Operating System Environment Manager

For z/OS

Reference Manual

Version 6.0

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What's New

Version 6.0

The following enhancements have been made to OS/EM version 6.0:

- OS/EM now supports z/OS 1.6

- The **OS/EM Autoinstall Feature** (new for version 6.0) significantly simplifies the OS/EM product installation process. See the **Basic Exit Functions** of the OS/EM User Guide for more information about this feature.

- Job Routing now supports up to 127 route statements.

- Job Routing now supports up to 127 dependent job control statements.

- Job Routing now supports up to 127 CNTL statements.

- The Job Routing communications dataset's record size has been increased to a maximum of 32719 from 4504 to allow additional resource entries.

- Job Routing has been enhanced to allow routing by:

  - PDS member name

  - Source name

  - Source program name

  - Source type

  - WLM Scheduling Environment

- OS/EM internals have been modified to enhance performance.

- Notification of User and OS/EM abends has been enhanced.

  You may now specify up to three IDs to be notified in the case of a user exit abend. You may also create notification groups where each ID within the group will receive a TSO send message.

  You may optionally specify a user ID or notify group name for each major section of OS/EM, i.e. ALLOCATION, SMF, HSM, etc.

- Performance Counts and Timings have been added to the Query Report.

- All load modules referenced in a Query Report now includes the name of the load library where the module was located.

- OS/EM now supports up to 255 user exits per supported exit point.

- OS/EM can optionally prevent a job from starting until all required datasets are available.

- OS/EM can optionally limit the concurrent execution of selected programs.

- OS/EM can issue DFSMSHSM Recall commands at conversion time and optionally prevent execution until needed files have been recalled.

- The TMSACCT option has been removed from version 6.0.

- The ENHANCED $HASP165 message option has been removed from version 6.0.

Version 5.6

The following enhancements have been made to OS/EM version 5.6:

- OS/EM now supports z/OS 1.6

- A **PRIMARY JES** indicator has been added to the **Set JES Name** function in the ISPF interface as well as the Query Report.

- OS/EM can now convert EZ-Proclib(R) statements to JCLLIB statements.

  See Exit 4 in the Reference Manual, and Miscellaneous Controls in the User Guide.

- Sysout Extension Support for JES2 Parameters

  - You may now control sysout extensions based on the JES2 Initialization parameters ESTLNCT, ESTPAGE and ESTBYTE. See Exit 9 in the Reference Manual, and Job Controls in the User Guide.

- Job/Step Statistics

  The STEPENDWTO message has been enhanced to show the CPU time and I/O counts. This is an optional feature and the original message is still available for customers using an automation package to trap the message.

- Job Routing Changes

  See Exit 5 in the Reference Manual, or option 1 on the Job Routing Controls Menu.

  - OS/EM now supports 999 selection groups.

  - SMF Records are now cut for jobs having resources attached to them.

    A record number must be assigned to OS/EM for this function to become active. See "SMF Audit Records" on page SMF-1 for instructions on assigning a record number.

  - Jobs may now be routed based on the account number field.

  - Jobs may be routed by the time parameter on the job card.

  - A Default Resource option has been added.

    Any job which does not have a resource attached to it will receive this new default resource.

  - Convert SCHENV JOBCARD parameter to OS/EM Route

    OS/EM can scan for the keyword SCHENV= on the JOBCARD statement and remove it. It then inserts an OS/EM Job routing JECL statement using the scheduling environment name just removed as the resource name.

  - Convert SYSAFF=name to SYSAFF=ANY if OS/EM Route present

    OS/EM can set a job's system affinity (SYSAFF) to ANY, if, and only if, the job has been assigned one or more OS/EM Job Route resourdces. The job route resources may be from either JECL control cards (/*ROUTE resource) or automatically generated.

- OS/EM will now route a job or range of jobs to another node if the job has the named resource attached to it. See Appendix F for the command format.

- The $DC (display conflicts) command has been enhanced to show jobs coming from a system without OS/EM job routing active, and to flag jobs which have a multi-system resource conflict.

- Region Controls now supports the MEMLIMIT keyword.

  OS/EM can now control the amount of storage given to a job above the 2 gigabyte bar. You may specify anything between zero for nothing above the bar to a maximum of 16 exabytes.

  See SMF exit OS$USI in the Reference Manual or option 7 on the JCL Controls Menu.

- The HSM Optimizer Priority Controls now supports failing requests based on the source of the request, location of data or dataset name/masks.

  See HSM exit ARCRPEXT in the Reference Manual, or option 8 on the HSM Optimizer Menu.

- The OS/EM RACF area now controls access to external tapes.

  OS/EM will allow a user to read any tape dataset with the following criteria is met, thus bypassing the RACF PROTECALL(FAIL) option:

  - A RACF profile does not exist for the dataset.

  - The user has READ access authority or higher to the FACILITY class profile EXTERNAL.TAPE.

Version 5.5

The following enhancements have been made to OS/EM version 5.5:

- ISPF Exit 16

  - Static System Symbolics may be used to generate file names for the ISPF Log dataset, List dataset and work datasets.

- JES2 Exit 5

  - Job Resource Routing (formally the Mellon Modifications) has been enhanced to allow automatic routing of jobs based on:

    1. DDNAME

    2. Dataset Name

    3. Job Class

    4. Job Name

    5. Program Name

    6. RACF Group

    7. Unit Name

    8. TSO User ID

    9. Workload Manager Service Class

    10. Execution Parm value

  - Set JOBCLASS based on:

1. DDNAME

2. Dataset Name

3. Job Class

4. Job Name

5. Program Name

6. RACF Group

7. Unit Name

8. TSO User ID

9. Workload Manager Service Class

10. Execution Parm value

- Set JES2 Job Priority based on:

1. DDNAME

2. Dataset Name

3. Job Class

4. Job Name

5. Program Name

6. RACF Group

7. Unit Name

8. TSO User ID

9. Workload Manager Service Class

10. Execution Parm value

- Set Service Class based on:

1. DDNAME

2. Dataset Name

3. Job Class

4. Job Name

5. Program Name

6. RACF Group

7. Unit Name

8. TSO User ID

9. Workload Manager Service Class

10. Execution Parm value

- Set Job Scheduling Environment (SCHENV=) based on:

1. DDNAME

2. Dataset Name

3. Job Class

4. Job Name

5. Program Name

6. RACF Group

7. Unit Name

8. TSO User ID

9. Workload Manager Service Class

10. Execution Parm value

- JES2 Exit 6

  - Account Number Controls now support up to six (6) accounting fields.

  - Account Number Controls may be limited to batch jobs, or both batch jobs and TSO users.

  - The Time Control function now allows jobs to be cancelled instead of having their time parameter adjusted.

- SMF IEFACTRT

  - A new function **Estimated Costs** has been added.

    The Estimated Cost function of OS/EM can be used to calculate an approximate charge for running each step of a job and an approximate total cost of running the job. The costs are presented in the "flower box" produced by requesting OS/EM's STEP/JOB-end statistics.

- SMF IEFUSI

  - Region Control values for region size below the line and limit value below the line may be specified as a negative value. This means that the job will be given all available space minus the value specified.

  - A new function **Quick Delete** has been added.

    This function specifies that any files coded with a retention setting of DELETE and the program name is IEFBR14 will be deleted by OS/EM. No DFSMSHSM RECALL will be performed. Instead a HDELETE will be generated.

- SMF IEFU83

  - A new function **Catalog Account Controls** has been added.

    This function can be used to place up to 32 bytes of JOB or STEP accounting information into the catalog record for a newly created VSAM dataset or SMS-managed non-VSAM dataset. Additionally, the JOB's User ID is placed into the Owner field of the catalog record. Neither of these fields is overridden if the information has already been provided.

- MISC Controls ACF2 Non-cancel Override

  - It is now possible to override the ACF2 non-cancel user attribute to allow OS/EM to enforce its controls.

Applying JES Maintenance

Any time you apply maintenance to your JES system, you must remember to reassemble the OS/EM Offset Table. This is done by selecting option 6 in the Installation Dialogue that was provided with the OS/EM distribution. Refer to installation step 2 in the OS/EM Installation Guide.

After the JES offset table is generated, it will need to copied from the OS/EM target LINKLIB into the executable LINKLIB.

Using Secondary JES2 Subsystems

Whenever you install a new version of JES2, and this release will operate as a secondary JES subsystem, you **MUST** use the ISPF interface and update the JES2 version number. Select option 6 **Set JES Name** on the Primary Option Menu and specify the version of JES you will be using. Once this is updated, select option 8 **Build Initialization Member** and select the following items:

- Basic Exit Functions

  - JES2

- Extended Functions

  - JCL

  - JOB

  - JOBR

  - TIME

Note: This process should be done before you IPL with your new JES2 system or unpredictable results may occur requiring another IPL or a restart of JES2.

Note: This process is only relevant for secondary JES2 subsystems. The JES2 release information, if specified, is ignored for the primary JES subsystem and the release information is determined from the JES2 system during OS/EM initialization.

OS/EM Maintenance

Applying OS/EM Maintenance

OS/EM is installed and maintained with SMP/E. Maintenance is distributed in the form of individual PTFs and Cumulative Service. This maintenance is applied using the standard SMP/E RECEIVE / AP-PLY / ACCEPT process.

In order to implement the maintenance, the affected library members must be copied from the target libraries to the executable libraries. If the maintenance affects a large number of members it may be more prudent to simply copy all of the target libraries to their executable counterparts:

    LINKLIB
    SISPEXEC
    SISPMENU
    SISPPENU
    SISPSENU
    SISPTENU

PTFs that require an IPL will be indicated through the SMP/E hold data. Users should receive the HOLDDATA as well as the maintenance and the HOLDATA must not be bypassed when performing the initial APPLY.

When applying maintenance that does not require an IPL, the following procedure is recommended after the executable libraries have been updated.

- Refresh the Library Lookaside - F LLA,REFRESH

- Reload the OS/EM system modules. If a small number of modules are affected, this can be done through the OS/EM ISPF Management Dialogue:

    1. Select **Reload Exits** at the primary menu
    2. Select **OS/EM System Modules**
    3. Place an 'S' next to the updated modules & press Enter
    4. Press **PF3** to execute the reloads

- Alternatively, OS/EM can be re-initialized by executing the OSEM started task (i.e. S OSEM,SUB=MSTR)

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OS$CNTL Command

This section of the reference guide defines the OS/EM OS$CNTL command that initializes and modifies the basic and optional functions of the OS/EM system.

Basic functions

The base OS/EM system supplies the following functions for all supported exits.

- Automatic Management of Exits with pre-defined names (SMF, HSM, ISPF, JES3, TSO, Allocation, RACF, SAF, and DFP)

- Eliminates the need to IPL to refresh LPA modules that are managed by OS/EM (SMF, JES2, JES3, HSM, ISPF, TSO, Allocation, RACF, SAF and DFP)

- Up to 255 user exits may be dynamically loaded or reloaded per exit point. The order of invocation is the order in which you list the exit names in the command.

- Each user exit may be independently enabled or disabled.

- The effect of any given user exit may be limited to specific jobs. This gives you the ability to test your exits, before making them global, in the environment they will run in without impacting other users. You gain a testing environment not previously available. This capability does not apply to exit points **that are not job oriented**. DFHSM exits, for example, deal with datasets at the dataset level, not datasets within jobs.

- Error Recovery for Exit abends (ESTAE and FRR as appropriate)

- Backup Exit programs specified to automatically switch to, if an Exit program abends

- Jobname limiting for each User Exit program

- Valid Return code checking for each exit point

- Good Return code checking for each exit point

- Disabling Return code checking (To remove an Exit program from execution for each exit point)

- Default Return code for each exit point

- TSO Notify support for User Exit programs that abend

- Loading of User Exits from LINKLIB, JOBLIB, STEPLIB, LLIB or private authorized load library

- SVC dumps for User Exit program abends

- Loading of Exit programs in either CSA or ECSA depending on RMODE / AMODE addressability

- Dynamically Reload individual User Exit programs

- Dynamically Disable individual User Exit programs

Optional functions

The optional OS/EM control functions are a set of pre-coded, parameter driven exits. All OS/EM options are defined by additional keywords on the OS$CNTL command. By coding the appropriate values, you can tailor these functions to the specifics of your installation.

OS/EM optional functions are intended to minimize the number of user exits you have to code and maintain. They cover the functions most OS/390 and z/OS installations deem important: standards enforcement and an enhanced operating environment (the QuickPool functions belong to the first category, while the HSM Optimizer functions belong to the second).

All options are invoked by use of the OPTIONS keyword on the appropriate command. Since options are, in effect, one more exit that is invoked for the exit point, you are given the ability to determine when these exits will be invoked: before your user exits, or after your user exits. By default, OS/EM options are invoked before your exits.

- If your installation does not have an Authorization code for the optional control functions installed, you should not specify these keywords. Specifying these keywords will have no effect and will cause an error.

Each of the OS$CNTL subcommands is presented separately for clarity. We suggest that you use the ISPF interface. Many of the optional functions require a multitude of parameters involving more than one exit and specification can become lengthy. If you intend to issue the OS$CNTL command online it would be best if you create a PDS member, then use the TSO EXEC command to issue the command. Any errors in syntax can be corrected more easily.

OS$CNTL command syntax notation

The OS$CNTL command is an ordinary TSO command. As such it may be used as input to a batch TMP(TSO) job. That is the recommended method for initial command input. The OS$CNTL command may also be issued from the TSO READY prompt, or from Option 6 of ISPF. This method would ordinarily be used to activate/deactivate an exit, or to change one of the options once the OS/EM system was initialized.

Remember if you issue the OS$CNTL command natively, the ISPF tables are not updated and will be outdated. If this happens, you will need to use the REBUILD option of the Maintenance and Installation function from the OS/EM ISPF Primary Options Menu.

The syntax follows that of a regular TSO command. OS$CNTL is the command and is followed by a subcommand. Keywords are then specified with optional parameters placed within parentheses.

The following command is used for illustration:

```
OS$CNTL HSM NOARCBDEXT|ARCBDEXT
{({NOEXits|Exits( *|0|exit1 {*|0|exit2 {*|0|exit3}})} -
        {NOOPTions|OPTions (                        -
            {FIRST|LAST}                            -
            {NOBACKupcontrol|BACKupcontrol(         -
            NOEXClude|EXClude(dsngroup,...))}})}
```

OS$CNTL and Subcommand

The OS$CNTL command must always be entered. It must be followed by a subcommand. In the example, the subcommand is HSM.

Or-sign |

The or-sign is used to separate alternative options for either a required optional parameter. Only one of the items can be selected. In the above example, either OPTIONS or NOOPTIONS may be specified, but not both.

Braces { }

All parameters between braces are optional.

Parentheses ( )

Parentheses are used to contain a list of options. These options can be separated by either spaces or commas, as with all regular TSO commands. Parentheses must be entered as shown.

Ellipsis ...

An ellipsis indicates that the indicated option may be repeated to form a list. For example, the 'dsngroup' option in the above example may be repeated as necessary to form a list of group names that will constitute the dataset names that will be excluded from backup processing.

The number of repetitions is determined by the use of the list. There is no practical limit to the list.

Capitalization

Keywords are specified in uppercase and lowercase. The uppercase characters are the minimum required for keyword specification. The entire keyword can be specified, both uppercase and lowercase characters, for more complete documentation of the keyword. In the above example, NOEXits can be specified NOEX or as NOEXITS.

We recommend that you spell out all keywords in their entirety. This will guarantee uniqueness of the keyword, plus more fully document the command.

TSO command parsing only requires that each keyword be unique; therefore, you may enter just those characters that will guarantee uniqueness.

All commands, keywords, and parameters must be capitalized when creating initialization members that will be used as input to a batch TMP (TSO) job.

Lowercase Only

Options shown entirely in lowercase indicate options that are replaced by user specified values. In the example, 'dsngroup' would be replaced by the group names containing the dataset names that are to be excluded from the backup processing.

Continuation

Continuation is the same as for regular TSO commands. The continuation character must be the last non-blank character on the line. A hyphen (-) indicates that leading blanks in the next line are not ignored. A plus (+) indicates that leading blanks in the next line are ignored.

Comments

Comments are indicated by a "/* */" pair, the same as for regular TSO CLISTs. A comment may be coded on a line by itself; or before, in the middle of, or after the command. Remember that continuation rules apply equally to comments.

Keyword Processing

OS$CNTL keyword processing has no defaults. Not entering either one of a keyword pair during initialization does not mean that some default is assumed. Omitting keywords assumes a null value. For example, not specifying OPTIONS or NOOPTIONS in the above example assumes nothing concerning OPTIONS specification (although, if this were the first issuance of the command, the effect would be the same as if you had specified NOOPTIONS).

Once a keyword value has been specified, it remains in effect until it is specifically changed by entering its opposite keyword value. If NOOPTIONS was entered during initialization, OPTIONS can be enabled by entering the above command, probably online, with OPTIONS specified.

The entire exit can be disabled by entering the NO keyword: NOARCBDEXT in the example.

Option lists

Option lists are positional keyword operands. As such, they are treated as a single entity. Therefore, any time an option list is respecified, it must be entered in its entirety if any changes are made to the list.

Option lists are contained within parentheses. The values specified within the parentheses are positional; and multiple lists within parentheses are positional. That is, the first value specified is always taken as the first value in the list, etc.

CODE command

This subcommand authorizes OS/EM for your particular CPU.

```
OS$CNTL CODE authorizationcode
```

Definition

The AUTHORIZATIONCODE will be supplied with your installation materials. You will be asked for the four low-order digits of your CPUID that you will be running on. Therefore, you need supply only one CPUID if your CPU contains more than one processor or LPAR.

Each CPU you intend running OS/EM on must have an authorization code. Multiple authorization commands are allowed in the initialization member so that a single initialization member can be used for all the CPUs in your installation.

Warning messages will be issued starting 30 days before expiration of the authorization code. You will need to obtain a new code within that time.

Note: The OS$CNTL CODE command must be the first command in your initialization member. No other OS/EM commands will be processed until a valid Authorization Code command is processed.

ALLOC Command

IEFALLOD Subcommand of ALLOC

This subcommand specifies whether the device allocation control option is to be active.

OS/EM provides two optional features for this exit:

- Restrict Devices

- Tape Sharing

```
OS$CNTL ALLOC                                                    -
 {NOABendnotify|ABendnotify(                                     -
    0|*|id1 {0|*|id2 {0|*|id3}})}                                -
 {LIBrary(library.dsn)}                                          -
 {NOIEFALLOD|IEFALLOD(                                    -
      {ENable|DISABLE}                                           -
      {NUmber( num1 num2 num3 )}                                 -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}   -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})} -
      {NOABendnotify|ABendnotify(                                -
         (0|*|id1a {0|*|id2a {0|*|id3a }})                       -
         (0|*|id1b {0|*|id2b {0|*|id3b }})                       -
         (0|*|id1c {0|*|id2c {0|*|id3c }}) })                    -
      {NOLIMit|LIMit(                                            -
        (jobmask1,...)|*|0                                       -
       {(jobmask2,...)|*|0                                       -
       {(jobmask3,...)|*|0}})}                                   -
      {NOVAlidrc|VAlidrc(rc,...)}                                -
      {NOGoodrc|Goodrc(rc,...)}                                  -
      {NODIsablerc|DISABLERc(rc)}                                -
      {DEFaultrc(rc)}                                            -
      {NOOptions|Options(                                 -
              {NOAbendnotify|Abendnotify(id)}        -
              {First|Last}                                -
              {Trace|NOTrace}                             -
              {NORestrict                                 -
                 {(devnum{:devnum} ...)} |               -
                Restrict(                                 -
                   (devnum{:devnum} ...)                  -
                   (jobmask ...) )}                       -
              {NOTApeshr{(GLobaloffline|WAit|REmove)} -
              {TApeshr(                                   -
                  {DSN(xx.xx.xx)}                          -
                  {WAit(HOld|NOHOld)}                      -
                  {DEV(xxx{:xxx} ...)}                     -
                  {ADD(xxx{:xxx} ...)}                     -
                  {DEL((xxx{:xxx} ... ){FOrce})}          -
```

```
                        {ONLine(xxx{:xxx} ... LOcal|GLobal)}  -
                        {OFFLine(xxx{:xxx} ... LOcal|GLobal)} -
                        {ALias(ggg:lll ggg:lll ...)}          -
                        {NOSYspri|SYspri(xxx xxx ...)}        -
                        {PRef(xxx xxx xxx ...)}  )}           -
                                                        )}
```

ABENDNOTIFY

Specifies that a TSO message will be sent if any Allocation exit ABENDs.

NOABENDNOTIFY

Specifies that no messages will be sent for Allocation exit ABENDs.

id1, id2, id3   You may specify up to three TSO IDs or notification group names
to be notified in the case of an ABEND. (See "NFYGROUPS" on
page SYS-1.)

LIBRARY   Specifies the loading of a IEFALLOD exit module from a private **authorized** library
named library.dsn. If this parameter is omitted then the normal MVS search criteria is
used for IEFALLOD modules.

library.dsn

Specifies the name of a private **authorized** library used to locate and load the
Allocation IEFALLOD user exit. The library name should be enclosed in single
quotes (').

Note: If the program is not found in this library, no other search is performed
and the user exit is **not** loaded.

IEFALLOD   Specifies that the IEFALLOD exit point is to be activated.

NOIEFALLOD   The NO option can be used to completely nullify the exit point and disable and reset
any options in effect for it.

ENABLE   Specifies that the named IEFALLOD exit point is be passed control for exit module
execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily
disable an exit point, but all the options that were specified previously are retained and
will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255
user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM
will process up to three user exits per OS$CNTL command based
on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM
will store the exit information in the corresponding slots of the pos-
sible 255 slots available. If only one number is entered, i.e.
NUMBER(7) OS/EM will process the user exits sequentially so the
exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IEFALLOD user exits are to be disabled. This is only effective
after initialization.

EXITS(...)   Specifies that the list of IEFALLOD user exits be activated. This can be specified at
initialization, or later to load and activate IEFALLOD user exits that were not activated
at initialization. The exits will be called in the order listed.

exit1

exit2

exit3
> The module name of the user exit that is assigned to the specified IEFALLOD exit point.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP Specifies that all active backup IEFALLOD user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IEFALLOD user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
> The module name of the backup user exit that is assigned to the specified Allocation exit point.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup Allocation user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
> Specifies that when a IEFALLOD exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IEFALLOD exit module has ABENDed.

NOABENDNOTIFY
> The NO option can be used to nullify the option to notify a TSO user of IEFALLOD exit module ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
> The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
> The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
> The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT Specifies that Job name limits are requested, to limit user exit modules for IEFALLOD to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

* An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by IEFALLOD user exit modules. A good return code allows subsequent IEFALLOD user exit modules to be called. OS/EM provides a default list. For example, if a Allocation user exit for IEFALLOD set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
NODISABLERC turns off disable return code checking for the exit point.

rc	Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY
DEFAULTRC	The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**
rc	Default return codes values are any numeric value

IEFALLOD Options

OPTIONS	Specifies that an optional OS/EM control function is to be enabled for IEFALLOD
NOOPTIONS	The NOOPTIONS parameter will totally disable the optional OS/EM control function for IEFALLOD.
	Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.
ABENDNOTIFY	
	Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.
NOABENDNOTIFY	
	The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.
	Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.
id1 id2 id3	
	The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.
'*'	An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
0	A zero (0) can be used to negate a previous entry of the notify TSO user list.
FIRST	
LAST	Specifies whether the optional OS/EM JCL Standards functions for IEFALLOD will be applied before or after the user exits are invoked.
	Note: OS/EM control functions are invoked FIRST by default.
TRACE	Write GTF Trace records for critical control blocks, used in Problem Determination for OS/EM Optional functions in conjunction with OS/EM support.
NOTRACE	Disables GTF trace records (This is the default)
RESTRICT	Specifies that device allocation control option processing will be in effect. This option limits the use of devices to certain jobnames, or jobname masks.
devnum	
	Specifies a list of device addresses, a range of device addresses, or both.

ALLOC Command   ALLOC-5

jobmask
> Specifies the Jobname or Jobname mask that is authorized to use devnum, or devnum:devnum device allocation control processing.

NORESTRICT Specifies that the devices are to be removed from device allocation control option processing.

> **devnum**
>> Specifies a list of device addresses, a range of device addresses, or both, that are to be removed from device allocation control option processing.

TAPESHR Specifies that tape share controls are to be in effect. Device addresses are specified for each system.

> **DSN** Specify the dataset name that will be used as the communications dataset. This file must be on shared DASD available to all systems sharing tape drives. The dataset must have the following attributes: RECFM=F,LRECL=29080,DSORG=PS.

> **WAIT**
>> Specify the action to be taken if resources are unavailable and the job is placed into a wait state.

>> **HOLD**
>>> Retain all resources currently allocated.

>> **NOHOLD**
>>> Any resources currently allocated when the job is placed into a wait may be released and allocated to another task.

> **DEV**
>> Specify the device addresses of the tape units to be shared. These are the initial devices setup at IPL time. After the IPL, use the **ADD** and **DEL** keywords described below.

>> **xxx{:xxx} ...{:...}**
>>> The actual device address or range of addresses. If a range is entered, it must be entered with a colon (:) separating the beginning and ending addresses. Do not enter any spaces before or after the colon.

> **ADD**
>> Used after an IPL to add new devices to the shared pool. Use the **DEV** keyword above to specify devices at IPL time.

>> **xxx{:xxx} ...{:...}**
>>> The actual device address or range of addresses. If a range is entered, it must be entered with a colon (:) separating the beginning and ending addresses. Do not enter any spaces before or after the colon.

> **DEL**
>> Used after an IPL to delete devices from the shared pool. Use the **DEV** keyword above to specify devices at IPL time.

>> **xxx{:xxx} ...{:...}**
>>> The actual device address or range of addresses. If a range is entered, it must be entered with a colon (:) separating the beginning and ending addresses. Do not enter any spaces before or after the colon.

>> **FORCE**
>>> Use the FORCE keyword to delete the device from the shared pool without waiting for the drive to become unallocated.

ONLINE

Cause the device or range of devices specified to be marked available in the shared pool.

Note: Does not issue the vary command to bring the device online.

xxx{:xxx} ...{:...}

The actual device address or range of addresses. If a range is entered, it must be entered with a colon (:) separating the beginning and ending addresses. Do not enter any spaces before or after the colon.

LOCAL

The ONLINE command will only affect the system the command is executed on. Other systems will not be affected.

GLOBAL

The ONLINE command will affect all systems sharing the specified device or device range.

OFFLINE

Cause the device or range of devices specified to be taken offline.

xxx{:xxx} ...{:...}

The actual device address or range of addresses. If a range is entered, it must be entered with a colon (:) separating the beginning and ending addresses. Do not enter any spaces before or after the colon.

LOCAL

The OFFLINE command will only affect the system the command is executed on. Other systems will not be affected.

GLOBAL

The OFFLINE command will affect all systems sharing the specified device or device range.

ALIAS

Used if all systems do not refer to a device with the same address. In this case, a global name is assigned that all systems will use, and the machine which has a different address will use the ALIAS keyword to bind the local address to the global address.

ggg:lll

Specify the global address, a colon (:), then the local address. Repeat for every device to be shared.

SYSPRI

Used to specify a priority order between systems. The system names are processed in the order specified. This allows you to give preference to a particular system in the case where a device is needed by multiple machines.

xxx   The system name. Repeat for each system.

NOSYSPRI

System priorities are not set.

PREF

The preference order the drives will be assigned.

xxx   The device addresses.

NOTAPESHR   Specifies that the system will not share tape drives.

GLOBALOFFLINE

A VARY OFFLINE command will be sent to all systems using Tape Share for all tape drives in the tape share pool.

WAIT

The system will wait for the drives to become unallocated before removing them from the tape share pool.

REMOVE

The system will not wait for the drive to become unallocated before removing them from the tape share pool.

Device Configuration

Since Tape Share controls bringing devices online or placing them in offline status, we suggest that you configure all devices defined to Tape Share as being OFFLINE at IPL time.

Started Task OS$TPSHR

In order for the Tape Share function to operate, it needs a PROC that executes as a started task. Please copy member OS$TPSHR from the OS/EM SAMPLIB into the PROCLIB pointed to by your **MASTER SCHEDULER JCL**. You may need to modify the dataset name of the SYSMDUMP file to match your shop standards.

MVS Commands

The following operator commands are available to control TAPESHR functions.

In the following command formats, **dev_spec** refers to the syntax allowed for ordinary MVS vary commands, e.g. 580 or 580-581 or (580,582-588), etc.

- V dev_spec,ONTPSHR

  To vary a device onto TAPESHR control, that is to have TAPESHR assume control of varying the device online and offline as needed to fulfill the needs of the various systems.

- V dev_spec,OFFTPSHR

  To cause TAPESHR to relinquish control of a device.

- V dev_spec,OFFLINE,LOCAL

  To indicate to TAPESHR that a device is not to be used, that is brought online, on this system only. The device is still eligible for use on other systems.

- V dev_spec,ONLINE,LOCAL

  To indicate to TAPESHR that a device which was previously varied offline locally may once again be used on this system. This command must be issued on the same system as the VARY OFFLINE,LOCAL command.

- V dev_spec,OFFLINE,GLOBAL

  To indicate to TAPESHR that a device is not to be used by any system in the complex. This command may be issued on any system.

- V dev_spec,ONLINE,GLOBAL

To indicate to TAPESHR that a device that was previously varied offline globally may now be used again. This command may be issued on any system.

A **modify** command is available to shut down **OS$TPSHR**.

```
F OS$TPSHR,STOP {option}
```

Where {option} is:

- WAIT

  This causes TAPESHR to wait until all owned tape devices have gone offline and so may safely be used by other systems where TAPESHR is still active.

- REMOVE

  The devices that do not go offline within 15 seconds will be removed from TAPESHR control and it will become the operator's responsibility to coordinate the use of those devices on the various systems. Note that if any uncontrolled device is eligible for use when a job goes into allocation recovery, TAPESHR will not participate in device selection other than to remove all TAPESHR devices from the candidate list, thus forcing the job to use an uncontrolled device.

- GLOBALOFFLINE

  The devices that do not go offline within 15 seconds will be marked as globally offline to protect them from being allocated by another TAPESHR system. After the devices go offline on the system where TAPESHR is being terminated, the operator may issue a command to vary them back online globally to make them available to the other systems where TAPESHR is still active.

The Display Units command has been enhanced to show the TAPESHR status of those devices controlled by TAPESHR. The additional data includes the system currently owning the device. There may also be additional characters appended to show additional information. These include:

- -A

  Indicates the device is allocated.

- -LO

  Indicates local offline.

  The -LO status can be removed by issuing a vary online,local command.

- -LO(P)

  Indicates pending local offline.

- -GO

  Indicates global offline.

  The -GO status can be removed by issuing a vary online,global command.

- -GO(P)

  Indicates pending global offline.

- -EO

  Indicates error offline. Error offline indicates that an attempt was made to vary the device online and the system was unable to bring the device online for some (usually hardware) reason. This status can be cleared by re-issuing the vary online command once the problem has been resolved.

Below is sample output from a display units command:

```
UNIT TYPE STATUS   VOLSER   VOLSTATE
0900 348S OFFLINE            /REMOV   0900 EXPR
0901 348S OFFLINE            /REMOV   0901 EXPR-A
0902 348S OFFLINE            /REMOV   0902 TEST-LO
0903 348S OFFLINE            /REMOV   0903 TEST-GO(P)
0904 348S OFFLINE            /REMOV   0904 EXPR-A
```

IEFALLSW Command

OS/EM only supplies basic control functions for this exit.

```
OS$CNTL ALLOC                                                          -
 {NOABendnotify|ABendnotify(                                           -
    0|*|id1 {0|*|id2 {0|*|id3}})}                                     -
 {LIBrary(library.dsn)}                                               -
 {NOIEFALLSW|IEFALLSW(                                        -
       {ENable|DISABLE}                                              -
       {NUmber( num1 num2 num3 )}                                    -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}} -
       {NOABendnotify|ABendnotify(                                   -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                          -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                          -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                       -
       {NOLIMit|LIMit(                                               -
         (jobmask1,...)|*|0                                          -
        {(jobmask2,...)|*|0                                          -
        {(jobmask3,...)|*|0}})}                                      -
       {NOVAlidrc|VAlidrc(rc,...)}                                   -
       {NOGoodrc|Goodrc(rc,...)}                                     -
       {NODIsablerc|DISABLERc(rc)}                                   -
       {DEFaultrc(rc)}                                               -
                                                            )}
```

ABENDNOTIFY

    Specifies that a TSO message will be sent if any Allocation exit ABENDs.

NOABENDNOTIFY

    Specifies that no messages will be sent for Allocation exit ABENDs.

        id1, id2, id3   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IEFALLSW exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IEFALLSW modules.

        library.dsn

        Specifies the name of a private **authorized** library used to locate and load the Allocation IEFALLSW user exit. The library name should be enclosed in single quotes (').

        Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IEFALLSW   Specifies that the IEFALLSW exit point is to be activated.

NOIEFALLSW   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IEFALLSW exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IEFALLSW user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IEFALLSW user exits be activated. This can be specified at initialization, or later to load and activate IEFALLSW user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3

The module name of the user exit that is assigned to the specified IEFALLSW exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IEFALLSW user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IEFALLSW user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3

The module name of the backup user exit that is assigned to the specified Allocation exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup Allocation user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
> Specifies that when a IEFALLSW exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IEFALLSW exit module has ABENDed.

NOABENDNOTIFY
> The NO option can be used to nullify the option to notify a TSO user of IEFALLSW exit module ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.
>
> **(id1a,id1b,id1c)**
> > The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.
>
> **(id2a,id2b,id2c)**
> > The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.
>
> **(id3a,id3b,id3c)**
> > The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.
> >
> > **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.
>
> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0** A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT Specifies that Job name limits are requested, to limit user exit modules for IEFALLSW to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT The NO option can be used to nullify the option for Job name limits.

> **jobmask1**

> **jobmask2**

> **jobmask3**
> > The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.
>
> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0** A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by IEFALLSW user exit modules. A good return code allows subsequent IEFALLSW user exit modules to be called. OS/EM provides a default list. For example, if a Allocation user exit for IEFALLSW set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

NODISABLERC turns off disable return code checking for the exit point.

rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc Default return codes values are any numeric value

IEFALLVE Command

OS/EM only supplies basic control functions for this exit.

```
          OS$CNTL ALLOC                                                  -
           {NOABendnotify|ABendnotify(                                   -
              0|*|id1 {0|*|id2 {0|*|id3}})}                              -
           {LIBrary(library.dsn)}                                       -
           {NOIEFALLVE|IEFALLVE(                                   -
                 {ENable|DISABLE}                                       -
                 {NUmber( num1 num2 num3 )}                             -
                 {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}   -
                 {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})} -
                 {NOABendnotify|ABendnotify(                            -
                    (0|*|id1a {0|*|id2a {0|*|id3a }})                   -
                    (0|*|id1b {0|*|id2b {0|*|id3b }})                   -
                    (0|*|id1c {0|*|id2c {0|*|id3c }}) })                -
                 {NOLIMit|LIMit(                                        -
                   (jobmask1,...)|*|0                                   -
                  {(jobmask2,...)|*|0                                   -
                  {(jobmask3,...)|*|0}})}                               -
                 {NOVAlidrc|VAlidrc(rc,...)}                            -
                 {NOGoodrc|Goodrc(rc,...)}                              -
                 {NODIsablerc|DISABLERc(rc)}                            -
                 {DEFaultrc(rc)}                                        -
                                                              )}
```

ABENDNOTIFY

Specifies that a TSO message will be sent if any Allocation exit ABENDs.

NOABENDNOTIFY

Specifies that no messages will be sent for Allocation exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IEFALLVE exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IEFALLVE modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the Allocation IEFALLVE user exit. The library name should be enclosed in single quotes (').
>
> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IEFALLVE   Specifies that the IEFALLVE exit point is to be activated.

NOIEFALLVE   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IEFALLVE exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

        num1, num2, num3

                Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IEFALLVE user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IEFALLVE user exits be activated. This can be specified at initialization, or later to load and activate IEFALLVE user exits that were not activated at initialization. The exits will be called in the order listed.

        exit1

        exit2

        exit3

                The module name of the user exit that is assigned to the specified IEFALLVE exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IEFALLVE user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IEFALLVE user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

        exit1

        exit2

        exit3

                The module name of the backup user exit that is assigned to the specified Allocation exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup Allocation user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IEFALLVE exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IEFALLVE exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IEFALLVE exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT Specifies that Job name limits are requested, to limit user exit modules for IEFALLVE to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

* An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IEFALLVE user exit modules. A good return code allows subsequent IEFALLVE user exit modules to be called. OS/EM provides a default list. For example, if a Allocation user exit for IEFALLVE set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

NODISABLERC turns off disable return code checking for the exit point.

rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc   Default return codes values are any numeric value

IEFALLVM Command

OS/EM only supplies basic control functions for this exit.

```
        OS$CNTL ALLOC                                              -
         {NOABendnotify|ABendnotify(                               -
            0|*|id1 {0|*|id2 {0|*|id3}})}                          -
         {LIBrary(library.dsn)}                                    -
         {NOIEFALLVM|IEFALLVM(                         -
               {ENable|DISABLE}                                    -
               {NUmber( num1 num2 num3 )}                          -
               {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
               {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
               {NOABendnotify|ABendnotify(                         -
                  (0|*|id1a {0|*|id2a {0|*|id3a }})                 -
                  (0|*|id1b {0|*|id2b {0|*|id3b }})                 -
                  (0|*|id1c {0|*|id2c {0|*|id3c }}) })              -
               {NOLIMit|LIMit(                                     -
                 (jobmask1,...)|*|0                                -
                {(jobmask2,...)|*|0                                -
                {(jobmask3,...)|*|0}})}                            -
               {NOVAlidrc|VAlidrc(rc,...)}                         -
               {NOGoodrc|Goodrc(rc,...)}                           -
               {NODIsablerc|DISABLERc(rc)}                         -
               {DEFaultrc(rc)}                                     -
                                                           )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any Allocation exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for Allocation exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a IEFALLVM exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IEFALLVM modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the Allocation IEFALLVM user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IEFALLVM Specifies that the IEFALLVM exit point is to be activated.

NOIEFALLVM The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named IEFALLVM exit point is be passed control for exit module execution.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IEFALLVM user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IEFALLVM user exits be activated. This can be specified at initialization, or later to load and activate IEFALLVM user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3

The module name of the user exit that is assigned to the specified IEFALLVM exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP Specifies that all active backup IEFALLVM user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IEFALLVM user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3

The module name of the backup user exit that is assigned to the specified Allocation exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup Allocation user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IEFALLVM exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IEFALLVM exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IEFALLVM exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT Specifies that Job name limits are requested, to limit user exit modules for IEFALLVM to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

* An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IEFALLVM user exit modules. A good return code allows subsequent IEFALLVM user exit modules to be called. OS/EM provides a default list. For example, if a Allocation user exit for IEFALLVM set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
NODISABLERC turns off disable return code checking for the exit point.

rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc   Default return codes values are any numeric value

IEFDB401 Command

This subcommand specifies whether the tape allocation control support is to be active.

```
        OS$CNTL ALLOC                                                    -
         {NOABendnotify|ABendnotify(                                     -
            0|*|id1 {0|*|id2 {0|*|id3}})}                                -
         {LIBrary(library.dsn)}                                          -
         {NOIEFDB401|IEFDB401(                                    -
              {ENable|DISABLE}                                           -
              {NUmber( num1 num2 num3 )}                                 -
              {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}     -
              {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})} -
              {NOABendnotify|ABendnotify(                                -
                 (0|*|id1a {0|*|id2a {0|*|id3a }})                       -
                 (0|*|id1b {0|*|id2b {0|*|id3b }})                       -
                 (0|*|id1c {0|*|id2c {0|*|id3c }}) })                    -
              {NOLIMit|LIMit(                                            -
                (jobmask1,...)|*|0                                       -
               {(jobmask2,...)|*|0                                       -
               {(jobmask3,...)|*|0}})}                                   -
              {NOVAlidrc|VAlidrc(rc,...)}                                -
              {NOGoodrc|Goodrc(rc,...)}                                  -
              {NODIsablerc|DISABLERc(rc)}                                -
              {DEFaultrc(rc)}                                            -
              {NOOptions|Options(                                        -
                 {NOAbendnotify|Abendnotify(id)}                 -
                 {First|Last}                                   -
                 {Warn|NOWarn}                                  -
                 {Trace|NOTrace}                                -
                 {NOMaxtape|Maxtape(                            -
                    {CLASSA(total,tot3420,tot3480,tot3490,totvts,tot3590)}    -
                    {CLASSB(total,tot3420,tot3480,tot3490,totvts,tot3590)}     -
                    {CLASSC(total,tot3420,tot3480,tot3490,totvts,tot3590)}     -
                    {CLASSD(total,tot3420,tot3480,tot3490,totvts,tot3590)}     -
                    {CLASSE(total,tot3420,tot3480,tot3490,totvts,tot3590)}     -
                    {CLASSF(total,tot3420,tot3480,tot3490,totvts,tot3590)}     -
                    {CLASSG(total,tot3420,tot3480,tot3490,totvts,tot3590)}     -
                    {CLASSH(total,tot3420,tot3480,tot3490,totvts,tot3590)}     -
                    {CLASSI(total,tot3420,tot3480,tot3490,totvts,tot3590)}     -
                    {CLASSJ(total,tot3420,tot3480,tot3490,totvts,tot3590)}     -
                    {CLASSK(total,tot3420,tot3480,tot3490,totvts,tot3590)}     -
                    {CLASSL(total,tot3420,tot3480,tot3490,totvts,tot3590)}     -
                    {CLASSM(total,tot3420,tot3480,tot3490,totvts,tot3590)}     -
                    {CLASSN(total,tot3420,tot3480,tot3490,totvts,tot3590)}     -
                    {CLASSO(total,tot3420,tot3480,tot3490,totvts,tot3590)}     -
                    {CLASSP(total,tot3420,tot3480,tot3490,totvts,tot3590)}     -
                    {CLASSQ(total,tot3420,tot3480,tot3490,totvts,tot3590)}     -
                    {CLASSR(total,tot3420,tot3480,tot3490,totvts,tot3590)}     -
                    {CLASSS(total,tot3420,tot3480,tot3490,totvts,tot3590)}     -
                    {CLASST(total,tot3420,tot3480,tot3490,totvts,tot3590)}     -
                    {CLASSU(total,tot3420,tot3480,tot3490,totvts,tot3590)}     -
                    {CLASSV(total,tot3420,tot3480,tot3490,totvts,tot3590)}     -
                    {CLASSW(total,tot3420,tot3480,tot3490,totvts,tot3590)}     -
                    {CLASSX(total,tot3420,tot3480,tot3490,totvts,tot3590)}     -
                    {CLASSY(total,tot3420,tot3480,tot3490,totvts,tot3590)}     -
                    {CLASSZ(total,tot3420,tot3480,tot3490,totvts,tot3590)}     -
```

```
                           {CLASS0(total,tot3420,tot3480,tot3490,totvts,tot3590)}    -
                           {CLASS1(total,tot3420,tot3480,tot3490,totvts,tot3590)}    -
                           {CLASS2(total,tot3420,tot3480,tot3490,totvts,tot3590)}    -
                           {CLASS3(total,tot3420,tot3480,tot3490,totvts,tot3590)}    -
                           {CLASS4(total,tot3420,tot3480,tot3490,totvts,tot3590)}    -
                           {CLASS5(total,tot3420,tot3480,tot3490,totvts,tot3590)}    -
                           {CLASS6(total,tot3420,tot3480,tot3490,totvts,tot3590)}    -
                           {CLASS7(total,tot3420,tot3480,tot3490,totvts,tot3590)}    -
                           {CLASS8(total,tot3420,tot3480,tot3490,totvts,tot3590)}    -
                           {CLASS9(total,tot3420,tot3480,tot3490,totvts,tot3590)}    -
                                                              )} )} )} )}    -
                                                        )}
```

ABENDNOTIFY

Specifies that a TSO message will be sent if any Allocation exit ABENDs.

NOABENDNOTIFY

Specifies that no messages will be sent for Allocation exit ABENDs.

id1, id2, id3   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IEFDB401 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IEFDB401 modules.

library.dsn

Specifies the name of a private **authorized** library used to locate and load the Allocation IEFDB401 user exit. The library name should be enclosed in single quotes (').

Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IEFDB401   Specifies that the IEFDB401 exit point is to be activated.

NOIEFDB401   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IEFDB401 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IEFDB401 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IEFDB401 user exits be activated. This can be specified at initialization, or later to load and activate IEFDB401 user exits that were not activated at initialization. The exits will be called in the order listed.

    exit1

    exit2

    exit3
        The module name of the user exit that is assigned to the specified IEFDB401 exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IEFDB401 user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IEFDB401 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

    exit1

    exit2

    exit3
        The module name of the backup user exit that is assigned to the specified Allocation exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup Allocation user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
        Specifies that when a IEFDB401 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IEFDB401 exit module has ABENDed.

NOABENDNOTIFY
        The NO option can be used to nullify the option to notify a TSO user of IEFDB401 exit module ABENDs.

        Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

    (id1a,id1b,id1c)
        The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
> The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
> The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

> **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
> A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IEFDB401 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
> The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
> A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IEFDB401 user exit modules. A good return code allows subsequent IEFDB401 user exit modules to be called. OS/EM provides a default list. For example, if a Allocation user exit for IEFDB401 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

NODISABLERC turns off disable return code checking for the exit point.

rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc   Default return codes values are any numeric value

IEFDB401 Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for IEFDB401

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for IEFDB401.

Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

ABENDNOTIFY

Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3

The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

FIRST

LAST   Specifies whether the optional OS/EM JCL Standards functions for IEFDB401 will be applied before or after the user exits are invoked.

Note: OS/EM control functions are invoked FIRST by default.

WARN   Specifies whether Optional Tape Control will be activated in WARN mode. The warn option specifies that OS/EM will simulate the activation of Optional Tape Control

functions, and issue messages if the request would cause the function to fail for the Optional Tape Control function.

NOWARN   NOWARN is the default, and specifies that OS/EM will perform the Optional Tape Control functions as specified by the options selected for the Optional Tape Control function.

TRACE   Write GTF Trace records for critical control blocks, used in Problem Determination for OS/EM Optional functions in conjunction with OS/EM support.

NOTRACE   Disables GTF trace records (This is the default)

MAXTAPE   Specifies that tape allocation control will be applied by the criteria established with the parameters specified.

> **{CLASS}A ...**
>
> **{CLASS}Z**
>
> **CLASS0 ...**
>
> **CLASS9**
> The job classes to which tape allocation control will be applied. In the case of the alpha job classes A through Z, CLASS is entirely optional. The single letter class designation A through Z is all that is necessary. The numeric job classes 0 through 9 must be specified as shown; that is, CLASS must be part of the keyword.
>
> **total** Up to six numbers are specified with each job class. The first, total, specifies the total number of tape devices that may be allocated to a given job step within the job class.
>
> **tot3420**
> The second, tot3420, specifies the total number of 3420 tape devices that may be allocated to a given step within the job class
>
> **tot3480**
> The third number, tot3480, specifies the total number of 3480 tape devices that may be allocated to a given step within the job class.
>
> **tot3490**
> The fourth number, tot3490, specifies the total number of 3490 tape devices that may be allocated to a given step within the job class.
>
> **totvts**
> The fifth number, totvts, specifies the total number of virtual tape devices that may be allocated to a given step within the job class.
>
> **tot3590**
> The sixth number, tot3590, specifies the total number of 3590 tape devices that may be allocated to a given step within the job class.
>
> **Note:** The number of devices for all types combined may exceed the total number of devices allowed. However, during step execution, the total number allowed will be the limit applied to the number of tape devices allocated. This allows for a varying number of each device to be allocated during any particular execution. This will especially occur as your installation converts from 3420 to 3480 to 3490 devices.

Example With LIMIT Checking

The following example shows the activation of the IEFDB401 allocation exit controlling maxtape usage for job classes **A** and **9**.

```
OS$CNTL ALLOC IEFDB401(EXITS(USERALOC) –
    LIMIT((MYJOB)) –
    OPT(NOWARN MAXTAPE(CLASSA(5,3,4,4,5,4) –
                       CLASS9(5,3,4,4,5,4)))
```

The above example also illustrates the use of LIMIT checking for testing a user exit, in your production environment, without affecting any of your production jobs. Whatever function USERALOC accomplishes, its effects can never truly be tested in a standalone environment. Prior to OS/EM, debugging would be done in a test environment and then it would be moved to the production environment. It would be rare if subsequent problems did not develop.

In the OS/EM environment, MYJOB could test all the possible permutations of exit USRALOC. As problems are uncovered, USRALOC can be changed, reloaded, and further testing done.

IEFW21SD Subcommand of ALLOC

This subcommand controls whether dynamic steplib support is to be active.

```
        OS$CNTL ALLOC                                                      -
/*                                                          */           -
        {NOIEFW21SD|IEFW21SD(                                     -
/*                                                          */           -
                {NOABENDNOTIFY|ABENDNOTIFY(                        -
                    0|*|ID1 {0|*|ID2 {0|*|ID3}})})}}              -
                {NOLIMIT|LIMIT(JOBMASK,...)}                       -
                {ENABLE|DISABLE} )}                                -
                {NOOPTIONS|OPTIONS(                                -
                  {NOSTEPLIB|STEPLIB(                              -
                    {NOWAITDSN|WAITDSN}                            -
                    {NOWAITVOL|WAITVOL}                            -
                    {NOWAITUNIT|WAITUNIT}                          -
                    {NORECALL|RECALL}                             -
                    {NOSTEPLIB1|STEPLIB1(                          -
                      {DSN(XXX, XXX, ...)}                         -
                      {VOL(XXX | *, XXX | *, ...)}                 -
                      {BEFORE|AFTER|REPLACE} -
                      {FAIL|NOFAIL} -
                      {NOJOBCLASS|JOBCLASS( -
                          INC(X,X,...)|EXC(X,X,...) )} -
                      {NOJOBNAME|JOBNAME( -
                        INC(XXX,XXX,...)| -
                        EXC(XXX,XXX,...) ) -
                      {NOUSER|USER( -
                        INC(XXX,XXX,...)| -
                        EXC(XXX,XXX,...) ) } -
                      {NOSTEPNAME|STEPNAME( -
                        INC(XXX,XXX,...)| -
                        EXC(XXX,XXX,...) ) } -
                      {NOPROGRAM|PROGRAM( -
                        INC(XXX,XXX,...)| -
                        EXC(XXX,XXX,...) ) } ) } -
                       .
                       .
                       .
                    {NOSTEPLIB32|STEPLIB32( -
                      {BEFORE|AFTER|REPLACE} -
                      {FAIL|NOFAIL} -
                      {DSN(XXX, XXX, ...)} -
                      {VOL(XXX, XXX, ...)} -
                      {NOJOBCLASS|JOBCLASS( -
                          INC(X,X,...)|EXC(X,X,...) )} -
                      {NOJOBNAME|JOBNAME( -
                        INC(XXX,XXX,...)| -
                        EXC(XXX,XXX,...) ) } -
                      {NOUSER|USER( -
                        INC(XXX,XXX,...)| -
                        EXC(XXX,XXX,...) ) } -
                      {NOSTEPNAME|STEPNAME( -
                        INC(XXX,XXX,...)| -
                        EXC(XXX,XXX,...) ) } -
                      {NOPROGRAM|PROGRAM( -
                        INC(XXX,XXX,...)| -
                        EXC(XXX,XXX,...) ) } ) }
```

IEFW21SD	Specifies that the IEFW21SD exit point is to be activated.
NOIEFW21SD	The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.
ENABLE	Specifies that the named IEFW21SD user exit is be passed control for exit module execution.
DISABLE	The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

IEFW21SD Options

OPTIONS	Specifies that an optional OS/EM control function is to be enabled for IEFW21SD
NOOPTIONS	The NOOPTIONS parameter will totally disable the optional OS/EM control function for IEFW21SD.

> **Note:** The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

ABENDNOTIFY

Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3

The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'

An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0

A zero (0) can be used to negate a previous entry of the notify TSO user list.

STEPLIB	Specifies that a dynamic steplib will be added based upon the following cretiera.

WAITDSN

The system will wait for the dataset name.

NOWAITDSN

The system will **not** wait for the dataset name, and the job will either execute without a dynamic steplib, or the job will fail depending on the **fail|nofail** option specified on the selection list in control.

WAITVOL

The system will wait for the volume containing the needed dataset.

NOWAITVOL

The system will **not** wait for the volume and the job will either execute without a dynamic steplib, or the job will fail depending on the **fail|nofail** option specified on the selection list in control.

WAITUNIT

The system will wait for the unit containing the needed dataset.

NOWAITUNIT

The system will **not** wait for the unit and the job will either execute without a dynamic steplib, or the job will fail depending on the **fail|nofail** option specified on the selection list in control.

RECALL

The system will allow and wait for a DFHSM recall to complete.

NORECALL

The system will not allow a DFHSM recall and the job will either execute without a dynamic steplib, or the job will fail depending on the **fail|nofail** option specified on the selection list in control.

STEPLIB1-32

NOSTEPLIB1-32

Allows the creation of up to 32 control definitions (selection lists) based on a list of job classes, job names, user IDs, step names, or program names.

Specifying NOSTEPLIB1-32 nullifies the named option.

> **BEFORE**
>
> Specifies that the dynamic steplib libraries will be concatenated before any libraries which may be specified in the JCL.
>
> **AFTER**
>
> Specifies that the dynamic steplib libraries will be concatenated after any libraries which may be specified in the JCL.
>
> **REPLACE**
>
> Specifies that the dynamic steplib libraries will completely replace any libraries which may have been specified in the JCL.
>
> **FAIL**
>
> Specifies that if any of the dynamic steplib libraries are unavailable, the job will fail with a JCL error.
>
> **NOFAIL**
>
> Specifies that if any of the dynamic steplib libraries are unavailable, the job will continue to execute without the steplib being modified.
>
> **DSN** Specify the library names to be used as dynamic steplibs. Separate the names with a space. The library name should be enclosed in single quotes (').
>
> **VOL**
>
> Specify the volume that contains the previously specified library. If a volume is not specified for a library, you may enter an '*' as a place holder.
>
> **JOBCLASS**
>
> Specifies which job classes will have this steplib added. You may specify either an include or exclude list of job classes.
>
> **NOJOBCLASS**
>
> Specifying NOJOBCLASS nullifies this option.
>
> > **INC**

EXC Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection cretiera. An exclude list states that all items not in the list will be used.

jobclass
Specifies which job classes will have their steplib modified. Job classes may be entered in a range, i.e. D:F would have classes D, E, and F added to the list.

JOBNAME
Specifies by job name, which jobs will have a steplib added or modified. You may specify either an include or exclude list of job names.

NOJOBNAME
Specifying NOJOBNAME nullifies this option.

INC

EXC
Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection cretiera. An exclude list states that all items not in the list will be used.

jobname
Specifies which jobs will have a steplib modified or added.

USER
Specifies by user ID which jobs will have a steplib modified or added. You may specify either an include or exclude list of user IDs.

NOUSER
Specifying NOUSER nullifies this option.

INC

EXC
Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection cretiera. An exclude list states that all items not in the list will be used.

userid
Specifies which users will have their jobs changed so that a steplib is either added or modified.

STEPNAME
Specifies by step name which steps will have a steplib added or modified. You may specify either an include or exclude list of step names.

NOSTEPNAME
Specifying NOSTEPNAME nullifies this option.

INC

EXC
Specify whether the attached list is to be included or excluded.

An include list states that the items in the list will be used as the selection cretiera. An exclude lists states that all items not in the list will be used.

stepname
> Specifies which steps will have a steplib added or modified.

PROGRAM
Specifies by program name, which jobs will have a steplib added or modified. You may specify either an include or exclude list of program names.

NOPROGRAM
Specifying NOPROGRAM nullifies this option.

INC

EXC
Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection cretiera. An exclude list states that all items not in the list will be used.

pgmname
> Specifies which programs will have a steplib added or modified.

SVC26 Subcommand of ALLOC

This subcommand SVC26 controls whether NOT CATALOG 2 support is to be active.

```
OS$CNTL ALLOC                                                      -
 {NOSvc26|Svc26(                                                   -
       {Enable|Disable}                                           -
       {NOoptions|Options(                                        -
               {NOAbendnotify|Abendnotify(id)}                    -
               {Warn|NOWarn}                                      -
               {Trace|NOTrace}                                    -
               {NONotcat2|Notcat2(                                -
                   {NODelete|Delete(                              -
                    jobclass{:jobclass},...)}                     -
                   {NORecatalog|Recatalog(                        -
                    jobclass{:jobclass},...)}                     -
                   {NOFail|Fail(                                  -
                    jobclass{:jobclass},...)}  )} )} )}
```

Note: This option is not effective for files under SMS control.

SVC26   Specifies the optional SVC26 NOT CATALOG 2 processing is to be active.

NOSVC26   The NO option can be used to completely nullify SVC26 NOT CATALOG 2 process-ing.

Note: Exit processing is not available with this option. Only OS/EM optional control is available.

SVC26 Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for OS$0002F

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for OS$0002F.

> **Note:** The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

ABENDNOTIFY
Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3
The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a de-fault, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

WARN　　　Specifies whether NOT CATALOG 2 will be activated in WARN mode. The warn option specifies that OS/EM will simulate the activation of NOT CATALOG 2 functions, and issue messages if the request would cause the function to fail for the NOT CATALOG 2 function.

NOWARN　　NOWARN is the default, and specifies that OS/EM will perform the NOT CATALOG 2 functions as specified by the options selected for the NOT CATALOG 2 function.

TRACE　　　Write GTF Trace records for critical control blocks, used in Problem Determination for OS/EM Optional functions in conjunction with OS/EM support.

NOTRACE　　Disables GTF trace records (This is the default)

NOTCAT2　　Specifies that NOT CATALOG 2 option processing will be done. The following options specify the action OS/EM processing will take when the NOT CATALOGED 2 conditions occurs.

NONOTCAT2　Specifying NONOTCAT2 will deactivate the NOT CATALOG 2 optional processing.

DELETE
When the DELETE option is chosen, OS/EM will attempt to correct the NOT CATALOG 2 condition by uncataloging and deleting the dataset causing the NOT CATALOG 2 condition to be raised. If the uncataloging or deleting of the old dataset fails, the job will be processed as specified in the FAIL operand. The cataloging of the new dataset that got the NOT CATALOG 2 will then be re-driven. If the re-catalog fails, the job will be processed as specified in the FAIL operand. If the FAIL operand is not specified, normal NOT CATALOG 2 processing prevails.

NODELETE
Specifying NODELETE will disable the DELETE optional processing.

jobclass
A list of execution Job classes to which the control definition is applied, TSU, TSO, and/or STC are valid entries. A colon (:) may be used to specify an inclusive range of classes. For example, A:Z may be entered to specify classes A through Z.

RECATALOG
When the RECATALOG option is chosen, OS/EM will attempt to correct the NOT CATALOG 2 condition by uncataloging the dataset causing the NOT CATALOG 2 condition to be raised. The cataloging of the new dataset that got the NOT CATALOG 2 will then be re-driven. If the re- catalog fails, the job will be processed as specified in the FAIL operand. If the FAIL operand is not specified, normal NOT CATALOG 2 processing prevails.

NORECATALOG
Specifying NORECATALOG will disable the RECATALOG optional processing.

jobclass
A list of execution Job classes to which the control definition is applied, TSU, TSO, and/or STC are valid entries. A colon (:) may be used to specify an inclusive range of classes. For example, A:Z may be entered to specify classes A through Z.

Note: The re-catalog may still fail if the dataset causing the NOT CATALOG 2 condition cannot be uncataloged. This could occur, for example, if the dataset to be cataloged was a QSAM file while the dataset to be uncataloged was a VSAM file.

FAIL
Specifies that if the NOT CATALOG 2 condition occurs, the job will be failed

unless the DELETE or RECATALOG option is also specified with either an explicit or implicit jobclass list.

jobclass

A list of execution Job classes to which the control definition is applied, TSU, TSO, and/or STC are valid entries. A colon (:) may be used to specify an inclusive range of classes. For example, A:Z may be entered to specify classes A through Z.

Example

The following example shows the activation of the SVC26 NOT CATALOG 2 support for Jobclass A with the delete option.

```
OS$CNTL ALLOC SVC26 ( OPTION (NOWARN  NOTCAT2 (DELETE(A) ) ) )
```

DASDPOOL Command

The OS$CNTL DASDPOOL command establishes the volume and dataset name pools required by various OS/EM functions. Further, it establishes the relationship between DASD volumes and datasets that are used by the OS/EM QuickPool function.

As its name implies, the QuickPool function is used to establish pools of DASD volumes, and to specify which datasets may, or may not, be allocated to these volumes. At the most simple level, you can enforce your installation's dataset naming standards by creating a single pool containing all your DASD volumes and specifically allowing only those datasets which conform to your naming standard.

The QuickPool function will also place non-VSAM datasets on the correct volumes if jobs do not direct datasets to specific volumes; that is, they omit the VOL=SER= parameter, and the volumes are mounted storage.

By creating multiple pools, you can establish volume groups with certain performance objectives in mind and ensure that the proper datasets are placed those volumes. For example, some of your volumes may deliver better access because of your hardware configuration. These volumes would be likely candidates for your online files where quick access is critical. Or, you can create volume groups that will ensure that datasets with simultaneous, heavy access are properly separated. Pools, and their usage, will depend on the requirements of your installation.

Bear in mind that the various subcommands - ALLOW, DISALLOW, and POOLS - only establish the QuickPool environment. Enabling, or disabling the QuickPool function is done via the OPTIONS keyword of the DASDCNTL IGGPRE00 subcommand (see discussion on "IGGPRE00 Command" on page DASD-2.)

Note: Whenever QuickPool encounters an DFSMS dataset that is about to be created, QuickPool always allows the allocation to take place. QuickPool doesn't process DFSMS datasets.

•   The QuickPool function is useful for those planning for IBM's DFSMS (Systems Managed Storage).

VOLGROUPS

Volume groups establish a list of DASD volume serial numbers. Such group names are used wherever OS/EM would require a list of volume serial numbers for example, the defragmentation function of HSM support.

Further, if your installation has established a naming scheme for DASD volumes, lists can consist of serial number masks that can resolve to many different volumes. Lists can consist of both discrete volume serial numbers and volume masks.

Groups are established by you as you require them. Volume serial numbers and volume masks can appear in more than one group. This allows you to create groups tailored to a particular function. For an example, see discussion on "Volume/Jobname Masks" on page C-1.

Volume serial numbers and volume masks are resolved to a particular group by going through the groups specified for a function in alphabetical order.

Note: Serial numbers and volume masks within each group are searched in the order in which you you list them.

Command Syntax

```
OS$CNTL DASDPOOL
    NOVOLgroups|VOLgroups -
        (NOgrpname|grpname(volser,volmask,...))
```

VOLGROUPS   Specifies that VOLGROUPS are being defined.

NOVOLGROUPS

Specifies all volume group definitions will be unavailable to any OS/EM function that requires them.

grpname   A grpname is an up to an eight character name chosen by you for the group.

Note: Volume Group Names may not start with the characters 'NO'.

NOgrpname   Specifies all volumes that would normally resolve to the group are unavailable to OS/EM functions.

Note: We strongly suggest that grpnames somehow indicate the purpose for which the group is created.

volser

volmask   The list of volume serial numbers and volume masks which constitute the group. Creating volume masks is explained "Volume/Jobname Masks" on page C-1.

Example

The following command will establish five volume groups:

```
OS$CNTL DASDPOOL VOLGROUPS ( -
    CICSGRP ( IFP001 IFP1%% IFPCIS ) -
    BATCH ( IFP2%% ) -
    WORK ( WRK001 WRK002 IFP301 IFP304 ) -
    TEMP ( ?????? ) -
    SYS ( MVS??? ) )
```

The first volume group, CICSGRP, will consist of volumes IFP001, IFPCICS, any volume beginning with IFP1 and any other two numerics such as IFP100 or IFP152.

The second group, BATCH, will consist of volumes beginning with IPF2 and two numerics such as IFP201 or IFP299.

The third group, WORK, will be used for various work files and consists of volumes WRK001, WRK002, IFP301 and IFP304.

The fourth group, TEMP, will consist of every volume in the installation. (Presumably, the dataset names assigned to this group will truly be temporary.)

The final group, SYS, will consist of all volumes beginning with MVS.

•   Dataset names are assigned to volume groups by use of the POOLS keyword keyword which is described on "POOLS" on page POOL-5.

DSNGROUPS

Dataset name groups establish a list of dataset names. Such group names are used wherever OS/EM would require a list of dataset names; for example, the Backup, Migration, and Direct-to-ML2 functions of HSM support.

Further, if your installation has an established naming convention for dataset names, a group can consist of dataset name masks that can resolve to many different discrete dataset names. Lists can consist of both fully qualified dataset names and masks.

Groups are established by you as you require them. Fully qualified dataset names and masks can appear in more than one group. This allows you to create groups tailored to a particular function. For example, a dataset name or mask may be in an EXCLUDE group for the Direct-to-ML2 function of Migration control. The same dataset name or mask may also be in an INCLUDE group for Delete-by-Age control.

Fully qualified dataset names and masks are resolved to a particular group by going through the groups specified for a function in alphabetical order.

Note: Dataset names and masks within each group are searched in the order in which you list them.

Command Syntax

```
OS$CNTL DASDPOOL
  NODSNgroups|DSNgroups –
    (NOgrpname|grpname(dataset name, dataset name mask,...))
```

DSNGROUPS   Specifies that DSNGROUPS are being defined.

NODSNGROUPS

Specifies all dataset name group definitions will be unavailable to any OS/EM function that requires them.

grpname   A grpname is an up to eight character name chosen by you for the group.

Note: Dataset Name Groups may not start with the characters 'NO'.

NOgrpname   Specifying NO will make all datasets that would normally resolve to the group unavailable to OS/EM functions.

Note: We strongly suggest that grpnames somehow indicate the purpose for which the group is created.

dataset name

dataset name mask

The list of fully qualified dataset names and dataset masks which constitute the group. How dataset name groups are constructed is explained "Dataset name masks" on page B-1.

Example

The following command will create six dataset name groups (a typical installation would probably establish a much larger number of groups):

```
OS$CNTL DASDPOOL DSNGROUPS ( -
  PAYROLL ( DM3.PAY.+ ) -
  TEMP ( T??.XY????.+ ) -
  ONLINE1 ( CIS.MED%%.- ) -
  ONLINE2 ( CIS.AUTO??.+ ) -
  SYSTEM ( SYS%.+ SYS&.+ ) -
  ZZ ( + ) )
```

All six groups are created by using masks. This will ensure that as new datasets are created, they are included in the proper groups.

The first group, PAYROLL, consists of all datasets that begin with DM3.PAY as the first two nodes. All other nodes will be ignored in determining a match. DM3.PAY.DAILY and DM3.PAY.MONTHLY will be considered as belonging to the PAYROLL group.

The second group, TEMP, consists of all datasets where the first node begins with a T and any two other characters; and the second node begins with XY and has four more characters. Any other nodes will be irrelevant in determining a match. For example, TAR.XY01CC.WORK will belong to this group. T01A.XY8.WORK will not belong since the first node is four characters long rather than the specified three.

Groups ONLINE1 and ONLINE2 establish two different groups of online files. Both groups have a first node of CIS. ONLINE1 has a second group that has MED as its first three characters and two numeric characters. ONLINE2 has a second node that has AUTO as its first four characters and any other two characters. ONLINE1 may only have one other node name. ONLINE2 may have three or more node names.

The SYSTEM group consists of all datasets that begin with SYS. Any system dataset can consist of two or more nodes. This example could also have been coded as SYSTEM (SYS?.+).

Finally, the ZZ group will consist of every dataset in the installation. However, since OS/EM searches group names in alphabetic sequence, this group contains, essentially, only those datasets that have not been matched in any of the other groups. Such a technique can be used to reduce the number of dataset groups that you actually have to create. (The primary use of such a group would be in establishing pools as described on "POOLS" on page POOL-5).

ALLOW

The ALLOW subcommand specifies which datasets will be globally allowed on any DASD volume within your installation, and is used in establishing the OS/EM QuickPool environment.

Command Syntax

```
OS$CNTL DASDPOOL -
  NOALlow|ALlow -
    (dsngrp,...)
```

ALLOW

NOALLOW   Specifies that all datasets named within the specified dataset name groups will be allowed on any volume within your installation. If NOALLOW is specified, any global ALLOW list already in effect will be disabled.

dsngrp   A dsngrp name points to a list of dataset names or dataset name masks as defined by you via the DSNGROUPS keyword. Such names do not have to exist when you define them here, but they must be defined at the time you enable the QuickPool function.

Example

Given the TEMP dataset name group created in the above DSNGROUPS example, the following command will allow any such datasets to be allocated on any volume in the installation.

```
OS$CNTL DASDPOOL ALLOW(TEMP))
```

DISALLOW

The DISALLOW subcommand specifies which datasets will be globally disallowed on any DASD volume within your installation, and is used in establishing the OS/EM QuickPool environment.

Command Syntax

```
OS$CNTL DASDPOOL –
  NODISALlow|DISALlow –
    (dsngrp,...)
```

DISALLOW

NODISALLOW

Specifies that all datasets named within the specified dataset name groups will not be allowed on any volume within your installation. If NO is specified, any global DISALLOW list already in effect will be deleted.

dsngrp   A dsngrp name points to a list of dataset names or dataset name masks as defined by you via the DSNGROUPS keyword. Such names do not have to exist when you define them here, but they must be defined at the time you enable the QuickPool function.

Example

Assume that you have created a ZZ dataset name group as explained in the DSNGROUPS example above. Further assume that all valid dataset names within your installation have been defined in other groups. The ZZ group then represents datasets which do not conform to your naming standards.

```
OS$CNTL DASDPOOL DISALLOW(ZZ))
```

Any dataset which resolves to the ZZ group will be failed during allocation.

POOLS

The POOLS subcommand creates the relationship between volume groups and dataset name groups. Once this subcommand is issued, the OS/EM QuickPool environment is fully established. Enabling the QuickPool function is then a matter of specifying OPTIONS on the OS$CNTL DASDCNTL IGGPRE00 command.

Command Syntax

```
OS$CNTL DASDPOOL -
  NOPools|Pools -
    (NOvolgrp|volgrp{(Allow(dsngrp,...)|DISAllow(dsngrp,...) } -
    .
    .
    .
    NOvolgrp|volgrp{(Allow(dsngrp,...)|DISAllow(dsngrp,...)}})
```

POOLS

NOPOOLS   Specifies that volume group/dataset name group relationships are being defined. If NO is specified, POOL definitions will not be available. The effect will be the same as specifying NOOPTIONS on the DASDCNTL IGGPRE00 subcommand.

volgrp   Names the volume group being associated with ALLOWed or DISALLOWed dataset name groups.

NOvolgrp   Specifying NO will make the volume group/dataset name groups association unavailable to the QuickPool function.

ALLOW

DISALLOW   Each volgrp may have a list of dataset group names associated with it. This list may be either an ALLOW list, or a DISALLOW list. If an ALLOW list is entered, one of two actions will occur. In the case of a non-directed dataset allocation, each dataset within the listed dataset name groups will be allocated on a volume within the volume group. In the case of directed dataset allocation, dataset allocation on a volume within the volume group will only be allowed if the dataset is resolved to one of the listed dataset name groups. If a DISALLOW list is entered, no dataset within a dataset name group within a allocated, or allowed to be allocated, on any volume within the volume group.

Note: If a volume group is coded without ALLOW or DISALLOW lists, the group will be controlled by the global ALLOW and DISALLOW lists. If you do not code these subcommands, and their attendant lists, such volumes will not be eligible for allocation.

Note: SYS1 datasets are always initially allowed on any volume. However, you cannot rename a dataset to SYS1 unless you have specifically allowed SYS1 datasets on the volume.

dsngrp   The dataset name groups which are being ALLOWed or DISALLOWed for the volume group.

DASDCNTL Command

The OS$CNTL DASDCNTL command specifies the basic and optional control functions for the IGGPRE00 and IGGPOST0 exits.

The basic function determines whether or not the exits will be active; loads the specified user exit modules; and sets LIMIT checking for the corresponding exit modules.

The optional function is currently available for IGGPRE00. At its basic level, it can be used to enforce your installation's DASD allocation rules such as not allowing ISAM files, or prohibiting contiguous extent allocation requests. It is also used to enable, or disable, the OS/EM QuickPool function (see the DASDPOOLS command "POOLS" on page POOL-5).

IGGPRE00 Command

Both basic and optional functions are supplied for this exit.

```
OS$CNTL DASDCNTL                                                    -
  {NOABendnotify|ABendnotify(                                       -
     0|*|id1 {0|*|id2 {0|*|id3 }})}                                 -
  {LIBrary(library.dsn)}                                            -
  {NOIGGPRE00|IGGPRE00(                                        -
       {ENable|DISABLE}                                            -
       {NUmber( num1 num2 num3 )}                                  -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}   -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})} -
       {NOABendnotify|ABendnotify(                                 -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                        -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                        -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                     -
       {NOLIMit|LIMit(                                             -
         (jobmask1,...)|*|0                                        -
        {(jobmask2,...)|*|0                                        -
        {(jobmask3,...)|*|0}})}                                    -
       {NOVAlidrc|VAlidrc(rc,...)}                                 -
       {NOGoodrc|Goodrc(rc,...)}                                   -
       {NODIsablerc|DISABLERc(rc)}                                 -
       {DEFaultrc(rc)}                                             -
       {NOOptions|Options(                                         -
               {NOAbendnotify|Abendnotify(id)}                     -
               {DSorg|NODSorg}                                     -
               {First|Last}                                        -
               {Warn|NOWarn}                                       -
               {Trace|NOTrace}                                     -
               {Enable|DIsable}                                    -
               {NOQuickpool|Quickpool({Control|NOControl})}    -
               {NODEfault|DEfault(                                 -
                       {ABstr|NOABstr}                             -
                       {Contig|NOContig}                           -
                       {Mxig|NOMxig}                               -
                       {Alx|NOAlx}                                 -
                       {Single|NOSingle}                           -
                       {Isam|NOIsam}                               -
                       {Unmove|NOUnmove}                           -
                       {ADsp|NOADsp|RESETAdsp}                     -
                       {Prot|NOProt|RESETProt}        )}           -
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any DFP exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for DFP exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IGGPRE00 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IGGPRE00 modules.

library.dsn
> Specifies the name of a private **authorized** library used to locate and load the DFP IGGPRE00 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IGGPRE00 Specifies that the IGGPRE00 exit point is to be activated.

NOIGGPRE00 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named IGGPRE00 exit point is be passed control for exit module execution.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

> **num1, num2, num3**
>> Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
>>
>> If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS Specifies that any active IGGPRE00 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of IGGPRE00 user exits be activated. This can be specified at initialization, or later to load and activate IGGPRE00 user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**

> **exit2**

> **exit3**
>> The module name of the user exit that is assigned to the specified IGGPRE00 exit point.

> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

> **0** A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP Specifies that all active backup IGGPRE00 user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IGGPRE00 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that

were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
>   The module name of the backup user exit that is assigned to the specified DFP exit point.

*
>   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup DFP user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
>   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
>   Specifies that when a IGGPRE00 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IGGPRE00 exit module has ABENDed.

NOABENDNOTIFY
>   The NO option can be used to nullify the option to notify a TSO user of IGGPRE00 exit module ABENDs.
>
>   **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
>   The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
>   The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
>   The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.
>
>   **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*
>   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
>   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IGGPRE00 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
> The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
> A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

> **rc**   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IGGPRE00 user exit modules. A good return code allows subsequent IGGPRE00 user exit modules to be called. OS/EM provides a default list. For example, if a DFP user exit for IGGPRE00 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

> **rc**   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
> NODISABLERC turns off disable return code checking for the exit point.

> **rc**   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

> **rc**   Default return codes values are any numeric value

IGGPRE00 Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for IGGPRE00

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for IGGPRE00.

Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

The QuickPool function is enabled, or disabled, by using this keyword.

ABENDNOTIFY
Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3
The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'
An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
A zero (0) can be used to negate a previous entry of the notify TSO user list.

DSORG
Specifies that all new datasets will have a DSORG=PS forced if none is specified. This is critical if datasets are allocated but never opened, because DFHSM will not migrate or backup datasets with unknown DSORGs.

NODSORG
Specifies that no DSORG will be forced for new datasets if none is present.

FIRST

LAST
Specifies whether the optional OS/EM JCL Standards functions for IGGPRE00 will be applied before or after the user exits are invoked.

Note: OS/EM control functions are invoked FIRST by default.

WARN
Specifies whether OGGPOST0 will be activated in WARN mode. The warn option specifies that OS/EM will simulate the activation of OGGPOST0 functions, and issue messages if the request would cause the function to fail for the OGGPOST0 function.

NOWARN
NOWARN is the default, and specifies that OS/EM will perform the OGGPOST0 functions as specified by the options selected for the OGGPOST0 function.

TRACE
Write GTF Trace records for critical control blocks, used in Problem Determination for OS/EM Optional functions in conjunction with OS/EM support.

NOTRACE
Disables GTF trace records (This is the default)

QUICKPOOL

NOQUICKPOOL
Specifies that the QuickPool function is to be enabled. NOQUICKPOOL disables the function.

CONTROL

NOCONTROL
Specifies whether all your installation's DASD volumes will be under the control of the QuickPool function (CONTROL); or only those volumes specified with the POOLS operand of the DASDPOOLS command (NOCONTROL).

If CONTROL is specified and you have volumes not covered by the POOLS operand only datasets that are part of the dataset name groups you list in the ALLOW operand of DASDPOOLS, or SYS1 datasets, will be allocated on these volumes.

DEFAULT

NODEFAULT   Specifies the options in the following keywords which will apply to dataset allocation. If this keyword is not specified or NODEFAULT is specified all options are assumed to be NO.

ABSTR

NOABSTR   Specifies whether ABSTR allocation will be allowed or disallowed.

CONTIG

NOCONTIG   Specifies whether CONTIG allocation will be allowed or disallowed.

MXIG

NOMXIG   Specifies whether MXIG allocation will be allowed or disallowed.

ALX

NOALX   Specifies whether ALX allocation will be allowed or disallowed.

SINGLE

NOSINGLE   Specifies whether single-level dataset names will be allowed or disallowed.

ISAM

NOISAM   Specifies whether ISAM datasets will be allowed or disallowed.

UNMOVE

NOUNMOVE   Specifies whether unmovable datasets will be allowed or disallowed.

ADSP

NOADSP   Specifies whether requests for datasets with the ADSP attribute will be allowed or disallowed.

RESETADSP   RESETADSP specifies that for datasets with the ADSP attribute, the ADSP attribute will be turned off.

PROT

NOPROT   Specifies whether discrete RACF profiles will be allowed or disallowed.

RESETPROT   RESETPROT specifies that for datasets with the discrete attribute, the discrete attribute will be deleted.

Example

```
OS$CNTL DASDCNTL IGGPRE00 –
  (NOEXITS –
    OPTIONS( –
    WARN –
    DEFAULT( –
    CONTROL –
    NOABSTR –
    NOCONTIG –
    NOISAM –
    NOUNMOVE)))
```

This command establishes the following:

• No user exits are invoked

• OPTIONS are enabled; therefore, the OS/EM QuickPool function will be active but you must have done the proper definitions via the DASDPOOLS subcommand

• All the volumes in your installation will be controlled by the QuickPool function

• Allocations using absolute track placement will not be allowed

• Allocations requesting contiguous space will not be allowed

• ISAM files will not be allowed

• Unmovable files will not be allowed.

IGGPOST0 Command

OS/EM only supplies basic control functions for this exit.

```
OS$CNTL DASDCNTL                                                        -
 {NOABendnotify|ABendnotify(                                            -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                      -
 {LIBrary(library.dsn)}                                                 -
 {NOIGGPOST0|IGGPOST0(                                           -
        {ENable|DISABLE}                                               -
        {NUmber( num1 num2 num3 )}                                     -
        {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}    -
        {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
        {NOABendnotify|ABendnotify(                                     -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                            -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                            -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                         -
        {NOLIMit|LIMit(                                                 -
          (jobmask1,...)|*|0                                           -
         {(jobmask2,...)|*|0                                           -
         {(jobmask3,...)|*|0}})}                                       -
        {NOVAlidrc|VAlidrc(rc,...)}                                     -
        {NOGoodrc|Goodrc(rc,...)}                                       -
        {NODIsablerc|DISABLERc(rc)}                                     -
        {DEFaultrc(rc)}                                                 -
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any DFP exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for DFP exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a IGGPOST0 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IGGPOST0 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the DFP IGGPOST0 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IGGPOST0 Specifies that the IGGPOST0 exit point is to be activated.

NOIGGPOST0 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named IGGPOST0 exit point is be passed control for exit module execution.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

        num1, num2, num3

              Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

              If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IGGPOST0 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IGGPOST0 user exits be activated. This can be specified at initialization, or later to load and activate IGGPOST0 user exits that were not activated at initialization. The exits will be called in the order listed.

        exit1

        exit2

        exit3

              The module name of the user exit that is assigned to the specified IGGPOST0 exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IGGPOST0 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IGGPOST0 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

        exit1

        exit2

        exit3

              The module name of the backup user exit that is assigned to the specified DFP exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup DFP user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IGGPOST0 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IGGPOST0 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IGGPOST0 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT Specifies that Job name limits are requested, to limit user exit modules for IGGPOST0 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

* An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc	Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IGGPOST0 user exit modules. A good return code allows subsequent IGGPOST0 user exit modules to be called. OS/EM provides a default list. For example, if a DFP user exit for IGGPOST0 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

rc	Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

NODISABLERC turns off disable return code checking for the exit point.

rc	Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc	Default return codes values are any numeric value

Example with LIMIT checking

The following example shows the activation of the DADSM IGGPOST0 exit with LIMIT checking specified.

```
OS$CNTL DASDCNTL IGGPOST0(EXITS(USRALLOC) -
    LIMIT((MYJOB))
```

Exit USRALLOC will apply only to job MYJOB, allowing for the testing of the exit prior to placing it into production.

Example Turn off LIMIT Checking

Given the command in the above example, it is decided that exit USRALLOC finally works and is to be applied to all jobs:

```
OS$CNTL DASDCNTL IGGPOST0(EXITS(*) -
    NOLIMIT)
```

HSM Command

The OS$CNTL HSM command specifies all the basic and most optional control functions for DFHSM (the optional functions are known as the HSM Optimizer). The IGGPRE00 exit specifies the default DSORG of PS for allocated but never opened datasets.

Many of the optional DFHSM control functions depend on the proper DFHSM specifications in the DFHSM ARCCMDxx parm member. For example, if you have not specified that DFHSM Delete-by-age processing be done, the optional function will not be invoked. Please consult the DFHSM Installation and Customization Guide, User Exits for complete information.

In order to activate the HSM Optimizer functions, the DFHSM ARCCMDxx parm member must be updated to enable all the DFHSM exits.

```
SETSYS EXITON(AD BD BE CB CD CR ED IN MD MM)
SETSYS EXITON(MV M2 RD RP SA SD SK TD TE TV)
```

ARCADEXT

This is the dataset deletion exit. You have access to this exit during dataset deletion or dataset retirement processing. This exit is not called for SMS-managed datasets.

OS/EM supplies optional control functions for this exit: Delete-by-Age (DBA) and Delete-if-Backed-Up (DBU) control.

Delete-by-Age control and Delete-if-Backed-Up control extends the aging process that DFHSM supplies. Where DFHSM allows the specification of a single number of days by DFHSM managed volume after which datasets will be deleted for either DBA or DBU volumes.

OS/EM allows both DBA and DBU datasets mixed on a single volume and the specification of a different number of days by dataset name mask and/ or size of dataset in kilobytes at time the dataset is to be deleted. The combination of the dataset name, dataset size and number of days old may also be considered.

Note: This exit is not taken for DFSMS managed datasets.

```
OS$CNTL HSM                                                      -
 {NOABendnotify|ABendnotify(                                     -
      0|*|id1 {0|*|id2 {0|*|id3}})}                              -
 {LIBrary(library.dsn)}                                          -
 {NOARCADEXT|ARCADEXT(                                           -
       {ENable|DISABLE}                                          -
       {NUmber( num1 num2 num3 )}                                -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}        -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}      -
       {NOABendnotify|ABendnotify(                               -
           ( 0|*|id1a {0|*|id2a {0|*|id3a}} )}                   -
           ( 0|*|id1b {0|*|id2b {0|*|id3b}} )}                   -
           ( 0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                -
       {NOVAlidrc|VAlidrc(rc,...)}                               -
       {NOGoodrc|Goodrc(rc,...)}                                 -
       {NODIsablerc|DISABLERc(rc)}                               -
       {DEFaultrc(rc)}                                           -
      {NOOPtions|OPtions(                                        -
        {NOABendnotify|ABendnotify(id)}                          -
        {FIrst|Last}                                             -
        {Trace|NOTrace}                                          -
        {NODELetecontrol|DELetecontrol(                          -
          {NOHOLD|HOLD({MAxsize(nn)} {OR|AND}                    -
            {INclude(dsngroup,...)})}                            -
          {NOHOLD01|HOLD01({MAxsize(nn)} {OR|AND}                -
            {INclude(dsngroup,...)})}                            -
          {NOHOLD02|HOLD02({MAxsize(nn)} {OR|AND}                -
            {INclude(dsngroup,...)})}                            -
          {NOHOLD03|HOLD03({MAxsize(nn)} {OR|AND}                -
            {INclude(dsngroup,...)})}                            -
          {NOHOLD04|HOLD04({MAxsize(nn)} {OR|AND}                -
            {INclude(dsngroup,...)})}                            -
          {NOHOLD05|HOLD05({MAxsize(nn)} {OR|AND}                -
            {INclude(dsngroup,...)})}                            -
          {NOHOLD06|HOLD06({MAxsize(nn)} {OR|AND}                -
            {INclude(dsngroup,...)})}                            -
          {NOHOLD07|HOLD07({MAxsize(nn)} {OR|AND}                -
            {INclude(dsngroup,...)})}                            -
          {NOHOLD08|HOLD08({MAxsize(nn)} {OR|AND}                -
            {INclude(dsngroup,...)})}                            -
          {NOHOLD09|HOLD09({MAxsize(nn)} {OR|AND}                -
```

```
                  {INclude(dsngroup,...)})})                          -
      {NOHOLD10|HOLD10({MAxsize(nn)}  {OR|AND}                         -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD15|HOLD15({MAxsize(nn)}  {OR|AND}                        -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD20|HOLD20({MAxsize(nn)}  {OR|AND}                        -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD25|HOLD25({MAxsize(nn)}  {OR|AND}                        -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD30|HOLD30({MAxsize(nn)}  {OR|AND}                        -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD35|HOLD35({MAxsize(nn)}  {OR|AND}                        -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD40|HOLD40({MAxsize(nn)}  {OR|AND}                        -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD45|HOLD45({MAxsize(nn)}  {OR|AND}                        -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD50|HOLD50({MAxsize(nn)}  {OR|AND}                        -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD60|HOLD60({MAxsize(nn)}  {OR|AND}                        -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD70|HOLD70({MAxsize(nn)}  {OR|AND}                        -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD80|HOLD80({MAxsize(nn)}  {OR|AND}                        -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD80|HOLD90({MAxsize(nn)}  {OR|AND}                        -
        {INclude(dsngroup,...)})}) )}                                 -
    {NORETirecontrol|RETirecontrol(                                   -
      {NOHOLD|HOLD({MAxsize(nn)}  {OR|AND}                            -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD01|HOLD01({MAxsize(nn)}  {OR|AND}                        -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD02|HOLD02({MAxsize(nn)}  {OR|AND}                        -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD03|HOLD03({MAxsize(nn)}  {OR|AND}                        -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD04|HOLD04({MAxsize(nn)}  {OR|AND}                        -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD05|HOLD05({MAxsize(nn)}  {OR|AND}                        -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD06|HOLD06({MAxsize(nn)}  {OR|AND}                        -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD07|HOLD07({MAxsize(nn)}  {OR|AND}                        -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD08|HOLD08({MAxsize(nn)}  {OR|AND}                        -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD09|HOLD09({MAxsize(nn)}  {OR|AND}                        -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD10|HOLD10({MAxsize(nn)}  {OR|AND}                        -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD15|HOLD15({MAxsize(nn)}  {OR|AND}                        -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD20|HOLD20({MAxsize(nn)}  {OR|AND}                        -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD25|HOLD25({MAxsize(nn)}  {OR|AND}                        -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD30|HOLD30({MAxsize(nn)}  {OR|AND}                        -
        {INclude(dsngroup,...)})})                                    -
      {NOHOLD35|HOLD35({MAxsize(nn)}  {OR|AND}                        -
```

```
                    {INclude(dsngroup,...)})}                                        –
          {NOHOLD40|HOLD40({MAxsize(nn)} {OR|AND}                                     –
            {INclude(dsngroup,...)})}                                                 –
          {NOHOLD45|HOLD45({MAxsize(nn)} {OR|AND}                                     –
            {INclude(dsngroup,...)})}                                                 –
          {NOHOLD50|HOLD50({MAxsize(nn)} {OR|AND}                                     –
            {INclude(dsngroup,...)})}                                                 –
          {NOHOLD60|HOLD60({MAxsize(nn)} {OR|AND}                                     –
            {INclude(dsngroup,...)})}                                                 –
          {NOHOLD70|HOLD70({MAxsize(nn)} {OR|AND}                                     –
            {INclude(dsngroup,...)})}                                                 –
          {NOHOLD80|HOLD80({MAxsize(nn)} {OR|AND}                                     –
            {INclude(dsngroup,...)})}                                                 –
          {NOHOLD90|HOLD90({MAxsize(nn)} {OR|AND}                                     –
            {INclude(dsngroup,...)})} )} )} )}                                        –
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any DFHSM exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for DFHSM exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ARCADEXT exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ARCADEXT modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the DFHSM ARCADEXT user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ARCADEXT   Specifies that the ARCADEXT exit point is to be activated.

NOARCADEXT
> The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ARCADEXT exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

> **num1, num2, num3**
> Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

> If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e.

NUMBER(7) OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ARCADEXT user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ARCADEXT user exits be activated. This can be specified at initialization, or later to load and activate ARCADEXT user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3
The module name of the user exit that is assigned to the specified ARCADEXT exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ARCADEXT user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ARCADEXT user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
The module name of the backup user exit that is assigned to the specified DFHSM exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup DFHSM user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a ARCADEXT exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ARCADEXT exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of ARCADEXT exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
> The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
> The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
> The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

> **rc**   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by ARCADEXT user exit modules. A good return code allows subsequent ARCADEXT user exit modules to be called. OS/EM provides a default list. For example, if a DFHSM user exit for ARCADEXT set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

> **rc**   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
> NODISABLERC turns off disable return code checking for the exit point.
>
> **rc**   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

> **rc**   Default return codes values are any numeric value

ARCADEXT Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for ARCADEXT

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for ARCADEXT.

Note: The optional OS/EM HSM Optimizer control functions must be installed for this parameter to have any effect.

ABENDNOTIFY

Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3

The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

FIRST

LAST   Specifies whether the optional OS/EM HSM Optimizer functions for ARCADEXT will be applied before or after the user exits are invoked.

Note: OS/EM control functions are invoked FIRST by default.

DELETECONTROL

NODELETECONTROL

Specifies whether or not optional OS/EM Delete-by-Age processing will be done. The NODELETECONTROL parameter will disable optional Delete-by-Age processing. That is, normal DFHSM processing will be done according to your installations specifications in ARCCMDxx.

RETIRECONTROL

NORETIRECONTROL

Specifies whether optional OS/EM Delete-if-backed-up processing will be done - RETIRECONTROL, or DFHSM Delete-if-backed-up processing will be done.

HOLD{(nn)}

NOHOLD

Specifies whether or not datasets will be eligible for optional OS/EM processing - HOLD; or normal DFHSM processing - NOHOLD. If HOLD and a dataset meets OS/EM HSM Optimizer eligibility requirements, the dataset will be held; that is, it will not be deleted.

Without the optional number-of-days suffix, this parameter applies to all datasets that meet either the specified size AND | OR dataset name pattern. Such datasets will never be deleted (you are, in effect, specifying that such datasets be held for 9999 days).

The number-of-days suffix specifies how many days old the dataset must be before it is eligible for processing. The number-of-days suffix is specified in one-day increments between one and ten days. Five day increments are specified between ten and 50 days. Ten-day increments are specified between 50 and 90 days.

MAXSIZE(nn)
> Designates the maximum size dataset that should be retained on a volume. Datasets larger than this size will not be held on the volume. The size is specified in kilobytes (K).

NOMAXSIZE
> Specifying NOMAXSIZE will disable a previously established MAXSIZE.

OR

AND
> Specifies the logical connective between the MAXSIZE parameter and INCLUDEd dataset name groups. If a dataset is less than or equal to the MAXSIZE OR matches one of the datasets within any of the included groups, the dataset will be processed. Either case will satisfy eligibility requirements. If the dataset is less than or equal to the MAXSIZE AND matches one of the datasets within any of the included groups, only then will the dataset be eligible for processing.

INCLUDE
> Specifies one, or more, dataset name groups to be included for exit ARCADEXT processing

NOINCLUDE
> Specifying NOINCLUDE will delete a previously established INCLUDE list.

> **dsngroup**
> > The dataset name groups which contain a list of dataset names and/or dataset name patterns which will be included.
> >
> > Creating dataset name groups is explained on "Appendix B. Define Dataset Name Groups" on page B-1.

Example DELETECONTROL and RETIRECONTROL

DFHSM processing includes the option to delete datasets that are no longer needed and which have reached a certain age. Further, you can specify whether or not datasets that have been backed up by DFHSM should be deleted from DASD. However, no provision is made to be selective as to which datasets will be so processed. The optional OS/EM HSM Optimizer ARCADEXT function supplies this capability.

```
OS$CNTL HSM ARCADEXT ( OPTIONS -
  FIRST -
  DELETE( -
    HOLD(MAXSIZE(50) AND -
      INCLUDE(SYSXGRP P3RDINS)) -
    HOLD02(MAXSIZE(130) OR -
      INCLUDE(TESTGRP)) -
    HOLD10(INCLUDE(DEVTMP)) -
    HOLD15(MAXSIZE(30) AND -
      INCLUDE(TESTT))) -
  RETIRE( -
    HOLD30(INCLUDE(DEVTEST)) -
    HOLD90(MAXSIZE(50) -
      INCLUDE(PRODW))))
```

This command specifies that both Delete-By-Age and Delete-If-Backed-Up processing be done.

ARCBDEXT

This is the dataset backup exit. You have access to this exit during volume backup processing, when a dataset meets the selection criteria.

OS/EM supplies optional control functions for this exit: Backup control. A list of datasets that should not be backed-up may be specified.

```
OS$CNTL HSM                                                    -
  {NOABendnotify|ABendnotify(                                  -
       0|*|id1 {0|*|id2 {0|*|id3}})}                          -
  {LIBrary(library.dsn)}                                      -
  {NOARCBDEXT|ARCBDEXT(                                       -
       {ENable|DISABLE}                                       -
       {NUmber( num1 num2 num3 )}                             -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}     -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}   -
       {NOABendnotify|ABendnotify(                            -
          ( 0|*|id1a {0|*|id2a {0|*|id3a}} )}                 -
          ( 0|*|id1b {0|*|id2b {0|*|id3b}} )}                 -
          ( 0|*|id1c {0|*|id2c {0|*|id3c}} )} )}              -
       {NOVAlidrc|VAlidrc(rc,...)}                            -
       {NOGoodrc|Goodrc(rc,...)}                              -
       {NODIsablerc|DISABLERc(rc)}                            -
       {DEFaultrc(rc)}                                        -
     {NOOPtions|OPtions(                                      -
       {NOABendnotify|ABendnotify(ID)}                        -
       {FIrst|Last}                                           -
       {Trace|NOTrace}                                        -
       {NOBackupcontrol|BAckupcontrol(                        -
          NOEXClude|EXClude(dsngroup,...))} )} )}             -
```

ABENDNOTIFY
Specifies that a TSO message will be sent if any DFHSM exit ABENDs.

NOABENDNOTIFY
Specifies that no messages will be sent for DFHSM exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ARCBDEXT exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ARCBDEXT modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the DFHSM ARCBDEXT user exit. The library name should be enclosed in single quotes (').
>
> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ARCBDEXT   Specifies that the ARCBDEXT exit point is to be activated.

NOARCBDEXT
The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named ARCBDEXT exit point is be passed control for exit module execution.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

       num1, num2, num3
             Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

             If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS Specifies that any active ARCBDEXT user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of ARCBDEXT user exits be activated. This can be specified at initialization, or later to load and activate ARCBDEXT user exits that were not activated at initialization. The exits will be called in the order listed.

       exit1

       exit2

       exit3
             The module name of the user exit that is assigned to the specified ARCBDEXT exit point.

       *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

       0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP Specifies that all active backup ARCBDEXT user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup ARCBDEXT user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

       exit1

       exit2

       exit3
             The module name of the backup user exit that is assigned to the specified DFHSM exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup DFHSM user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a ARCBDEXT exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ARCBDEXT exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of ARCBDEXT exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by ARCBDEXT user exit modules. A good return code allows subsequent ARCBDEXT user exit modules to be called. OS/EM provides a default list. For example, if a DFHSM user exit for ARCBDEXT set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
                     NODISABLERC turns off disable return code checking for the exit point.

    rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc   Default return codes values are any numeric value

ARCBDEXT Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for ARCBDEXT

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for ARCBDEXT.

                     Note: The optional OS/EM HSM Optimizer control functions must be installed for this parameter to have any effect.

ABENDNOTIFY
                     Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY
                     The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

                     Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

    id1 id2 id3
                            The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

    '*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

FIRST

LAST   Specifies whether the optional OS/EM HSM Optimizer functions for ARCBDEXT will be applied before or after the user exits are invoked.

                     Note: OS/EM control functions are invoked FIRST by default.

TRACE   Write GTF Trace records for critical control blocks, used in Problem Determination for OS/EM Optional functions in conjunction with OS/EM support.

NOTRACE   Disables GTF trace records (This is the default)

BACKUPCONTROL

>Specifies that the HSM Optimizer ARCBDEXT exit will exclude datasets from DFHSM backup processing.

NOBACKUPCONTROL

>Specifies that the HSM Optimizer ARCBDEXT exit will not exclude datasets from DFHSM backup processing.

>**EXCLUDE**

>>Specifies that datasets matching any specified dataset name pattern within the specified dataset name groups will not be backed up during DFHSM backup processing.

>**NOEXCLUDE**

>>Specifying NO will disable any dataset name matching, effectively disabling optional control processing, and delete the EXCLUDE list.

>>**dsngroup**

>>>The dataset name groups which contain a list of dataset names and/or dataset name patterns which will be included.

>>>Creating dataset name groups is explained on "Appendix B. Define Dataset Name Groups" on page B-1.

Example

DFHSM regularly backs up those datasets which have been changed since the last backup. While an extremely useful function, no means are provided to instruct DFHSM to ignore those datasets for which backups are not needed or wanted.

The following command will result in DFHSM not backing up all datasets that match dataset names or dataset name masks contained within the dataset name groups specified.

```
OS$CNTL HSM ARCBDEXT(EXITS(USREXIT1) –
  OPTIONS(BACKUPCONTROL( –
    EXCLUDE(SYSTWRK $TEV))))
```

The above command also enables USREXIT1. Whatever its function, it will not be invoked until OS/EM processing is done since FIRST is the default. Therefore, USREXIT1 will never see any datasets that have been matched within the dataset name groups.

ARCBEEXT

This exit is the ABARS backup error exit. You have access to this exit during aggregate backup processing.

OS/EM only supplies basic exit control functions for ARCBEEXT.

```
OS$CNTL HSM                                                             -
 {NOABendnotify|ABendnotify(                                            -
      0|*|id1 {0|*|id2 {0|*|id3}})}                                     -
 {LIBrary(library.dsn)}                                                 -
 {NOARCBEEXT|ARCBEEXT(                                                  -
      {ENable|DISABLE}                                                  -
      {NUmber( num1 num2 num3 )}                                        -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}               -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}             -
      {NOABendnotify|ABendnotify(                                       -
          ( 0|*|id1a {0|*|id2a {0|*|id3a}} )}                          -
          ( 0|*|id1b {0|*|id2b {0|*|id3b}} )}                          -
          ( 0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                       -
      {NOVAlidrc|VAlidrc(rc,...)}                                       -
      {NOGoodrc|Goodrc(rc,...)}                                         -
      {NODIsablerc|DISABLERc(rc)}                                       -
      {DEFaultrc(rc)}                                                   -
```

ABENDNOTIFY

> Specifies that a TSO message will be sent if any DFHSM exit ABENDs.

NOABENDNOTIFY

> Specifies that no messages will be sent for DFHSM exit ABENDs.

> > **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ARCBEEXT exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ARCBEEXT modules.

> **library.dsn**
> > Specifies the name of a private **authorized** library used to locate and load the DFHSM ARCBEEXT user exit. The library name should be enclosed in single quotes (').

> > **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ARCBEEXT   Specifies that the ARCBEEXT exit point is to be activated.

NOARCBEEXT

> The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ARCBEEXT exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

       num1, num2, num3

              Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

              If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ARCBEEXT user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ARCBEEXT user exits be activated. This can be specified at initialization, or later to load and activate ARCBEEXT user exits that were not activated at initialization. The exits will be called in the order listed.

       exit1

       exit2

       exit3

              The module name of the user exit that is assigned to the specified ARCBEEXT exit point.

       *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

       0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ARCBEEXT user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ARCBEEXT user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

       exit1

       exit2

       exit3

              The module name of the backup user exit that is assigned to the specified DFHSM exit point.

       *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup DFHSM user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

       0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a ARCBEEXT exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ARCBEEXT exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of ARCBEEXT exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by ARCBEEXT user exit modules. A good return code allows subsequent ARCBEEXT user exit modules to be called. OS/EM provides a default list. For example, if a DFHSM user exit for ARCBEEXT set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

NODISABLERC turns off disable return code checking for the exit point.

rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc   Default return codes values are any numeric value

Example

The following command will establish user exits USREXT1 and USREXT2:

```
OS$CNTL HSM ARCBEEXT(EXITS( -
    (USREXT1 USREXT2))
```

ARCCBEXT

This exit is the control dataset backup exit. You have access to this exit after HSM creates backup copies of the control datasets.

OS/EM only supplies basic exit control functions for ARCCBEXT.

```
        OS$CNTL HSM                                                        -
         {NOABendnotify|ABendnotify(                                       -
             0|*|id1 {0|*|id2 {0|*|id3}})}                                 -
         {LIBrary(library.dsn)}                                            -
         {NOARCCBEXT|ARCCBEXT(                                             -
             {ENable|DISABLE}                                              -
             {NUmber( num1 num2 num3 )}                                    -
             {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}           -
             {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}         -
             {NOABendnotify|ABendnotify(                                   -
                 ( 0|*|id1a {0|*|id2a {0|*|id3a}} )}                       -
                 ( 0|*|id1b {0|*|id2b {0|*|id3b}} )}                       -
                 ( 0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                    -
             {NOVAlidrc|VAlidrc(rc,...)}                                   -
             {NOGoodrc|Goodrc(rc,...)}                                     -
             {NODIsablerc|DISABLERc(rc)}                                   -
             {DEFaultrc(rc)}                                               -
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any DFHSM exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for DFHSM exit ABENDs.

>> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ARCCBEXT exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ARCCBEXT modules.

> **library.dsn**
>> Specifies the name of a private **authorized** library used to locate and load the DFHSM ARCCBEXT user exit. The library name should be enclosed in single quotes (').

>> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ARCCBEXT   Specifies that the ARCCBEXT exit point is to be activated.

NOARCCBEXT
> The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ARCCBEXT exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

        num1, num2, num3

            Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

            If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ARCCBEXT user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ARCCBEXT user exits be activated. This can be specified at initialization, or later to load and activate ARCCBEXT user exits that were not activated at initialization. The exits will be called in the order listed.

        exit1

        exit2

        exit3

            The module name of the user exit that is assigned to the specified ARCCBEXT exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ARCCBEXT user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ARCCBEXT user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

        exit1

        exit2

        exit3

            The module name of the backup user exit that is assigned to the specified DFHSM exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup DFHSM user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a ARCCBEXT exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ARCCBEXT exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of ARCCBEXT exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by ARCCBEXT user exit modules. A good return code allows subsequent ARCCBEXT user exit modules to be called. OS/EM provides a default list. For example, if a DFHSM user exit for ARCCBEXT set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
NODISABLERC turns off disable return code checking for the exit point.

| | **rc** | Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY |

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

| | **rc** | Default return codes values are any numeric value |

Example

The following command will establish user exits USREXT1 and USREXT2:

```
OS$CNTL HSM ARCCBEXT(EXITS( –
    (USREXT1 USREXT2))
```

ARCCDEXT

This exit is the dataset reblock exit. You have access to this exit during recall or recovery processing.

OS/EM supplies optional control functions for ARCCDEXT: Reblock control.

Datasets may be reblocked for more efficient DASD utilization during recall processing.

Note: For non-DFSMS datasets only.

```
OS$CNTL HSM                                                      -
 {NOABendnotify|ABendnotify(                                     -
      0|*|id1 {0|*|id2 {0|*|id3}})}                              -
 {LIBrary(library.dsn)}                                          -
 {NOARCCDEXT|ARCCDEXT(                                      -
      {ENable|DISABLE}                                           -
      {NUmber( num1 num2 num3 )}                                 -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}      -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}    -
      {NOABendnotify|ABendnotify(                               -
          ( 0|*|id1a {0|*|id2a {0|*|id3a}} )}                  -
          ( 0|*|id1b {0|*|id2b {0|*|id3b}} )}                  -
          ( 0|*|id1c {0|*|id2c {0|*|id3c}} )} )}               -
      {NOVAlidrc|VAlidrc(rc,...)}                               -
      {NOGoodrc|Goodrc(rc,...)}                                 -
      {NODIsablerc|DISABLERc(rc)}                               -
      {DEFaultrc(rc)}                                           -
      {NOOPtions|OPtions(                                   -
       {NOABendnotify|ABendnotify(ID)}                          -
       {FIrst|Last}                                             -
       {Trace|NOTrace}                                          -
       {NOREBLOCK|REBLOCK(                                      -
         {SYstem( {MINsize(nn)} {EXClude(dsngroup,...)} )}  -
         {Full(   {MINsize(nn)} {EXClude(dsngroup,...)} )}  -
         {Half(   {MINsize(nn)} {EXClude(dsngroup,...)} )}  -
         {Third(  {MINsize(nn)} {EXClude(dsngroup,...)} )}  -
         {FOurth( {MINsize(nn)} {EXClude(dsngroup,...)} )}  -
         {FIfth(  {MINsize(nn)} {EXClude(dsngroup,...)} )}  -
         {SIxth(  {MINsize(nn)} {EXClude(dsngroup,...)} )}  -
         {SEventh({MINsize(nn)} {EXClude(dsngroup,...)} )}  -
         {EIGhth( {MINsize(nn)} {EXClude(dsngroup,...)} )}  -
         )} )} )}                                               -
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any DFHSM exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for DFHSM exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a ARCCDEXT exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ARCCDEXT modules.

> **library.dsn**
>> Specifies the name of a private **authorized** library used to locate and load the

DFHSM ARCCDEXT user exit. The library name should be enclosed in single quotes (').

Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ARCCDEXT   Specifies that the ARCCDEXT exit point is to be activated.

NOARCCDEXT

The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ARCCDEXT exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

      num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ARCCDEXT user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ARCCDEXT user exits be activated. This can be specified at initialization, or later to load and activate ARCCDEXT user exits that were not activated at initialization. The exits will be called in the order listed.

      exit1

      exit2

      exit3

The module name of the user exit that is assigned to the specified ARCCDEXT exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ARCCDEXT user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ARCCDEXT user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user

exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
> The module name of the backup user exit that is assigned to the specified DFHSM exit point.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup DFHSM user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
> A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
> Specifies that when a ARCCDEXT exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ARCCDEXT exit module has ABENDed.

NOABENDNOTIFY
> The NO option can be used to nullify the option to notify a TSO user of ARCCDEXT exit module ABENDs.

> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.

> **(id1a,id1b,id1c)**
>> The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

> **(id2a,id2b,id2c)**
>> The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

> **(id3a,id3b,id3c)**
>> The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

>> **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.

> *****
>> An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

> **0**
>> A zero (0) can be used to negate a previous entry of the notify TSO user list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

> **rc**   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by ARCCDEXT user exit modules. A good return code allows subsequent ARCCDEXT user exit modules to be

called. OS/EM provides a default list. For example, if a DFHSM user exit for ARCCDEXT set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

    rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
    NODISABLERC turns off disable return code checking for the exit point.

    rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc   Default return codes values are any numeric value

ARCCDEXT Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for ARCCDEXT

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for ARCCDEXT.

    Note: The optional OS/EM HSM Optimizer control functions must be installed for this parameter to have any effect.

ABENDNOTIFY
    Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY
    The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

    Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

    id1 id2 id3
        The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

    '*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

FIRST

LAST Specifies whether the optional OS/EM HSM Optimizer functions for ARCCDEXT will be applied before or after the user exits are invoked.

> **Note:** OS/EM control functions are invoked FIRST by default.

TRACE Write GTF Trace records for critical control blocks, used in Problem Determination for OS/EM Optional functions in conjunction with OS/EM support.

NOTRACE Disables GTF trace records (This is the default)

REBLOCK

NOREBLOCK Specifies whether sequential files that are recalled by DFHSM will be reblocked to better utilize the DASD volume. Specifying NO disables this option.

> **SYSTEM**
>
> **FULL**
>
> **HALF**
>
> **THIRD**
>
> **FOURTH**
>
> **FIFTH**
>
> **SIXTH**
>
> **SEVENTH**
>
> **EIGHTH**
>> Specifies the blocksize to be applied during reblocking of recalled sequential datasets. SYSTEM requires that DFP 3.+ be installed and indicates that reblocking be handled by DFP 3.+ System Reblockable Support.
>
> **MINSIZE(nn)**
>> The minimum dataset size which will be used to determine whether datasets will be reblocked. Datasets less than or equal to this size will not be reblocked. The size is specified in kilobytes (K).
>
> **NOMINSIZE**
>> Specifying NO disables a previously established MINSIZE.
>
> **EXCLUDE**
>
> **NOEXCLUDE**
>> Specifies that datasets matching any specified dataset name pattern within the specified dataset name groups will not be reblocked during DFHSM recall processing. Specifying NO will delete a previously established EXCLUDE list.

dsngroup

The dataset name groups which contain a list of dataset names and/or dataset name patterns which will be included.

Creating dataset name groups is explained on "Appendix B. Define Dataset Name Groups" on page B-1.

DFHSM will reblock files for datasets that are recalled. Refer to the SETSYS Conversion parameter in the DFHSM System Programmer's Guide for a complete description of the parameters that are required.

Example

The following command will reblock sequential datasets:

```
OS$CNTL HSM ARCCDEXT(EXITS –
  (USREXIT1 USREXIT2) –
  OPTIONS( –
  LAST –
  FULL(MINSIZE(500) EXCLUDE(PAYGRP)) –
  HALF(MINSIZE(200) EXCLUDE(PAYGRP)) –
  THIRD(MINSIZE(100) EXCLUDE(PAYGRP))))
```

This command also invokes USREXIT1 and USREXIT2. In this example, OS/EM processing is done after these exits are invoked.

ARCCREXT

This exit is the ABARS dataset conflict resolution exit. You have access to this exit during aggregate recovery verification.

OS/EM only supplies basic control functions for this exit.

```
OS$CNTL HSM                                                        -
  {NOABendnotify|ABendnotify(                                      -
       0|*|id1 {0|*|id2 {0|*|id3}})}                               -
  {LIBrary(library.dsn)}                                           -
  {NOARCCREXT|ARCCREXT(                                            -
       {ENable|DISABLE}                                            -
       {NUmber( num1 num2 num3 )}                                  -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}          -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}        -
       {NOABendnotify|ABendnotify(                                 -
          ( 0|*|id1a {0|*|id2a {0|*|id3a}} )}                      -
          ( 0|*|id1b {0|*|id2b {0|*|id3b}} )}                      -
          ( 0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                   -
       {NOVAlidrc|VAlidrc(rc,...)}                                 -
       {NOGoodrc|Goodrc(rc,...)}                                   -
       {NODIsablerc|DISABLERc(rc)}                                 -
       {DEFaultrc(rc)}                                             -
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any DFHSM exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for DFHSM exit ABENDs.
>
> > **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a ARCCREXT exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ARCCREXT modules.

> **library.dsn**
> > Specifies the name of a private **authorized** library used to locate and load the DFHSM ARCCREXT user exit. The library name should be enclosed in single quotes (').
> >
> > **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ARCCREXT Specifies that the ARCCREXT exit point is to be activated.

NOARCCREXT
> The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named ARCCREXT exit point is be passed control for exit module execution.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

        num1, num2, num3

                Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ARCCREXT user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ARCCREXT user exits be activated. This can be specified at initialization, or later to load and activate ARCCREXT user exits that were not activated at initialization. The exits will be called in the order listed.

        exit1

        exit2

        exit3

                The module name of the user exit that is assigned to the specified ARCCREXT exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ARCCREXT user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ARCCREXT user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

        exit1

        exit2

        exit3

                The module name of the backup user exit that is assigned to the specified DFHSM exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup DFHSM user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a ARCCREXT exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ARCCREXT exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of ARCCREXT exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by ARCCREXT user exit modules. A good return code allows subsequent ARCCREXT user exit modules to be called. OS/EM provides a default list. For example, if a DFHSM user exit for ARCCREXT set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

NODISABLERC turns off disable return code checking for the exit point.

rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc   Default return codes values are any numeric value

Example

The following command will establish user exit USREXT1:

```
OS$CNTL HSM ARCCREXT(EXITS( -
    (USREXT1))
```

ARCEDEXT

This exit is the ABARS expiration date exit. You have access to this exit prior to allocation of an ABACKUP file.

OS/EM only supplies basic exit control functions for ARCEDEXT.

```
OS$CNTL HSM                                                             -
 {NOABendnotify|ABendnotify(                                            -
      0|*|id1 {0|*|id2 {0|*|id3}})}                                     -
 {LIBrary(library.dsn)}                                                 -
 {NOARCEDEXT|ARCEDEXT(                                                  -
      {ENable|DISABLE}                                                  -
      {NUmber( num1 num2 num3 )}                                        -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}               -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}            -
      {NOABendnotify|ABendnotify(                                       -
          ( 0|*|id1a {0|*|id2a {0|*|id3a}} )}                          -
          ( 0|*|id1b {0|*|id2b {0|*|id3b}} )}                          -
          ( 0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                       -
      {NOVAlidrc|VAlidrc(rc,...)}                                       -
      {NOGoodrc|Goodrc(rc,...)}                                         -
      {NODIsablerc|DISABLERc(rc)}                                       -
      {DEFaultrc(rc)}                                                   -
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any DFHSM exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for DFHSM exit ABENDs.

> > **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ARCEDEXT exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ARCEDEXT modules.

> **library.dsn**
> > Specifies the name of a private **authorized** library used to locate and load the DFHSM ARCEDEXT user exit. The library name should be enclosed in single quotes (').

> > **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ARCEDEXT   Specifies that the ARCEDEXT exit point is to be activated.

NOARCEDEXT
> The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ARCEDEXT exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

> **num1, num2, num3**
>> Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
>>
>> If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS Specifies that any active ARCEDEXT user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of ARCEDEXT user exits be activated. This can be specified at initialization, or later to load and activate ARCEDEXT user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the user exit that is assigned to the specified ARCEDEXT exit point.
>
> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0** A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP Specifies that all active backup ARCEDEXT user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup ARCEDEXT user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the backup user exit that is assigned to the specified DFHSM exit point.
>
> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup DFHSM user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0** A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a ARCEDEXT exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ARCEDEXT exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of ARCEDEXT exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by ARCEDEXT user exit modules. A good return code allows subsequent ARCEDEXT user exit modules to be called. OS/EM provides a default list. For example, if a DFHSM user exit for ARCEDEXT set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

NODISABLERC turns off disable return code checking for the exit point.

rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc   Default return codes values are any numeric value

Example

The following command will establish user exit USREXT1:

```
OS$CNTL HSM ARCEDEXT(EXITS( -
    (USREXT1))
```

ARCINEXT

This exit is the HSM initialization exit. You have access to this exit after HSM startup, but before any functional subtasks become active.

OS/EM only supplies basic control functions for ARCINEXT.

```
OS$CNTL HSM                                                        -
 {NOABendnotify|ABendnotify(                                       -
     0|*|id1 {0|*|id2 {0|*|id3}})}                                 -
 {LIBrary(library.dsn)}                                            -
 {NOARCINEXT|ARCINEXT(                                  -
     {ENable|DISABLE}                                             -
     {NUmber( num1 num2 num3 )}                                   -
     {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}       -
     {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}     -
     {NOABendnotify|ABendnotify(                                  -
         ( 0|*|id1a {0|*|id2a {0|*|id3a}} )}                 -
         ( 0|*|id1b {0|*|id2b {0|*|id3b}} )}                 -
         ( 0|*|id1c {0|*|id2c {0|*|id3c}} )} )}              -
     {NOVAlidrc|VAlidrc(rc,...)}                                  -
     {NOGoodrc|Goodrc(rc,...)}                                    -
     {NODIsablerc|DISABLERc(rc)}                                  -
     {DEFaultrc(rc)}                                              -
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any DFHSM exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for DFHSM exit ABENDs.

> > **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a ARCINEXT exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ARCINEXT modules.

> **library.dsn**
> > Specifies the name of a private **authorized** library used to locate and load the DFHSM ARCINEXT user exit. The library name should be enclosed in single quotes (').

> > **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ARCINEXT Specifies that the ARCINEXT exit point is to be activated.

NOARCINEXT The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named ARCINEXT exit point is be passed control for exit module execution.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

> Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
>
> If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ARCINEXT user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ARCINEXT user exits be activated. This can be specified at initialization, or later to load and activate ARCINEXT user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**
>
> **exit2**
>
> **exit3**
> > The module name of the user exit that is assigned to the specified ARCINEXT exit point.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0**   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ARCINEXT user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ARCINEXT user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**
>
> **exit2**
>
> **exit3**
> > The module name of the backup user exit that is assigned to the specified DFHSM exit point.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup DFHSM user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0**   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

> Specifies that when a ARCINEXT exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ARCINEXT exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of ARCINEXT exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by ARCINEXT user exit modules. A good return code allows subsequent ARCINEXT user exit modules to be called. OS/EM provides a default list. For example, if a DFHSM user exit for ARCINEXT set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

NODISABLERC turns off disable return code checking for the exit point.

rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has

occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc Default return codes values are any numeric value

Example

The following command will establish user exit USREXT1:

```
OS$CNTL HSM ARCINEXT(EXITS( -
      (USREXT1))
```

ARCMDEXT

This exit is the dataset migration exit. You have access to this exit when a dataset meets the selection criteria for level-0, but before it is migrated.

OS/EM supports an optional control function for this exit: Migration control.

You may specify which datasets are migrated directly to Level-2 storage; how many days old a dataset is before it is eligible for migration; what size a dataset should be in order to be migrated; and which datasets should be included, or not.

```
OS$CNTL HSM                                                          -
  {NOABendnotify|ABendnotify(                                        -
        0|*|id1 {0|*|id2 {0|*|id3}})}                               -
  {LIBrary(library.dsn)}                                            -
  {NOARCMDEXT|ARCMDEXT(                                             -
        {ENable|DISABLE}                                            -
        {NUmber( num1 num2 num3 )}                                  -
        {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}         -
        {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}      -
        {NOABendnotify|ABendnotify(                                 -
            ( 0|*|id1a {0|*|id2a {0|*|id3a}} )}                    -
            ( 0|*|id1b {0|*|id2b {0|*|id3b}} )}                    -
            ( 0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                -
        {NOVAlidrc|VAlidrc(rc,...)}                                 -
        {NOGoodrc|Goodrc(rc,...)}                                   -
        {NODIsablerc|DISABLERc(rc)}                                -
        {DEFaultrc(rc)}                                             -
      {NOOPtions|OPtions(                                           -
        {NOABendnotify|ABendnotify(ID)}                            -
        {FIrst|Last}                                                -
        {Trace|NOTrace}                                             -
        {NOMIGCONTROL|MIGCONTROL(                                   -
          {NODIRECTML2|DIRECTML2({MINsize(nn)} {OR|AND}           -
             {INclude(dsngroup,...)|EXClude(dsngroup,...)})} -
          {NOHOLD|HOLD({MAxsize(nn)} {OR|AND}                      -
            {INclude(dsngroup,...)})}                              -
          {NOHOLD01|HOLD01({MAxsize(nn)} {OR|AND}                  -
            {INclude(dsngroup,...)})}                              -
          {NOHOLD02|HOLD02({MAxsize(nn)} {OR|AND}                  -
            {INclude(dsngroup,...)})}                              -
          {NOHOLD03|HOLD03({MAxsize(nn)} {OR|AND}                  -
            {INclude(dsngroup,...)})}                              -
          {NOHOLD04|HOLD04({MAxsize(nn)} {OR|AND}                  -
            {INclude(dsngroup,...)})}                              -
          {NOHOLD05|HOLD05({MAxsize(nn)} {OR|AND}                  -
            {INclude(dsngroup,...)})}                              -
          {NOHOLD06|HOLD06({MAxsize(nn)} {OR|AND}                  -
            {INclude(dsngroup,...)})}                              -
          {NOHOLD07|HOLD07({MAxsize(nn)} {OR|AND}                  -
            {INclude(dsngroup,...)})}                              -
          {NOHOLD08|HOLD08({MAxsize(nn)} {OR|AND}                  -
            {INclude(dsngroup,...)})}                              -
          {NOHOLD09|HOLD09({MAxsize(nn)} {OR|AND}                  -
            {INclude(dsngroup,...)})}                              -
          {NOHOLD10|HOLD10({MAxsize(nn)} {OR|AND}                  -
            {INclude(dsngroup,...)})}                              -
          {NOHOLD15|HOLD15({MAxsize(nn)} {OR|AND}                  -
```

```
                      {INclude(dsngroup,...)})}                                    –
            {NOHOLD20|HOLD20({MAxsize(nn)} {OR|AND}                                 –
              {INclude(dsngroup,...)})}                                            –
            {NOHOLD25|HOLD25({MAxsize(nn)} {OR|AND}                                 –
              {INclude(dsngroup,...)})}                                            –
            {NOHOLD30|HOLD30({MAxsize(nn)} {OR|AND}                                 –
              {INclude(dsngroup,...)})}                                            –
            {NOHOLD35|HOLD35({MAxsize(nn)} {OR|AND}                                 –
              {INclude(dsngroup,...)})}                                            –
            {NOHOLD40|HOLD40({MAxsize(nn)} {OR|AND}                                 –
              {INclude(dsngroup,...)})}                                            –
            {NOHOLD45|HOLD45({MAxsize(nn)} {OR|AND}                                 –
              {INclude(dsngroup,...)})}                                            –
            {NOHOLD50|HOLD50({MAxsize(nn)} {OR|AND}                                 –
              {INclude(dsngroup,...)})}                                            –
            {NOHOLD60|HOLD60({MAxsize(nn)} {OR|AND}                                 –
              {INclude(dsngroup,...)})}                                            –
            {NOHOLD70|HOLD70({MAxsize(nn)} {OR|AND}                                 –
              {INclude(dsngroup,...)})}                                            –
            {NOHOLD80|HOLD80({MAxsize(nn)} {OR|AND}                                 –
              {INclude(dsngroup,...)})}                                            –
            {NOHOLD90|HOLD90({MAxsize(nn)} {OR|AND}                                 –
              {INclude(dsngroup,...)})} )} )} )}                                   –
```

ABENDNOTIFY
Specifies that a TSO message will be sent if any DFHSM exit ABENDs.

NOABENDNOTIFY
Specifies that no messages will be sent for DFHSM exit ABENDs.

id1, id2, id3   You may specify up to three TSO IDs or notification group names
to be notified in the case of an ABEND. (See "NFYGROUPS" on
page SYS-1.)

LIBRARY   Specifies the loading of a ARCMDEXT exit module from a private **authorized** library
named library.dsn. If this parameter is omitted then the normal MVS search criteria is
used for ARCMDEXT modules.

library.dsn
Specifies the name of a private **authorized** library used to locate and load the
DFHSM ARCMDEXT user exit. The library name should be enclosed in single
quotes (').

Note: If the program is not found in this library, no other search is performed
and the user exit is **not** loaded.

ARCMDEXT   Specifies that the ARCMDEXT exit point is to be activated.

NOARCMDEXT
The NO option can be used to completely nullify the exit point and disable and reset
any options in effect for it.

ENABLE   Specifies that the named ARCMDEXT exit point is be passed control for exit module
execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily
disable an exit point, but all the options that were specified previously are retained and
will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255
user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ARCMDEXT user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ARCMDEXT user exits be activated. This can be specified at initialization, or later to load and activate ARCMDEXT user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3

The module name of the user exit that is assigned to the specified ARCMDEXT exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ARCMDEXT user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ARCMDEXT user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3

The module name of the backup user exit that is assigned to the specified DFHSM exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup DFHSM user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a ARCMDEXT exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ARCMDEXT exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of ARCMDEXT exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by ARCMDEXT user exit modules. A good return code allows subsequent ARCMDEXT user exit modules to be called. OS/EM provides a default list. For example, if a DFHSM user exit for ARCMDEXT set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

NODISABLERC turns off disable return code checking for the exit point.

rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has

occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc   Default return codes values are any numeric value

ARCMDEXT Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for ARCMDEXT

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for ARCMDEXT.

Note: The optional OS/EM HSM Optimizer control functions must be installed for this parameter to have any effect.

ABENDNOTIFY

Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3

The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

FIRST

LAST   Specifies whether the optional OS/EM HSM Optimizer functions for ARCMDEXT will be applied before or after the user exits are invoked.

Note: OS/EM control functions are invoked FIRST by default.

TRACE   Write GTF Trace records for critical control blocks, used in Problem Determination for OS/EM Optional functions in conjunction with OS/EM support.

NOTRACE   Disables GTF trace records (This is the default)

MIGCONTROL

NOMIGCONTROL

Determines whether optional OS/EM migration control will apply - MIGCONTROL, or if DFHSM migration control will apply - NOMIGCONTROL.

DIRECTML2

NODIRECTML2

Specifies whether eligible datasets will be directed to DFHSM Migration Level-2 storage (normally assigned to tape), bypassing Level-1 storage.

Note: You may want to do this for datasets that are infrequently needed. Letting such datasets migrate to Level-1 storage would be needless, occupying storage better utilized by more frequently used datasets.

MINSIZE(nn)

The minimum dataset size which will be used to determine whether datasets will be migrated directly to migration level-2. Datasets less than or equal to this size will not be migrated. The size is specified in kilobytes (K).

NOMINSIZE

Specifying NO disables a previously established MINSIZE.

OR

AND

Specifies the logical connective between the MINSIZE parameter and INCLUDEd dataset name groups.

If a dataset is less than or equal to the MINSIZE OR matches one of the datasets within any of the included groups, the dataset will be migrated directly to migration level-2 storage. Either case will satisfy eligibility requirements.

If the dataset is less than or equal to the MINSIZE AND matches one of the datasets within any of the included groups, only then will the dataset be eligible for processing.

INCLUDE

NOINCLUDE

EXCLUDE

NOEXCLUDE

Specify either an INCLUDE or EXCLUDE dataset name list. Such datasets will either be INCLUDEd in Direct-to-ML2 processing considerations, or EXCLUDEd from processing consideration. Specifying NO for either list will delete the list and dataset names will not be considered when doing Direct-to-ML2 processing.

HOLD{(nn)}

NOHOLD

Specifies whether or not datasets will be eligible for optional OS/EM processing - HOLD; or normal DFHSM processing - NOHOLD. If HOLD and a dataset meets OS/EM HSM Optimizer eligibility requirements, the dataset will be held; that is, it will not be migrated.

Without the optional number-of-days suffix, this parameter applies to all datasets that meet either the specified size AND | OR dataset name pattern. Such datasets will never be migrated (you are, in effect, specifying that such datasets be held for 9999 days).

The number-of-days suffix specifies how many days old the dataset must be before it is eligible for processing. The number-of-days suffix is specified in one-day increments between one and ten days. Five day increments are specified between ten and 50 days. Ten-day increments are specified between 50 and 90 days.

MAXSIZE(nn)
> Designates the maximum size dataset that should be retained on a volume. Datasets larger than this size will not be held on the volume. The size is specified in kilobytes (K).

NOMAXSIZE
> Specifying NOMAXSIZE will disable a previously established MAXSIZE.

> **Note:** To be effective, this number should decrease as the number of days a dataset is held (not deleted or migrated) increases. That is, large datasets should be held for a few days; small datasets can be effectively held for a longer period of time. While there is no requirement that this policy be implemented, holding large datasets beyond when DFHSM processing would normally remove eligible datasets from a volume defeats the purpose of removing such datasets maximizing available DASD space.

OR

AND
> Specifies the logical connective between the MAXSIZE parameter and INCLUDEd dataset name groups. If a dataset is less than or equal to the MAXSIZE OR matches one of the datasets within any of the included groups, the dataset will be processed. Either case will satisfy eligibility requirements. If the dataset is less than or equal to the MAXSIZE AND matches one of the datasets within any of the included groups, only then will the dataset be eligible for processing.

INCLUDE
> Specifies one, or more, dataset name groups to be included for exit ARCMDEXT processing

NOINCLUDE
> Specifying NOINCLUDE will delete a previously established INCLUDE list.

> **dsngroup**
>> The dataset name groups which contain a list of dataset names and/or dataset name patterns which will be included.

>> Creating dataset name groups is explained on "Appendix B. Define Dataset Name Groups" on page B-1.

Example

As with deletion, DFHSM provides no means to finely control dataset migration. Datasets are either eligible for migration, or they are not. The ARCMDEXT option provides that control.

```
OS$CNTL HSM ARCMDEXT(OPTIONS( –
  MIGCONTROL( –
    HOLD(INCLUDE(SYSXGRP $DEVPRF)) –
    HOLD03(MAXSIZE(1000) AND –
      INCLUDE(TESTGRP)) –
    HOLD15(MAXSIZE(200) OR –
      INCLUDE(PROV01)))))
```

Assuming that group SYSXGRP contains SYSX.+ as a mask and group $DEVPRF contains $DEV%%&.ISPPROF, all datasets beginning with SYSX and all ISPF profile datasets belonging to any user whose id begins with $DEV plus two numerics and one alpha character will never be migrated.

Datasets that do not exceed 1M in size and match dataset names or dataset name masks within dataset name group TESTGRP will be held for three days before they are eligible for migration.

Datasets that do not exceed 200K or achieve a match within dataset name group PROV01 will be held for 15 days before they are eligible for migration.

As with Delete-by-age and Delete-if-backed-up processing, datasets that are finally eligible for migration will be migrated as determined by DFHSM.

As mentioned previously, you can force migration of datasets to DFHSM Level 2 by issuing the following command:

```
OS$CNTL HSM ARCMDEXT(OPTIONS -
  (MIGCONTROL( -
    DIRECTML2(INCLUDE(PROV02)))))
```

All datasets belonging within PROV02 will be migrated to DFHSM Level-2 storage.

- DFHSM will not migrate any dataset to tape Level 2 storage if it has not been backed up. It is entirely possible that if you exclude a dataset from the backup process that you will not be able to direct it to tape Level 2 storage.

ARCMMEXT

This exit is the level-2 dataset migration exit. You have access to this exit when a dataset is selected to go from level-1 to level-2.

OS/EM supports an optional control function for this exit: Migration Level-1 to Migration Level-2 Control.

With this function you may specify which datasets are migrated from Level-1 to Level-2 storage. You may specify aging criteria; the size of datasets to hold on Level-1 storage; which datasets should be included in the selection criteria, etc.

```
OS$CNTL HSM                                                         -
 {NOABendnotify|ABendnotify(                                        -
       0|*|id1 {0|*|id2 {0|*|id3}})}                               -
 {LIBrary(library.dsn)}                                            -
 {NOARCMMEXT|ARCMMEXT(                                          -
       {ENable|DISABLE}                                            -
       {NUmber( num1 num2 num3 )}                                  -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}       -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}    -
       {NOABendnotify|ABendnotify(                                 -
           ( 0|*|id1a {0|*|id2a {0|*|id3a}} )}                    -
           ( 0|*|id1b {0|*|id2b {0|*|id3b}} )}                    -
           ( 0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                -
       {NOVAlidrc|VAlidrc(rc,...)}                                 -
       {NOGoodrc|Goodrc(rc,...)}                                   -
       {NODIsablerc|DISABLERc(rc)}                                 -
       {DEFaultrc(rc)}                                             -
       {NOOPtions|OPtions(                                         -
         {NOABendnotify|ABendnotify(ID)}                           -
         {FIrst|Last}                                              -
         {Trace|NOTrace}                                           -
         {NOML2control|ML2control(                                 -
           {NOHOLD|HOLD({MAxsize(nn)} {OR|AND}                     -
             {INclude(dsngroup,...)})}                             -
           {NOHOLD01|HOLD01({MAxsize(nn)} {OR|AND}                 -
             {INclude(dsngroup,...)})}                             -
           {NOHOLD02|HOLD02({MAxsize(nn)} {OR|AND}                 -
             {INclude(dsngroup,...)})}                             -
           {NOHOLD03|HOLD03({MAxsize(nn)} {OR|AND}                 -
             {INclude(dsngroup,...)})}                             -
           {NOHOLD04|HOLD04({MAxsize(nn)} {OR|AND}                 -
             {INclude(dsngroup,...)})}                             -
           {NOHOLD05|HOLD05({MAxsize(nn)} {OR|AND}                 -
             {INclude(dsngroup,...)})}                             -
           {NOHOLD06|HOLD06({MAxsize(nn)} {OR|AND}                 -
             {INclude(dsngroup,...)})}                             -
           {NOHOLD07|HOLD07({MAxsize(nn)} {OR|AND}                 -
             {INclude(dsngroup,...)})}                             -
           {NOHOLD08|HOLD08({MAxsize(nn)} {OR|AND}                 -
             {INclude(dsngroup,...)})}                             -
           {NOHOLD09|HOLD09({MAxsize(nn)} {OR|AND}                 -
             {INclude(dsngroup,...)})}                             -
           {NOHOLD10|HOLD10({MAxsize(nn)} {OR|AND}                 -
             {INclude(dsngroup,...)})}                             -
           {NOHOLD15|HOLD15({MAxsize(nn)} {OR|AND}                 -
             {INclude(dsngroup,...)})}                             -
```

```
               {NOHOLD20|HOLD20({MAxsize(nn)} {OR|AND}          -
                 {INclude(dsngroup,...)})})                     -
               {NOHOLD25|HOLD25({MAxsize(nn)} {OR|AND}          -
                 {INclude(dsngroup,...)})})                     -
               {NOHOLD30|HOLD30({MAxsize(nn)} {OR|AND}          -
                 {INclude(dsngroup,...)})})                     -
               {NOHOLD35|HOLD35({MAxsize(nn)} {OR|AND}          -
                 {INclude(dsngroup,...)})})                     -
               {NOHOLD40|HOLD40({MAxsize(nn)} {OR|AND}          -
                 {INclude(dsngroup,...)})})                     -
               {NOHOLD45|HOLD45({MAxsize(nn)} {OR|AND}          -
                 {INclude(dsngroup,...)})})                     -
               {NOHOLD50|HOLD50({MAxsize(nn)} {OR|AND}          -
                 {INclude(dsngroup,...)})})                     -
               {NOHOLD60|HOLD60({MAxsize(nn)} {OR|AND}          -
                 {INclude(dsngroup,...)})})                     -
               {NOHOLD70|HOLD70({MAxsize(nn)} {OR|AND}          -
                 {INclude(dsngroup,...)})})                     -
               {NOHOLD80|HOLD80({MAxsize(nn)} {OR|AND}          -
                 {INclude(dsngroup,...)})})                     -
               {NOHOLD90|HOLD90({MAxsize(nn)} {OR|AND}          -
                 {INclude(dsngroup,...)})}) )} )} )}            -
```

ABENDNOTIFY

Specifies that a TSO message will be sent if any DFHSM exit ABENDs.

NOABENDNOTIFY

Specifies that no messages will be sent for DFHSM exit ABENDs.

id1, id2, id3   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ARCMMEXT exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ARCMMEXT modules.

library.dsn

Specifies the name of a private **authorized** library used to locate and load the DFHSM ARCMMEXT user exit. The library name should be enclosed in single quotes (').

Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ARCMMEXT   Specifies that the ARCMMEXT exit point is to be activated.

NOARCMMEXT

The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ARCMMEXT exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

> Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

> If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ARCMMEXT user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ARCMMEXT user exits be activated. This can be specified at initialization, or later to load and activate ARCMMEXT user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3
> The module name of the user exit that is assigned to the specified ARCMMEXT exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ARCMMEXT user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ARCMMEXT user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
> The module name of the backup user exit that is assigned to the specified DFHSM exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup DFHSM user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

> Specifies that when a ARCMMEXT exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ARCMMEXT exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of ARCMMEXT exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by ARCMMEXT user exit modules. A good return code allows subsequent ARCMMEXT user exit modules to be called. OS/EM provides a default list. For example, if a DFHSM user exit for ARCMMEXT set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

NODISABLERC turns off disable return code checking for the exit point.

rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has

occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc   Default return codes values are any numeric value

ARCMMEXT Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for ARCMMEXT

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for ARCMMEXT.

Note: The optional OS/EM HSM Optimizer control functions must be installed for this parameter to have any effect.

ABENDNOTIFY
Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3
The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

FIRST

LAST   Specifies whether the optional OS/EM HSM Optimizer functions for ARCMMEXT will be applied before or after the user exits are invoked.

Note: OS/EM control functions are invoked FIRST by default.

TRACE   Write GTF Trace records for critical control blocks, used in Problem Determination for OS/EM Optional functions in conjunction with OS/EM support.

NOTRACE   Disables GTF trace records (This is the default)

ML2CONTROL

NOML2CONTROL
Determines whether optional OS/EM migration control will apply - ML2CONTROL, or if DFHSM migration control will apply - NOML2CONTROL.

HOLD{(nn)}

NOHOLD
Specifies whether or not datasets will be eligible for optional OS/EM processing - HOLD; or normal DFHSM processing - NOHOLD. If HOLD and a dataset

meets OS/EM HSM Optimizer eligibility requirements, the dataset will be held; that is, it will not be deleted or retired.

Without the optional number-of-days suffix, this parameter applies to all datasets that meet either the specified size AND | OR dataset name pattern. Such datasets will never be deleted or retired (you are, in effect, specifying that such datasets be held for 9999 days).

The number-of-days suffix specifies how many days old the dataset must be before it is eligible for processing. The number-of-days suffix is specified in one-day increments between one and ten days. Five day increments are specified between ten and 50 days. Ten-day increments are specified between 50 and 90 days.

MAXSIZE(nn)

Designates the maximum size dataset that should be retained on a volume. Datasets larger than this size will not be held on the volume. The size is specified in kilobytes (K).

NOMAXSIZE

Specifying NOMAXSIZE will disable a previously established MAXSIZE.

Note: To be effective, this number should decrease as the number of days a dataset is held (not deleted or migrated) increases. That is, large datasets should be held for a few days; small datasets can be effectively held for a longer period of time. While there is no requirement that this policy be implemented, holding large datasets beyond when DFHSM processing would normally remove eligible datasets from a volume defeats the purpose of removing such datasets - maximizing available DASD space.

OR

AND

Specifies the logical connective between the MAXSIZE parameter and INCLUDEd dataset name groups. If a dataset is less than or equal to the MAXSIZE OR matches one of the datasets within any of the included groups, the dataset will be processed. Either case will satisfy eligibility requirements. If the dataset is less than or equal to the MAXSIZE AND matches one of the datasets within any of the included groups, only then will the dataset be eligible for processing.

INCLUDE

Specifies one, or more, dataset name groups to be included for exit ARCMMEXT processing

NOINCLUDE

Specifying NOINCLUDE will delete a previously established INCLUDE list.

dsngroup

The dataset name groups which contain a list of dataset names and/or dataset name patterns which will be included.

Creating dataset name groups is explained on "Appendix B. Define Dataset Name Groups" on page B-1.

Example Migration Level-2

The following example command establishes criteria for holding datasets on DFHSM Level-1 storage, keeping these datasets from migrating to Level-2 storage.

```
OS$CNTL HSM ARCMMEXT(OPTIONS( –
  ML2CONTROL( –
    HOLD(MAXSIZE(200) OR –
      INCLUDE(SYSXXM$)) –
    HOLD03(INCLUDE(SYS5CAI)) –
    HOLD30(INCLUDE(PAYMNTH PAYQRTR)))))
```

Datasets that do not exceed 200K in size (approximately the size of datasets eligible for Small Dataset Packing handling by DFHSM - if you have enabled this option) OR datasets belonging to group SYSXXM$ will be held indefinitely.

Datasets belonging to group SYS5CAI will be held for three days.

Two different PAY groups - PAYMNTH and PAYQRTR - will be held for 30 days.

ARCMVEXT

This is the space management volume exit. You have access to this exit after HSM completes processing at level-0.

OS/EM HSM Optimizer supports an optional control function for this exit: Defragmentation Control which compresses DASD volumes to maximize contiguous DSN DASD space for available allocations.

Defragmentation of DASD volumes may be automated with this function. Volumes may be defrag'd on specified days of the week at specified times.

Eight different fragmentation indexes may be specified to control the defrag process.

```
OS$CNTL HSM                                                      -
 {NOABendnotify|ABendnotify(                                     -
      0|*|id1 {0|*|id2 {0|*|id3}})}                              -
 {LIBrary(library.dsn)}                                          -
 {NOARCMVEXT|ARCMVEXT(                                        -
      {ENable|DISABLE}                                           -
      {NUmber( num1 num2 num3 )}                                 -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}         -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}       -
      {NOABendnotify|ABendnotify(                                -
         ( 0|*|id1a {0|*|id2a {0|*|id3a}} )}                     -
         ( 0|*|id1b {0|*|id2b {0|*|id3b}} )}                     -
         ( 0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                  -
      {NOVAlidrc|VAlidrc(rc,...)}                                -
      {NOGoodrc|Goodrc(rc,...)}                                  -
      {NODIsablerc|DISABLERc(rc)}                                -
      {DEFaultrc(rc)}                                            -
      {NOOPtions|OPtions(                                        -
        {NOABendnotify|ABendnotify(ID)}                          -
        {FIrst|Last}                                             -
        {Trace|NOTrace}                                          -
        {NODefrag|DEfrag(                                        -
          {PRoc(OS$DFRAG|procname)}                              -
          {NOTIme|TIme(hhmm:hhmm)}                              -
          {NODAys|DAys(XXX,...)}                                 -
          {NOLEVEL1|LEVEL1({0|frag-index}                        -
              {NOVOLS|VOLS(VOLGrp,...)}                          -
              {NOTIme|TIme(hhmm:hhmm)}                          -
              {NODAyS|DAyS(XXX,...)} )}                          -
          {NOLEVEL2|LEVEL1({0|frag-index}                        -
              {NOVOLS|VOLS(VOLGrp,...)}                          -
              {NOTIme|TIme(hhmm:hhmm)}                          -
              {NODAyS|DAyS(XXX,...)} )}                          -
          {NOLEVEL3|LEVEL1({0|frag-index}                        -
              {NOVOLS|VOLS(VOLGrp,...)}                          -
              {NOTIme|TIme(hhmm:hhmm)}                          -
              {NODAyS|DAyS(XXX,...)} )}                          -
          {NOLEVEL4|LEVEL1({0|frag-index}                        -
              {NOVOLS|VOLS(VOLGrp,...)}                          -
              {NOTIme|TIme(hhmm:hhmm)}                          -
              {NODAyS|DAyS(XXX,...)} )}                          -
          {NOLEVEL5|LEVEL1({0|frag-index}                        -
              {NOVOLS|VOLS(VOLGrp,...)}                          -
              {NOTIme|TIme(hhmm:hhmm)}                          -
              {NODAyS|DAyS(XXX,...)} )}                          -
          {NOLEVEL6|LEVEL1({0|frag-index}                        -
```

```
                    {NOVOLS|VOLS(VOLGrp,...)}                          -
                    {NOTIme|TIme(hhmm:hhmm)}                         -
                    {NODAyS|DAyS(XXX,...)} )}                           -
              {NOLEVEL7|LEVEL1({0|frag-index}                      -
                    {NOVOLS|VOLS(VOLGrp,...)}                          -
                    {NOTIme|TIme(hhmm:hhmm)}                      -
                    {NODAyS|DAyS(XXX,...)} )}                           -
              {NOLEVEL8|LEVEL1({0|frag-index}                      -
                    {NOVOLS|VOLS(VOLGrp,...)}                          -
                    {NOTIme|TIme(hhmm:hhmm)}                        -
                    {NODAyS|DAyS(XXX,...)} )} )} )} )} )}          -
```

ABENDNOTIFY

Specifies that a TSO message will be sent if any DFHSM exit ABENDs.

NOABENDNOTIFY

Specifies that no messages will be sent for DFHSM exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a ARCMVEXT exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ARCMVEXT modules.

> **library.dsn**
>> Specifies the name of a private **authorized** library used to locate and load the DFHSM ARCMVEXT user exit. The library name should be enclosed in single quotes (').
>>
>> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ARCMVEXT Specifies that the ARCMVEXT exit point is to be activated.

NOARCMVEXT

The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named ARCMVEXT exit point is be passed control for exit module execution.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

> **num1, num2, num3**
>> Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
>>
>> If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ARCMVEXT user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ARCMVEXT user exits be activated. This can be specified at initialization, or later to load and activate ARCMVEXT user exits that were not activated at initialization. The exits will be called in the order listed.

    exit1

    exit2

    exit3
        The module name of the user exit that is assigned to the specified ARCMVEXT exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ARCMVEXT user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup ARCMVEXT user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

    exit1

    exit2

    exit3
        The module name of the backup user exit that is assigned to the specified DFHSM exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup DFHSM user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
    Specifies that when a ARCMVEXT exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ARCMVEXT exit module has ABENDed.

NOABENDNOTIFY
    The NO option can be used to nullify the option to notify a TSO user of ARCMVEXT exit module ABENDs.

    Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

    (id1a,id1b,id1c)
        The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

      The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

      The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

      Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by ARCMVEXT user exit modules. A good return code allows subsequent ARCMVEXT user exit modules to be called. OS/EM provides a default list. For example, if a DFHSM user exit for ARCMVEXT set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

      NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

ARCMVEXT Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for ARCMVEXT

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for ARCMVEXT.

> **Note:** The optional OS/EM HSM Optimizer control functions must be installed for this parameter to have any effect.

ABENDNOTIFY

Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3

The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

FIRST

LAST   Specifies whether the optional OS/EM HSM Optimizer functions for ARCMVEXT will be applied before or after the user exits are invoked.

> **Note:** OS/EM control functions are invoked FIRST by default.

TRACE   Write GTF Trace records for critical control blocks, used in Problem Determination for OS/EM Optional functions in conjunction with OS/EM support.

NOTRACE   Disables GTF trace records (This is the default)

DEFRAG

NODEFRAG   Specifies whether or not optional OS/EM processing should be done based on the fragmentation index returned by DFHSM during volume space management.

PROC

procname

Specifies the procedure name that the OS/EM HSM Optimizer will use to start the DFDSS procedure which will actually defragment the DASD volume.

The default name is OS$DFRAG. Any other procedure name can be specified. The procedure must exist in your installation's procedure library.

TIME(HHMM:HHMM)

NOTIME
    Specifies the time of day during which OS/EM will issue the start for the defrag procedure. Specify the time based on a 24 hour clock. The first time parameter specifies the earliest start time that the defrag procedure will be submitted; the time parameter, the latest time that the defrag procedure will be submitted.

    If you specify this option before you specify any of the defrag levels, specification becomes the default time which will be applied to any level for which you omit the time parameter.

DAYS

NODAYS
    Specifies the day of the week during which defrag processing will take place. Enter SUN, MON, TUE, etc. (the day of the week may be completely spelled out; i.e., WEDNESDAY, if you prefer).

    If you specify this option before you specify any of the defrag levels, specification becomes the default days which will be applied to any level at which you omit the days parameter.

    Note: If the specified TIME parameter specifies TIME(2300:0300) and the DAY parameter specifies DAY(SUN), DEFRAG processing may be started anywhere from 11:00PM Sunday night to 3:00AM Monday morning.

LEVEL1...8

NOLEVEL1...8
    Specifies the fragmentation index that will be applied.

    fragindex

    0   The fragmentation index that is to be used to determine whether a list of volumes should be defragmented. The number ranges from 0 (the default) to 999. A 0 implies that no defragmentation is to be done. 999 indicates that the volume is very fragmented, equivalent to half a volume's worth of one-track datasets placed on every other track.

            Note: An appropriate initial value would be between 250 and 450. However, the value most appropriate to your installation must be determined by the type of datasets - large or small - on the volume, and the frequency of dataset allocation on the volume.

    VOLS
        Specifies a list of volumes groups. These groups contain a list of volumes which will be defrag'd when the fragmentation index is exceeded and the specified (or default) TIME and DAY parameters are satisfied.

    NOVOLS
        Specifying NO will remove the volumes from defrag processing. "VOLGROUPS" on page POOL-1 as to how volume groups are actually created.

        volgrp
            The volume groups which contain a list of volumes and/or volume masks which will be defragmented.

    DAYS
        Specifies the day of the week during which defrag processing will take

place. Enter SUN, MON, TUE, etc. (the day of the week may be completely spelled out, i.e., WEDNESDAY, if you prefer.)

NODAYS

Specifying NODAYS will cause the defrag processing to use the default DAYS.

TIME(HHMM:HHMM)

NOTIME

Specifies the time of day during which OS/EM will issue the start for the defrag procedure.

Specify the time based on a 24 hour clock. The first time parameter specifies the earliest start time that the defrag procedure will be submitted; the second parameter is the latest time that the defrag procedure will be submitted.

Example Defrag

While DFHSM can manage storage residency, it can lead to DASD volumes that are fragmented. Volume free space is scattered all over the volume resulting in multiple extents during allocation. And there is the possibility that a dataset cannot be allocated because too many extents would be needed for allocation.

DFHSM returns a fragmentation index for a volume each time it does volume space management. This optional OS/EM control function uses this returned index to determine whether a DFDSS task should be started that will defrag the volume.

```
OS$CNTL HSM ARCMVEXT(OPTIONS(DEFRAG –
  PROC(OS$DFRAG) –
  TIME(2300:0300) –
  DAYS(MON TUE WED THU FRI) –
  LEVEL1(700 –
    VOLS(VOLSUN) DAYS(SUN)) –
  LEVEL2(700 VOLS(VOLMON) DAYS(MON)) –
  LEVEL3(700 VOLS(VOLTUE) DAYS(TUE)) –
  LEVEL4(700 VOLS(VOLWED) DAYS(WED)) –
  LEVEL5(700 VOLS(VOLTHU) DAYS(THU)) –
  LEVEL6(700 VOLS(VOLFRI) DAYS(FRI)) –
  LEVEL7(700 VOLS(VOLSAT) DAYS(SAT)) –
  LEVEL8(800 DAYS(SUN MON TUE WED THU FRI SAT) –
    VOLS(VOLSUN VOLMON VOLTUE VOLWED VOLTHU VOLFRI VOLSAT) –
    TIME(0100:0500))))
```

ARCM2EXT

This exit is the ABARS migration level-2 dataset exit. You have access to this exit during aggregate backup processing.

OS/EM only supplies basic control functions for this exit.

```
OS$CNTL HSM                                                       -
 {NOABendnotify|ABendnotify(                                      -
      0|*|id1 {0|*|id2 {0|*|id3}})}                               -
 {LIBrary(library.dsn)}                                           -
 {NOARCM2EXT|ARCM2EXT(                                          -
      {ENable|DISABLE}                                            -
      {NUmber( num1 num2 num3 )}                                  -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}          -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}        -
      {NOABendnotify|ABendnotify(                                 -
          ( 0|*|id1a {0|*|id2a {0|*|id3a}} )}                     -
          ( 0|*|id1b {0|*|id2b {0|*|id3b}} )}                     -
          ( 0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                  -
      {NOVAlidrc|VAlidrc(rc,...)}                                 -
      {NOGoodrc|Goodrc(rc,...)}                                   -
      {NODIsablerc|DISABLERc(rc)}                                 -
      {DEFaultrc(rc)}                                             -
```

ABENDNOTIFY

Specifies that a TSO message will be sent if any DFHSM exit ABENDs.

NOABENDNOTIFY

Specifies that no messages will be sent for DFHSM exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ARCM2EXT exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ARCM2EXT modules.

> **library.dsn**
>
> Specifies the name of a private **authorized** library used to locate and load the DFHSM ARCM2EXT user exit. The library name should be enclosed in single quotes (').
>
> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ARCM2EXT   Specifies that the ARCM2EXT exit point is to be activated.

NOARCM2EXT

The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ARCM2EXT exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

> **num1, num2, num3**
>> Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
>>
>> If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ARCM2EXT user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ARCM2EXT user exits be activated. This can be specified at initialization, or later to load and activate ARCM2EXT user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the user exit that is assigned to the specified ARCM2EXT exit point.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0**   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ARCM2EXT user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ARCM2EXT user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the backup user exit that is assigned to the specified DFHSM exit point.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup DFHSM user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0**   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a ARCM2EXT exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ARCM2EXT exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of ARCM2EXT exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by ARCM2EXT user exit modules. A good return code allows subsequent ARCM2EXT user exit modules to be called. OS/EM provides a default list. For example, if a DFHSM user exit for ARCM2EXT set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
NODISABLERC turns off disable return code checking for the exit point.

rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc Default return codes values are any numeric value

Example

The following command will establish user exit USREXT1:

```
OS$CNTL HSM ARCM2EXT(EXITS( -
   (USREXT1))
```

ARCRDEXT

This exit is the recall exit. You have access to this exit during recall processing of non-SMS managed datasets.

OS/EM supports an optional control function for this exit: Directed recall control.

This function is used in conjunction with OS/EM's QuickPool function. By specifying this option, you ensure that DFHSM recall and recovery processing does not fail by attempting to place the recalled/recovered dataset on the wrong volume.

```
OS$CNTL HSM                                                        -
 {NOABendnotify|ABendnotify(                                       -
      0|*|id1 {0|*|id2 {0|*|id3}})}                               -
 {LIBrary(library.dsn)}                                           -
 {NOARCRDEXT|ARCRDEXT(                                            -
      {ENable|DISABLE}                                            -
      {NUmber( num1 num2 num3 )}                                  -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}          -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}        -
      {NOABendnotify|ABendnotify(                                 -
          ( 0|*|id1a {0|*|id2a {0|*|id3a}} )}                     -
          ( 0|*|id1b {0|*|id2b {0|*|id3b}} )}                     -
          ( 0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                  -
      {NOVAlidrc|VAlidrc(rc,...)}                                 -
      {NOGoodrc|Goodrc(rc,...)}                                   -
      {NODIsablerc|DISABLERc(rc)}                                 -
      {DEFaultrc(rc)}                                             -
      {NOOPtions|OPtions(                                         -
        {NOABendnotify|ABendnotify(id)}                           -
        {FIrst|Last}                                              -
        {Trace|NOTrace}                                           -
        {NODIRectrecall|DIRectrecall)} )}                         -
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any DFHSM exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for DFHSM exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ARCRDEXT exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ARCRDEXT modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the DFHSM ARCRDEXT user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ARCRDEXT   Specifies that the ARCRDEXT exit point is to be activated.

NOARCRDEXT

    The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ARCRDEXT exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

    num1, num2, num3

        Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

        If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ARCRDEXT user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ARCRDEXT user exits be activated. This can be specified at initialization, or later to load and activate ARCRDEXT user exits that were not activated at initialization. The exits will be called in the order listed.

    exit1

    exit2

    exit3

        The module name of the user exit that is assigned to the specified ARCRDEXT exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ARCRDEXT user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ARCRDEXT user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

    exit1

    exit2

exit3

> The module name of the backup user exit that is assigned to the specified DFHSM exit point.

*

> An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup DFHSM user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0

> A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

> Specifies that when a ARCRDEXT exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ARCRDEXT exit module has ABENDed.

NOABENDNOTIFY

> The NO option can be used to nullify the option to notify a TSO user of ARCRDEXT exit module ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.
>
> **(id1a,id1b,id1c)**
>
> > The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.
>
> **(id2a,id2b,id2c)**
>
> > The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.
>
> **(id3a,id3b,id3c)**
>
> > The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.
> >
> > **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.
>
> *****
>
> > An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0**
>
> > A zero (0) can be used to negate a previous entry of the notify TSO user list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

> **rc** Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by ARCRDEXT user exit modules. A good return code allows subsequent ARCRDEXT user exit modules to be called. OS/EM provides a default list. For example, if a DFHSM user exit for ARCRDEXT set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

| | rc | Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY |

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

NODISABLERC turns off disable return code checking for the exit point.

| | rc | Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY |

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

| | rc | Default return codes values are any numeric value |

ARCRDEXT Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for ARCRDEXT

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for ARCRDEXT.

Note: The optional OS/EM HSM Optimizer control functions must be installed for this parameter to have any effect.

ABENDNOTIFY

Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3

The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

FIRST

LAST   Specifies whether the optional OS/EM HSM Optimizer functions for ARCRDEXT will be applied before or after the user exits are invoked.

Note: OS/EM control functions are invoked FIRST by default.

TRACE   Write GTF Trace records for critical control blocks, used in Problem Determination for OS/EM Optional functions in conjunction with OS/EM support.

NOTRACE   Disables GTF trace records (This is the default)

DIRECTRECALL

NODIRECTRECALL

      Specifies whether DFHSM RECALL/RECOVERY will proceed according to the DASD allocation rules established with the DASDCNTL command for QuickPool.

      Directed Recall requires that the following DFHSM SETSYS option be present in DFHSM ARCCMDxx member.

```
SETSYS RECALL(PRIVATE(UNLIKE))
```

      Note: If the dataset is a DFSMS dataset this option will not be invoked. If QUICKPOOL allocation is in effect, you must specify DIRECTRECALL. DFHSM RECALL/RECOVERY will most likely fail if this option is not enabled.

Example Direct Recall

The DFHSM optional ARCRDEXT processing is enabled with the following command:

```
OS$CNTL HSM ARCRDEXT(NOEXITS OPTIONS( -
   DIRECTRECALL))
```

ARCRPEXT

This exit is the return-priority exit. You have access to this exit before a recall, recover or delete request is placed on the queue.

OS/EM supports an optional control function for this exit: Recall/Recover Priority control.

This function allows you to control which recall or recover requests receive the highest priority and to optionally fail requests based on the source of the request (batch or online) and where the data resides, DASD (ML1 storage) or TAPE (ML2 storage). You may also fail requests based on dataset names or masks.

```
          OS$CNTL HSM                                                    -
           {NOABendnotify|ABendnotify(                                   -
                0|*|id1 {0|*|id2 {0|*|id3}})}                            -
           {LIBrary(library.dsn)}                                        -
           {NOARCRPEXT|ARCRPEXT(                                         -
                {ENable|DISABLE}                                         -
                {NUmber( num1 num2 num3 )}                               -
                {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}       -
                {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}     -
                {NOABendnotify|ABendnotify(                              -
                    ( 0|*|id1a {0|*|id2a {0|*|id3a}} )}                  -
                    ( 0|*|id1b {0|*|id2b {0|*|id3b}} )}                  -
                    ( 0|*|id1c {0|*|id2c {0|*|id3c}} )} )}               -
                {NOVAlidrc|VAlidrc(rc,...)}                              -
                {NOGoodrc|Goodrc(rc,...)}                                -
                {NODIsablerc|DISABLERc(rc)}                              -
                {DEFaultrc(rc)}                                          -
                {NOOPtions|OPtions(                                      -
                    {NOABendnotify|ABendnotify(id)}                      -
                    {FIrst|Last}                                         -
                    {Trace|NOTrace}                                      -
                    {NOPRioritize|PRioritize(                            -
                        {NOOPerator|OPerator(nnn)}                       -
                        {NOFail|FAil(                                    -
                          {ONline}                                       -
                          {BATch}                                        -
                          {DAsd}                                         -
                          {TApe}                                         -
                          {DSn(INCLUDE|EXCLUDE(xxx,xxx,...))}            -
                        {NORECAll|RECAll(                                -
                        {NOWEight|WEight(                                -
                            {DAY(n)}                                     -
                            {DATaset(n)}                                 -
                            {JOb(n)}                                     -
                            {USerid(n)}  )}                              -
                        {NODEfault|DEfault(nnn)}                         -
   RECALL PRIORITY 1 THRU 22
                        {NOPRIORITY__|PRIORITY__(                        -
                          {NOBAtch|BAtch(nnn)}                           -
                          {NOONline|ONline(nnn)}                         -
                          {NODASd|DASd(nnn)}                             -
                          {NOTApe|TApe(NNN)}                             -
                          {NOJObname|JObname(                            -
                            INC(xxx,...) | EXC(xxx,...) )}               -
                          {NODSname|DSname(                              -
                            INC(xxx,...) | EXC(xxx,...) )}               -
```

```
                      {NOUSerid|USerid(                                       -
                         INC(xxx,...)  |  EXC(xxx,...) )}                      -
                      {NODAYs|DAYs(0|*|nnnn:nnnn,....)} )}                -
             {NORECOver|RECOver(                                               -
                {NOWEight|WEight(                                              -
                   {DAY(N)}                                                    -
                   {DATaset(N)}                                                -
                   {JOb(N)}                                                    -
                   {USerid(N)}  )}                                             -
               {NODEfault|DEfault(NNN)}                                        -
  RECOVER PRIORITY 1 THRU 22
                  {NOPRIORITY__|PRIORITY__(                                    -
                  {NOBAtch|BAtch(nnn)}                                         -
                  {NOONline|ONline(nnn)}                                       -
                  {NODASd|DASd(nnn)}                                           -
                  {NOTApe|TApe(NNN)}                                           -
                  {NOJObname|JObname(                                          -
                     INC(xxx,...)  |  EXC(xxx,...) )}                          -
                  {NODSname|DSname(                                            -
                     INC(xxx,...)  |  EXC(xxx,...) )}                          -
                  {NOUSerid|USerid(                                           -
                     INC(xxx,...)  |  EXC(xxx,...) )}                          -
               {NODAYs|DAYs(0|*|nnnn:nnnn,....)} )} )} )} )}
```

ABENDNOTIFY

Specifies that a TSO message will be sent if any DFHSM exit ABENDs.

NOABENDNOTIFY

Specifies that no messages will be sent for DFHSM exit ABENDs.

    id1, id2, id3   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ARCRPEXT exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ARCRPEXT modules.

    library.dsn

    Specifies the name of a private **authorized** library used to locate and load the DFHSM ARCRPEXT user exit. The library name should be enclosed in single quotes (').

    Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ARCRPEXT   Specifies that the ARCRPEXT exit point is to be activated.

NOARCRPEXT

The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ARCRPEXT exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3
>
> Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
>
> If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ARCRPEXT user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ARCRPEXT user exits be activated. This can be specified at initialization, or later to load and activate ARCRPEXT user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3
>
> The module name of the user exit that is assigned to the specified ARCRPEXT exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ARCRPEXT user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ARCRPEXT user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
>
> The module name of the backup user exit that is assigned to the specified DFHSM exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup DFHSM user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
>
> Specifies that when a ARCRPEXT exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ARCRPEXT exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of ARCRPEXT exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by ARCRPEXT user exit modules. A good return code allows subsequent ARCRPEXT user exit modules to be called. OS/EM provides a default list. For example, if a DFHSM user exit for ARCRPEXT set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

NODISABLERC turns off disable return code checking for the exit point.

rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has

occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc   Default return codes values are any numeric value

ARCRPEXT Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for ARCRPEXT

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for ARCRPEXT.

Note: The optional OS/EM HSM Optimizer control functions must be installed for this parameter to have any effect.

ABENDNOTIFY

Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3

The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

FIRST

LAST   Specifies whether the optional OS/EM HSM Optimizer functions for ARCRPEXT will be applied before or after the user exits are invoked.

Note: OS/EM control functions are invoked FIRST by default.

TRACE   Write GTF Trace records for critical control blocks, used in Problem Determination for OS/EM Optional functions in conjunction with OS/EM support.

NOTRACE   Disables GTF trace records (This is the default)

PRIORITIZE

NOPRIORITIZE

Specifies whether you will control the priority given to recall or recover requests.

OPERATOR(nn)

Specify the priority to be given to either operator requests or requests generated by HSM.

NOOPERATOR

Specifies that operator or HSM generated requests will be given the default priority of 50%. A value of 0 operates the same as specifing NOOPERATOR.

FAIL

NOFAIL
>   Specifying FAIL allows you to disallow DFSMShsm recall or recover requests.

ONLINE

BATCH
>   Specify either ONLINE, BATCH or both to disallow recall/recover requests. This is the source of the request.

DASD

TAPE
>   Specify either DASD, TAPE or both to disallow recall/recover requests where the data to be recalled/recovered is stored either on DASD (ML1 storage) or TAPE (ML2 storage).

DSN Specify DSN to fail requests based on the name of the dataset to be recalled/recovered. This option takes precedence over any other fail options specified. In other words, if you are failing all requests (online, batch) if the data resides on tape, the request will also fail even if coming from DASD if the dataset being recalled/recovered matches the include list or doesn't match an exclude list.

>   **INCLUDE** Any dataset name/mask in the list will be rejected for recall or recover.

>   **EXCLUDE** Every dataset not matching a name/mask in the list will be rejected for recall or recovery.

>   **xxx,xxx,...** Dataset names or masks separated by commas (,).

>   **Note:** Failing batch requests will result in the following IBM messages being issued, a SYMPTOM record being cut, and the job failing for a JCL error:

>   **IEF344I**   Allocation failed.

>   **IGD17261I** Invalid volume list passed.

>   **IDG306I**   Unexpected error, symptom record created.

RECALL

NORECALL
>   Specifing RECALL allows you to control the priority given to RECALL requests. NORECALL allows all RECALL requests to be processed at the default value of 50%.

>   **WEIGHT**

>   **NOWEIGHT**
>> Specifies which type of include/exclude list will be given the most weight when determining which priority list to use.
>>
>> If NOWEIGHT is specified, the first matching entry will be used.
>>
>> OS/EM checks all active priority selection lists to find matching entries. The WEIGHT parameters are added to each matching entry and the entry

with the hightest value will be used to determine the priority given to the request.

DAY(n)
>Specify the weight to be given to the Time of Day, Day of Week include lists. Specify a value from 1 to 4.

DATASET(n)
>Specify the weight to be given to the Dataset name Include/Exclude lists. Specify a value from 1 to 4.

JOB(n)
>Specify the weight to be given to the Job name Include/Exclude lists. Specify a value from 1 to 4.

USERID(n)
>Specify the weight to be given to the UserID Include/Exclude lists. Specify a value from 1 to 4.

DEFAULT(nnn)
>Specify the priority to be given to any recall request which does not meet any of the specified selection criteria.

NODEFAULT
>Specifing NODEFAULT results in any requests not matching to receive a HSM default of 50%.

PRIORITY1 through PRIORITY22

NOPRIORITY1 through NOPRIORITY22
>There may be up to 22 selection lists. Each list is checked in sequence, and based unpon the weights entered, either the first matching list, or the list with the highest weight will be selected.

BATCH(nnn)
>Specify the value to be used if the request is received from a batch job.
>
>The **BATCH, ONLINE, DASD and TAPE** parameters control the actual priority value assigned to a request. OS/EM determines if the request is from a batch job or an online user, and whether the dataset to be recalled is currently stored on tape or DASD. It then calculates the priority to be assigned by adding the stated values together.
>
>As an example, the following values have been specified to OS/EM:

```
BATCH:  30    TAPE:  40
ONLINE: 40    DASD:  45
```

>If a request is received from a batch job, and HSM has the dataset stored on DASD, the priority assigned to the request would be:

```
30 + 45 = 75%
```

>While a request from an online user for a dataset which is stored on tape would be:

```
40 + 40 = 80%
```

NOBATCH

Specifing NOBATCH has OS/EM ignore batch requests for this selection group.

ONLINE(nnn)

Specify the value to be used for online requests.

NOONLINE

Specifing NOONLINE has OS/EM ignore online requests for this selection group.

DASD(nnn)

Specify the value to be used for requests where HSM has the dataset archived on DASD.

NODASD

Specifing NODASD has OS/EM ignore requests for DASD archived files for this selection group.

TAPE(nnn)

Specify the value to be used for requests where HSM has the dataset archived on TAPE.

NOTAPE

Specifing NOTAPE has OS/EM ignore requests for TAPE archived files for this selection group.

JOBNAME

Specifies which jobs will have their recall priority changed.

NOJOBNAME

Specifing NOJOBNAME nullifies this option.

INC

EXC

Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection criteria. An exclude list states that all items not in the list will be used.

jobname

Specify a jobname, or a jobname mask for the include/exclude list.

DSNAME

Specifies which datasets will have their recall priority changed.

NODSNAME

Specifing NODSNAME nullifies this option.

INC

EXC

Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection criteria. An exclude list states that all items not in the list will be used.

dsname

Specify a dataset name, or a dataset name mask for the include/exclude list.

USERID

Specifies which users will have their recall priority changed.

NOUSERID

Specifying NOUSERID nullifies this option.

INC

EXC

Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection criteria. An exclude list states that all items not in the list will be used.

userid

Specify a user id, or a user id mask for the include/exclude list.

DAYS(0|*|nnnn:nnnn,...)

Specify the time of day by day of week that you want this selection group active. There are 7 slots for values to be entered. Slot one is for Monday while slot 7 is for Sunday.

For example, to specify a value for Wednesday and Friday, while ignoring any values which may have been entered for Monday, Tuesday and Thursday, enter the following:

```
DAYS(* * 0800:1700 * 0800:1700)
```

This ignores any previously entered values for Monday, Tuesday, Thursday, Saturday and Sunday, while setting new values for Wednesday and Friday.

Entering a value of **0** deletes any previously entered value for that day.

NODAYS

Specifing NODAYS deletes all 7 slots and OS/EM will ignore the time of day by day of week for this selection group.

RECOVER

NORECOVER

Specifing RECOVER allows you to control the priority given to RECOVER requests. NORECOVER allows all RECOVER requests to be processed at the default value of 50%.

WEIGHT

NOWEIGHT

Specifies which type of include/exclude list will be given the most weight when determining which priority list to use.

If NOWEIGHT is specified, the first matching entry will be used.

OS/EM checks all active priority selection lists to find matching entries. The WEIGHT parameters are added to each matching entry and the entry with the hightest value will be used to determine the priority given to the request.

DAY(n)

Specify the weight to be given to the Time of Day, Day of Week include lists. Specify a value from 1 to 4.

DATASET(n)

Specify the weight to be given to the Dataset name Include/Exclude lists. Specify a value from 1 to 4.

JOB(n)

Specify the weight to be given to the Job name Include/Exclude lists. Specify a value from 1 to 4.

USERID(n)

Specify the weight to be given to the UserID Include/Exclude lists. Specify a value from 1 to 4.

DEFAULT(nnn)

Specify the priority to be given to any recover request which does not meet any of the specified selection criteria.

NODEFAULT

Specifing NODEFAULT results in any requests not matching to receive a HSM default of 50%.

PRIORITY1 through PRIORITY22

NOPRIORITY1 through NOPRIORITY22

There may be up to 22 selection lists. Each list is checked in sequence, and based unpon the weights entered, either the first matching list, or the list with the highest weight will be selected.

BATCH(nnn)

Specify the value to be used if the request is received from a batch job.

The **BATCH, ONLINE, DASD and TAPE** parameters control the actual priority value assigned to a request. OS/EM determines if the request is from a batch job or an online user, and whether the dataset to be recovered is currently stored on tape or DASD. It then calculates the priority to be assigned by adding the stated values together.

As an example, the following values have been specified to OS/EM:

```
BATCH:  30    TAPE:  40
ONLINE: 40    DASD:  45
```

If a request is received from a batch job, and HSM has the dataset stored on DASD, the priority assigned to the request would be:

```
30 + 45 = 75%
```

While a request from an online user for a dataset which is stored on tape would be:

```
40 + 40 = 80%
```

NOBATCH

Specifing NOBATCH has OS/EM ignore batch requests for this selection group.

ONLINE(nnn)
>   Specify the value to be used for online requests.

NOONLINE
>   Specifing NOONLINE has OS/EM ignore online requests for this selection group.

DASD(nnn)
>   Specify the value to be used for requests where HSM has the dataset archived on DASD.

NODASD
>   Specifying NODASD has OS/EM ignore requests for DASD archived files for this selection group.

TAPE(nnn)
>   Specify the value to be used for requests where HSM has the dataset archived on TAPE.

NOTAPE
>   Specifying NOTAPE has OS/EM ignore requests for TAPE archived files for this selection group.

JOBNAME
>   Specifies which jobs will have their recover priority changed.

NOJOBNAME
>   Specifying NOJOBNAME nullifies this option.

>   **INC**

>   **EXC**
>>   Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection criteria. An exclude list states that all items not in the list will be used.

>>   **jobname**
>>>   Specify a jobname, or a jobname mask for the include/exclude list.

DSNAME
>   Specifies which datasets will have their recover priority changed.

NODSNAME
>   Specifying NODSNAME nullifies this option.

>   **INC**

>   **EXC**
>>   Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection criteria. An exclude list states that all items not in the list will be used.

>>   **dsname**
>>>   Specify a dataset name, or a dataset name mask for the include/exclude list.

USERID
>   Specifies which users will have their recover priority changed.

NOUSERID
>>Specifying NOUSERID nullifies this option.

>**INC**

>**EXC**
>>Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection criteria. An exclude list states that all items not in the list will be used.

>>**userid**
>>>Specify a user id, or a user id mask for the include/exclude list.

DAYS(0|*|nnnn:nnnn,...)
>Specify the time of day by day of week that you want this selection group active. There are 7 slots for values to be entered. Slot one is for Monday while slot 7 is for Sunday.

>For example, to specify a value for Wednesday and Friday, while ignoring any values which may have been entered for Monday, Tuesday and Thursday, enter the following:

```
DAYS(* * 0800:1700 * 0800:1700)
```

>This ignores any previously entered values for Monday, Tuesday, Thursday, Saturday and Sunday, while setting new values for Wednesday and Friday.

>Entering a value of **0** deletes any previously entered value for that day.

NODAYS
>Specifing NODAYS deletes all 7 slots and OS/EM will ignore the time of day by day of week for this selection group.

ARCSAEXT

This exit is the space management and backup exit. You have access to this exit once for each dataset processed during backup processing or volume space management.

OS/EM only supplies basic control functions for this exit.

```
OS$CNTL HSM                                                    -
 {NOABendnotify|ABendnotify(                                   -
     0|*|id1 {0|*|id2 {0|*|id3}})}                             -
 {LIBrary(library.dsn)}                                        -
 {NOARCSAEXT|ARCSAEXT(                                 -
       {ENable|DISABLE}                                        -
       {NUmber( num1 num2 num3 )}                              -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}     -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}   -
       {NOABendnotify|ABendnotify(                             -
           ( 0|*|id1a {0|*|id2a {0|*|id3a}} )}                 -
           ( 0|*|id1b {0|*|id2b {0|*|id3b}} )}                 -
           ( 0|*|id1c {0|*|id2c {0|*|id3c}} )} )}              -
       {NOVAlidrc|VAlidrc(rc,...)}                             -
       {NOGoodrc|Goodrc(rc,...)}                               -
       {NODIsablerc|DISABLERc(rc)}                             -
       {DEFaultrc(rc)}                                         -
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any DFHSM exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for DFHSM exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ARCSAEXT exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ARCSAEXT modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the DFHSM ARCSAEXT user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ARCSAEXT   Specifies that the ARCSAEXT exit point is to be activated.

NOARCSAEXT The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ARCSAEXT exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ARCSAEXT user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ARCSAEXT user exits be activated. This can be specified at initialization, or later to load and activate ARCSAEXT user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3

The module name of the user exit that is assigned to the specified ARCSAEXT exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ARCSAEXT user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ARCSAEXT user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3

The module name of the backup user exit that is assigned to the specified DFHSM exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup DFHSM user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a ARCSAEXT exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ARCSAEXT exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of ARCSAEXT exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by ARCSAEXT user exit modules. A good return code allows subsequent ARCSAEXT user exit modules to be called. OS/EM provides a default list. For example, if a DFHSM user exit for ARCSAEXT set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

NODISABLERC turns off disable return code checking for the exit point.

rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has

occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc   Default return codes values are any numeric value

Example

The following command will establish user exit USREXT1:

```
OS$CNTL HSM ARCSAEXT(EXITS( -
     (USREXT1))
```

ARCSDEXT

This is the shutdown exit. You have access to this exit during shutdown processing.

OS/EM only supplies basic exit control functions for ARCSDEXT.

```
OS$CNTL HSM                                                           -
 {NOABendnotify|ABendnotify(                                          -
       0|*|id1 {0|*|id2 {0|*|id3}})}                                  -
 {LIBrary(library.dsn)}                                               -
 {NOARCSDEXT|ARCSDEXT(                                                -
       {ENable|DISABLE}                                              -
       {NUmber( num1 num2 num3 )}                                    -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}           -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}         -
       {NOABendnotify|ABendnotify(                                   -
           ( 0|*|id1a {0|*|id2a {0|*|id3a}} )}                       -
           ( 0|*|id1b {0|*|id2b {0|*|id3b}} )}                       -
           ( 0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                    -
       {NOVAlidrc|VAlidrc(rc,...)}                                   -
       {NOGoodrc|Goodrc(rc,...)}                                     -
       {NODIsablerc|DISABLERc(rc)}                                   -
       {DEFaultrc(rc)}                                               -
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any DFHSM exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for DFHSM exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a ARCSDEXT exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ARCSDEXT modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the DFHSM ARCSDEXT user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ARCSDEXT Specifies that the ARCSDEXT exit point is to be activated.

NOARCSDEXT The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named ARCSDEXT exit point is be passed control for exit module execution.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

> Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
>
> If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ARCSDEXT user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ARCSDEXT user exits be activated. This can be specified at initialization, or later to load and activate ARCSDEXT user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**
>
> **exit2**
>
> **exit3**
> > The module name of the user exit that is assigned to the specified ARCSDEXT exit point.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0**   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ARCSDEXT user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ARCSDEXT user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**
>
> **exit2**
>
> **exit3**
> > The module name of the backup user exit that is assigned to the specified DFHSM exit point.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup DFHSM user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0**   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

> Specifies that when a ARCSDEXT exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ARCSDEXT exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of ARCSDEXT exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by ARCSDEXT user exit modules. A good return code allows subsequent ARCSDEXT user exit modules to be called. OS/EM provides a default list. For example, if a DFHSM user exit for ARCSDEXT set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

NODISABLERC turns off disable return code checking for the exit point.

rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has

occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc   Default return codes values are any numeric value

Example

The following command will establish user exit USREXT1:

```
OS$CNTL HSM ARCSAEXT(EXITS( -
    (USREXT1))
```

ARCSKEXT

This is the ABARS dataset skip exit. You have access to this exit during aggregate recovery processing for each dataset being restored.

OS/EM only supplies basic control functions for this exit.

```
OS$CNTL HSM                                                          -
 {NOABendnotify|ABendnotify(                                         -
      0|*|id1 {0|*|id2 {0|*|id3}})}                                  -
 {LIBrary(library.dsn)}                                              -
 {NOARCSKEXT|ARCSKEXT(                                              -
      {ENable|DISABLE}                                               -
      {NUmber( num1 num2 num3 )}                                     -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}            -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}          -
      {NOABendnotify|ABendnotify(                                    -
         ( 0|*|id1a {0|*|id2a {0|*|id3a}} )}                        -
         ( 0|*|id1b {0|*|id2b {0|*|id3b}} )}                        -
         ( 0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                     -
      {NOVAlidrc|VAlidrc(rc,...)}                                    -
      {NOGoodrc|Goodrc(rc,...)}                                      -
      {NODIsablerc|DISABLERc(rc)}                                    -
      {DEFaultrc(rc)}                                                -
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any DFHSM exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for DFHSM exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a ARCSKEXT exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ARCSKEXT modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the DFHSM ARCSKEXT user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ARCSKEXT Specifies that the ARCSKEXT exit point is to be activated.

NOARCSKEXT
> The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named ARCSKEXT exit point is be passed control for exit module execution.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

> **num1, num2, num3**
>> Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
>>
>> If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ARCSKEXT user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ARCSKEXT user exits be activated. This can be specified at initialization, or later to load and activate ARCSKEXT user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the user exit that is assigned to the specified ARCSKEXT exit point.

> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

> **0**   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ARCSKEXT user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup ARCSKEXT user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the backup user exit that is assigned to the specified DFHSM exit point.

> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup DFHSM user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

> **0**   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a ARCSKEXT exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ARCSKEXT exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of ARCSKEXT exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by ARCSKEXT user exit modules. A good return code allows subsequent ARCSKEXT user exit modules to be called. OS/EM provides a default list. For example, if a DFHSM user exit for ARCSKEXT set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

NODISABLERC turns off disable return code checking for the exit point.

rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc   Default return codes values are any numeric value

Example

The following command will establish user exit USREXT1:

```
OS$CNTL HSM ARCSKEXT(EXITS( -
   (USREXT1))
```

ARCTDEXT

This exit is the tape dataset exit. You have access to this exit when an output tape is opened.

OS/EM only supplies basic control functions for this exit.

```
OS$CNTL HSM                                                            -
 {NOABendnotify|ABendnotify(                                           -
      0|*|id1 {0|*|id2 {0|*|id3}})}                                    -
 {LIBrary(library.dsn)}                                                -
 {NOARCTDEXT|ARCTDEXT(                                          -
      {ENable|DISABLE}                                                 -
      {NUmber( num1 num2 num3 )}                                       -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}      -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}    -
      {NOABendnotify|ABendnotify(                                      -
          ( 0|*|id1a {0|*|id2a {0|*|id3a}} )}                 -
          ( 0|*|id1b {0|*|id2b {0|*|id3b}} )}                 -
          ( 0|*|id1c {0|*|id2c {0|*|id3c}} )} )}              -
      {NOVAlidrc|VAlidrc(rc,...)}                                      -
      {NOGoodrc|Goodrc(rc,...)}                                        -
      {NODIsablerc|DISABLERc(rc)}                                      -
      {DEFaultrc(rc)}                                                  -
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any DFHSM exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for DFHSM exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ARCTDEXT exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ARCTDEXT modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the DFHSM ARCTDEXT user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ARCTDEXT   Specifies that the ARCTDEXT exit point is to be activated.

NOARCTDEXT
> The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ARCTDEXT exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ARCTDEXT user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ARCTDEXT user exits be activated. This can be specified at initialization, or later to load and activate ARCTDEXT user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3

The module name of the user exit that is assigned to the specified ARCTDEXT exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ARCTDEXT user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ARCTDEXT user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3

The module name of the backup user exit that is assigned to the specified DFHSM exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup DFHSM user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a ARCTDEXT exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ARCTDEXT exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of ARCTDEXT exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by ARCTDEXT user exit modules. A good return code allows subsequent ARCTDEXT user exit modules to be called. OS/EM provides a default list. For example, if a DFHSM user exit for ARCTDEXT set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

NODISABLERC turns off disable return code checking for the exit point.

rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has

occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc   Default return codes values are any numeric value

Example

The following command will establish user exit USREXT1:

```
OS$CNTL HSM ARCTDEXT(EXITS( -
   (USREXT1))
```

ARCTEEXT

This exit is the tape-ejected exit. You have access to this exit when an input tape is needed.

OS/EM only supplies basic exit control functions for ARCTEEXT.

```
OS$CNTL HSM                                                          -
 {NOABendnotify|ABendnotify(                                         -
      0|*|id1 {0|*|id2 {0|*|id3}})}                                  -
 {LIBrary(library.dsn)}                                              -
 {NOARCTEEXT|ARCTEEXT(                                              -
      {ENable|DISABLE}                                               -
      {NUmber( num1 num2 num3 )}                                     -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}            -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}         -
      {NOABendnotify|ABendnotify(                                    -
          ( 0|*|id1a {0|*|id2a {0|*|id3a}} )}                        -
          ( 0|*|id1b {0|*|id2b {0|*|id3b}} )}                        -
          ( 0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                     -
      {NOVAlidrc|VAlidrc(rc,...)}                                    -
      {NOGoodrc|Goodrc(rc,...)}                                      -
      {NODIsablerc|DISABLERc(rc)}                                    -
      {DEFaultrc(rc)}                                                -
```

ABENDNOTIFY
Specifies that a TSO message will be sent if any DFHSM exit ABENDs.

NOABENDNOTIFY
Specifies that no messages will be sent for DFHSM exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ARCTEEXT exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ARCTEEXT modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the DFHSM ARCTEEXT user exit. The library name should be enclosed in single quotes (').
>
> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ARCTEEXT   Specifies that the ARCTEEXT exit point is to be activated.

NOARCTEEXT
The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ARCTEEXT exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

> Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
>
> If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS Specifies that any active ARCTEEXT user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of ARCTEEXT user exits be activated. This can be specified at initialization, or later to load and activate ARCTEEXT user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3
> The module name of the user exit that is assigned to the specified ARCTEEXT exit point.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP Specifies that all active backup ARCTEEXT user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup ARCTEEXT user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
> The module name of the backup user exit that is assigned to the specified DFHSM exit point.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup DFHSM user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

> Specifies that when a ARCTEEXT exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ARCTEEXT exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of ARCTEEXT exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by ARCTEEXT user exit modules. A good return code allows subsequent ARCTEEXT user exit modules to be called. OS/EM provides a default list. For example, if a DFHSM user exit for ARCTEEXT set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

NODISABLERC turns off disable return code checking for the exit point.

rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has

occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc   Default return codes values are any numeric value

Example

The following command will establish user exit USREXT1:

```
OS$CNTL HSM ARCTEEXT(EXITS( -
    (USREXT1))
```

ARCTVEXT

This is the tape volume exit. You have access to this exit when a HSM-owned tape no longer contains valid data. This exit is used by both ABARS and standard HSM processing.

OS/EM only supplies basic control functions for this exit.

```
OS$CNTL HSM                                                            -
  {NOABendnotify|ABendnotify(                                          -
       0|*|id1 {0|*|id2 {0|*|id3}})}                                   -
  {LIBrary(library.dsn)}                                               -
  {NOARCTVEXT|ARCTVEXT(                                                -
       {ENable|DISABLE}                                                -
       {NUmber( num1 num2 num3 )}                                      -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}             -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}          -
       {NOABendnotify|ABendnotify(                                     -
          ( 0|*|id1a {0|*|id2a {0|*|id3a}} )}                          -
          ( 0|*|id1b {0|*|id2b {0|*|id3b}} )}                          -
          ( 0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                       -
       {NOVAlidrc|VAlidrc(rc,...)}                                     -
       {NOGoodrc|Goodrc(rc,...)}                                       -
       {NODIsablerc|DISABLERc(rc)}                                     -
       {DEFaultrc(rc)}                                                 -
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any DFHSM exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for DFHSM exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ARCTVEXT exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ARCTVEXT modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the DFHSM ARCTVEXT user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ARCTVEXT   Specifies that the ARCTVEXT exit point is to be activated.

NOARCTVEXT
> The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ARCTVEXT exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ARCTVEXT user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ARCTVEXT user exits be activated. This can be specified at initialization, or later to load and activate ARCTVEXT user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3

The module name of the user exit that is assigned to the specified ARCTVEXT exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ARCTVEXT user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ARCTVEXT user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3

The module name of the backup user exit that is assigned to the specified DFHSM exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup DFHSM user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a ARCTVEXT exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ARCTVEXT exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of ARCTVEXT exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by ARCTVEXT user exit modules. A good return code allows subsequent ARCTVEXT user exit modules to be called. OS/EM provides a default list. For example, if a DFHSM user exit for ARCTVEXT set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

NODISABLERC turns off disable return code checking for the exit point.

rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc   Default return codes values are any numeric value

Example

The following command will establish user exit USREXT1:

```
OS$CNTL HSM ARCTVEXT(EXITS( -
   (USREXT1))
```

ISPF Command

This subcommand sets which ISPF exits will be active, loads the specified user exit modules, loads the specified backup user exit modules, specifies the TSO USERID to be notified if a corresponding user exit module abends, sets additional user exit return codes, and sets LIMIT checking for the corresponding exit modules.

The optional OS/EM control functions can:

- Modify the LOG dataset name to include a user specified prefix after the TSOID.

- Modify the LIST dataset name to include a user specified prefix after the TSOID.

- Modify the TEMPORARY file dataset names to include a user specified prefix after the TSOID.

EXIT1

The **ISPF initialization** exit provides accounting and monitoring capabilities prior to ISPF initialization.

OS/EM supplies only basic exit control functions for this exit.

```
OS$CNTL ISPF                                                  -
 {NOABendnotify|ABendnotify(                                  -
       0|*|id1 {0|*|id2 {0|*|id3}})}                          -
 {LIBrary(library.dsn)}                                       -
 {NOEXIT1|EXIT1(                                              -
       {ENable|DISABLE}                                       -
       {NUmber( num1 num2 num3 )}                             -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}     -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}   -
       {NOABendnotify|ABendnotify(                            -
          (0|*|id1a {0|*|id2a {0|*|id3a}} )}                  -
          (0|*|id1b {0|*|id2b {0|*|id3b}} )}                  -
          (0|*|id1c {0|*|id2c {0|*|id3c}} )} )}               -
       {NOLIMit|LIMit(                                        -
         (jobmask1,...)|*|0                                   -
        {(jobmask2,...)|*|0                                   -
        {(jobmask3,...)|*|0}})}                               -
       {NODATAArea|DATAArea(                                  -
          0|*|area1 {0|*|area2 {0|*|area3}})}                 -
       {NODATALength|DATALength(                              -
          0|*|length1 {0|*|length2 {0|*|length3}})}           -
       {NOVAlidrc|VAlidrc(rc,...)}                            -
       {NOGoodrc|Goodrc(rc,...)}                              -
       {NODIsablerc|DISABLERc(rc)}                            -
       {DEFaultrc(rc)}                                        -
```

EXIT1   Specifies that the EXIT1 exit point is to be activated.

NOEXIT1   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named EXIT1 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

LIBRARY   Specifies the loading of a EXIT1 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for EXIT1 modules.

library.dsn
Specifies the name of a private **authorized** library used to locate and load the ISPF EXIT1 user exit. The library name should be enclosed in single quotes (').

Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

NOEXITS   Specifies that any active EXIT1 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of EXIT1 user exits be activated. This can be specified at initialization, or later to load and activate EXIT1 user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3
The module name of the user exit that is assigned to the specified EXIT1 exit.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ISPF user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ISPF user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
The module name of the backup user exit that is assigned to the specified ISPF exit.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup ISPF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
> Specifies that a TSO message will be sent if any ISPF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for ISPF exit ABENDs.

id1, id2, id3   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

id1

id2

id3   The TSO userid that is to be notified if the corresponding user exit module should ABEND.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for EXIT1 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
> The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

NODATAAREA
> Specifies that any active dataareas are to be disabled. This is only effective after initialization.

DATAAREA(...)
> Specifies that the list of dataareas are to be activated. This can be specified at initialization, or later to load and activate a dataarea for the specified exit that was not activated at initialization.

Note: The length of the dataarea is specified by the DATALENGTH keyword documented below.

area1

area2

area3
> The name of the dataarea that will be assigned for this user exit.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the dataarea list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the dataarea.

Note: These dataareas may be shared between exits based upon the name of the dataarea. Please refer to the ISPF Planning and Customizing manual for more information about dataareas.

DATALENGTH(...)
> Specifies that the list of datalengths are to be activated. This can be specified at initialization, or later to load and activate a datalength for the specified exit that was not activated at initialization.

Note: The DATALENGTHs correspond to the DATAAREA names documented above.

length1

length2

length3
> The length of the dataarea that will be assigned for this user exit.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the datalength list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the datalength.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

         rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by EXIT1 user exit modules. A good return code allows subsequent EXIT1 user exit modules to be called. OS/EM provides a default list. For example, if a ISPF user exit for EXIT1 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

  rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
  NODISABLERC turns off disable return code checking for the exit point.

  rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

  rc Default return codes values are any numeric value

EXIT2

The **ISPF termination** exit provides accounting and monitoring capabilities prior to ISPF termination.

OS/EM supplies only basic exit control functions for this exit.

```
OS$CNTL ISPF                                                        -
 {NOABendnotify|ABendnotify(                                        -
       0|*|id1 {0|*|id2 {0|*|id3}})}                               -
 {LIBrary(library.dsn)}                                            -
 {NOEXIT2|EXIT2(                                                    -
       {ENable|DISABLE}                                            -
       {NUmber( num1 num2 num3 )}                                  -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}          -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}        -
       {NOABendnotify|ABendnotify(                                 -
          (0|*|id1a {0|*|id2a {0|*|id3a}} )}                       -
          (0|*|id1b {0|*|id2b {0|*|id3b}} )}                       -
          (0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                    -
       {NOLIMit|LIMit(                                             -
         (jobmask1,...)|*|0                                        -
        {(jobmask2,...)|*|0                                        -
        {(jobmask3,...)|*|0}})}                                    -
       {NODATAArea|DATAArea(                                       -
          0|*|area1 {0|*|area2 {0|*|area3}})}                      -
       {NODATALength|DATALength(                                   -
          0|*|length1 {0|*|length2 {0|*|length3}})}               -
       {NOVAlidrc|VAlidrc(rc,...)}                                 -
       {NOGoodrc|Goodrc(rc,...)}                                   -
       {NODIsablerc|DISABLERc(rc)}                                 -
       {DEFaultrc(rc)}                                             -
```

EXIT2   Specifies that the EXIT2 exit point is to be activated.

NOEXIT2   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named EXIT2 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

LIBRARY   Specifies the loading of a EXIT2 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for EXIT2 modules.

        library.dsn
           Specifies the name of a private **authorized** library used to locate and load the ISPF EXIT2 user exit. The library name should be enclosed in single quotes (').

           Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

NOEXITS   Specifies that any active EXIT2 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of EXIT2 user exits be activated. This can be specified at initialization, or later to load and activate EXIT2 user exits that were not activated at initialization. The exits will be called in the order listed.

    exit1

    exit2

    exit3
        The module name of the user exit that is assigned to the specified EXIT2 exit.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ISPF user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ISPF user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

    exit1

    exit2

    exit3
        The module name of the backup user exit that is assigned to the specified ISPF exit.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup ISPF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
    Specifies that a TSO message will be sent if any ISPF exit ABENDs.

NOABENDNOTIFY
    Specifies that no messages will be sent for ISPF exit ABENDs.

    id1, id2, id3   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

    id1

    id2

    id3   The TSO userid that is to be notified if the corresponding user exit module should ABEND.

*	An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
0	A zero (0) can be used to negate a previous entry of the notify TSO user list.
LIMIT	Specifies that Job name limits are requested, to limit user exit modules for EXIT2 to a specific Jobname(s) or a Jobname mask(s).
NOLIMIT	The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
> The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*	An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
0	A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

NODATAAREA
> Specifies that any active dataareas are to be disabled. This is only effective after initialization.

DATAAREA(...)
> Specifies that the list of dataareas are to be activated. This can be specified at initialization, or later to load and activate a dataarea for the specified exit that was not activated at initialization.

> **Note:** The length of the dataarea is specified by the DATALENGTH keyword documented below.

area1

area2

area3
> The name of the dataarea that will be assigned for this user exit.

*	An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the dataarea list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
0	A zero (0) can be used to negate a previous entry of the dataarea.

> **Note:** These dataareas may be shared between exits based upon the name of the dataarea. Please refer to the ISPF Planning and Customizing manual for more information about dataareas.

DATALENGTH(...)
Specifies that the list of datalengths are to be activated. This can be specified at initialization, or later to load and activate a datalength for the specified exit that was not activated at initialization.

Note: The DATALENGTHs correspond to the DATAAREA names documented above.

length1

length2

length3
The length of the dataarea that will be assigned for this user exit.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the datalength list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the datalength.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by EXIT2 user exit modules. A good return code allows subsequent EXIT2 user exit modules to be called. OS/EM provides a default list. For example, if a ISPF user exit for EXIT2 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
NODISABLERC turns off disable return code checking for the exit point.

rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc Default return codes values are any numeric value

EXIT3

The **SELECT service start** exit provides monitoring information and lets you restrict access to applications selected through ISPF.

OS/EM supplies only basic exit control functions for this exit.

```
        OS$CNTL ISPF                                                    -
         {NOABendnotify|ABendnotify(                                    -
              0|*|id1 {0|*|id2 {0|*|id3}})}                             -
         {LIBrary(library.dsn)}                                         -
         {NOEXIT3|EXIT3(                                            -
               {ENable|DISABLE}                                         -
               {NUmber( num1 num2 num3 )}                               -
               {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}       -
               {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}     -
               {NOABendnotify|ABendnotify(                              -
                  (0|*|id1a {0|*|id2a {0|*|id3a}} )}                    -
                  (0|*|id1b {0|*|id2b {0|*|id3b}} )}                    -
                  (0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                 -
               {NOLIMit|LIMit(                                          -
                 (jobmask1,...)|*|0                                     -
                {(jobmask2,...)|*|0                                     -
                {(jobmask3,...)|*|0}})}                                 -
               {NODATAArea|DATAArea(                                    -
                   0|*|area1 {0|*|area2 {0|*|area3}})}                  -
               {NODATALength|DATALength(                                -
                   0|*|length1 {0|*|length2 {0|*|length3}})}           -
               {NOVAlidrc|VAlidrc(rc,...)}                              -
               {NOGoodrc|Goodrc(rc,...)}                                -
               {NODIsablerc|DISABLERc(rc)}                              -
               {DEFaultrc(rc)}                                          -
```

EXIT3   Specifies that the EXIT3 exit point is to be activated.

NOEXIT3   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named EXIT3 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

LIBRARY   Specifies the loading of a EXIT3 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for EXIT3 modules.

                library.dsn
                    Specifies the name of a private **authorized** library used to locate and load the ISPF EXIT3 user exit. The library name should be enclosed in single quotes (').

                    Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

NOEXITS   Specifies that any active EXIT3 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of EXIT3 user exits be activated. This can be specified at initialization, or later to load and activate EXIT3 user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**

> **exit2**

> **exit3**
>> The module name of the user exit that is assigned to the specified EXIT3 exit.

> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

> **0**   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ISPF user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ISPF user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**

> **exit2**

> **exit3**
>> The module name of the backup user exit that is assigned to the specified ISPF exit.

> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup ISPF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

> **0**   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
> Specifies that a TSO message will be sent if any ISPF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for ISPF exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

> **id1**

> **id2**

> **id3**   The TSO userid that is to be notified if the corresponding user exit module should ABEND.

*	An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
0	A zero (0) can be used to negate a previous entry of the notify TSO user list.
LIMIT	Specifies that Job name limits are requested, to limit user exit modules for EXIT3 to a specific Jobname(s) or a Jobname mask(s).
NOLIMIT	The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
> The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EX-ITS(...) parameter, jobmask2 for the second User exit module etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

* An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

NODATAAREA
> Specifies that any active dataareas are to be disabled. This is only effective after initialization.

DATAAREA(...)
> Specifies that the list of dataareas are to be activated. This can be specified at initialization, or later to load and activate a dataarea for the specified exit that was not activated at initialization.

Note: The length of the dataarea is specified by the DATALENGTH keyword documented below.

area1

area2

area3
> The name of the dataarea that will be assigned for this user exit.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the dataarea list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the dataarea.

Note: These dataareas may be shared between exits based upon the name of the dataarea. Please refer to the ISPF Planning and Customizing manual for more information about dataareas.

DATALENGTH(...)

Specifies that the list of datalengths are to be activated. This can be specified at initialization, or later to load and activate a datalength for the specified exit that was not activated at initialization.

Note: The DATALENGTHs correspond to the DATAAREA names documented above.

length1

length2

length3

The length of the dataarea that will be assigned for this user exit.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the datalength list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the datalength.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by EXIT3 user exit modules. A good return code allows subsequent EXIT3 user exit modules to be called. OS/EM provides a default list. For example, if a ISPF user exit for EXIT3 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

NODISABLERC turns off disable return code checking for the exit point.

rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc Default return codes values are any numeric value

EXIT4

The **SELECT service end** exit marks the end of a program, command, or menu invoiked through any
of the SELECT services.

OS/EM supplies only basic exit control functions for this exit.

```
OS$CNTL ISPF                                                          -
 {NOABendnotify|ABendnotify(                                          -
      0|*|id1 {0|*|id2 {0|*|id3}})}                                   -
 {LIBrary(library.dsn)}                                               -
 {NOEXIT4|EXIT4(                                                  -
       {ENable|DISABLE}                                              -
       {NUmber( num1 num2 num3 )}                                    -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}        -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}      -
       {NOABendnotify|ABendnotify(                                   -
          (0|*|id1a {0|*|id2a {0|*|id3a}} )}                     -
          (0|*|id1b {0|*|id2b {0|*|id3b}} )}                     -
          (0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                  -
       {NOLIMit|LIMit(                                               -
         (jobmask1,...)|*|0                                          -
        {(jobmask2,...)|*|0                                          -
        {(jobmask3,...)|*|0}})}                                      -
       {NODATAArea|DATAArea(                                         -
           0|*|area1 {0|*|area2 {0|*|area3}})}                    -
       {NODATALength|DATALength(                                     -
           0|*|length1 {0|*|length2 {0|*|length3}})}             -
       {NOVAlidrc|VAlidrc(rc,...)}                                  -
       {NOGoodrc|Goodrc(rc,...)}                                    -
       {NODIsablerc|DISABLERc(rc)}                                  -
       {DEFaultrc(rc)}                                              -
```

EXIT4 Specifies that the EXIT4 exit point is to be activated.

NOEXIT4 The NO option can be used to completely nullify the exit point and disable and reset
any options in effect for it.

ENABLE Specifies that the named EXIT4 exit point is be passed control for exit module exe-
cution.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily
disable an exit, but all the options that were specified previously are retained and will
not have to be re-specified if the exit is enabled again.

LIBRARY Specifies the loading of a EXIT4 exit module from a private **authorized** library named
library.dsn. If this parameter is omitted then the normal MVS search criteria is used
for EXIT4 modules.

library.dsn
Specifies the name of a private **authorized** library used to locate and load the
ISPF EXIT4 user exit. The library name should be enclosed in single quotes (').

Note: If the program is not found in this library, no other search is performed
and the user exit is **not** loaded.

NOEXITS Specifies that any active EXIT4 user exits are to be disabled. This is only effective after
initialization.

EXITS(...) Specifies that the list of EXIT4 user exits be activated. This can be specified at initialization, or later to load and activate EXIT4 user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**

> **exit2**

> **exit3**
> > The module name of the user exit that is assigned to the specified EXIT4 exit.

> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

> **0** A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP Specifies that all active backup ISPF user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup ISPF user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**

> **exit2**

> **exit3**
> > The module name of the backup user exit that is assigned to the specified ISPF exit.

> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup ISPF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

> **0** A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
> Specifies that a TSO message will be sent if any ISPF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for ISPF exit ABENDs.

> > **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

> > **id1**

> > **id2**

> > **id3** The TSO userid that is to be notified if the corresponding user exit module should ABEND.

*	An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
0	A zero (0) can be used to negate a previous entry of the notify TSO user list.
LIMIT	Specifies that Job name limits are requested, to limit user exit modules for EXIT4 to a specific Jobname(s) or a Jobname mask(s).
NOLIMIT	The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
>   The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*
>   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
>   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

NODATAAREA

Specifies that any active dataareas are to be disabled. This is only effective after initialization.

DATAAREA(...)

Specifies that the list of dataareas are to be activated. This can be specified at initialization, or later to load and activate a dataarea for the specified exit that was not activated at initialization.

Note: The length of the dataarea is specified by the DATALENGTH keyword documented below.

area1

area2

area3
>   The name of the dataarea that will be assigned for this user exit.

*
>   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the dataarea list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
>   A zero (0) can be used to negate a previous entry of the dataarea.

Note: These dataareas may be shared between exits based upon the name of the dataarea. Please refer to the ISPF Planning and Customizing manual for more information about dataareas.

DATALENGTH(...)
Specifies that the list of datalengths are to be activated. This can be specified at initialization, or later to load and activate a datalength for the specified exit that was not activated at initialization.

Note: The DATALENGTHs correspond to the DATAAREA names documented above.

length1

length2

length3
The length of the dataarea that will be assigned for this user exit.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the datalength list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the datalength.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by EXIT4 user exit modules. A good return code allows subsequent EXIT4 user exit modules to be called. OS/EM provides a default list. For example, if a ISPF user exit for EXIT4 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
NODISABLERC turns off disable return code checking for the exit point.

rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc Default return codes values are any numeric value

EXIT5

The **TSO command start** exit provides for monitoring and restricting commands invoked through ISPF; allows commands newly added to the system to be invoked without updating ISPTCM.

OS/EM supplies only basic exit control functions for this exit.

```
OS$CNTL ISPF                                                          -
  {NOABendnotify|ABendnotify(                                         -
       0|*|id1 {0|*|id2 {0|*|id3}})}                                  -
  {LIBrary(library.dsn)}                                             -
  {NOEXIT5|EXIT5(                                                     -
       {ENable|DISABLE}                                              -
       {NUmber( num1 num2 num3 )}                                     -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}            -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}          -
       {NOABendnotify|ABendnotify(                                    -
           (0|*|id1a {0|*|id2a {0|*|id3a}} )}                         -
           (0|*|id1b {0|*|id2b {0|*|id3b}} )}                         -
           (0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                      -
       {NOLIMit|LIMit(                                                -
         (jobmask1,...)|*|0                                           -
        {(jobmask2,...)|*|0                                           -
        {(jobmask3,...)|*|0}})}                                       -
       {NODATAArea|DATAArea(                                          -
           0|*|area1 {0|*|area2 {0|*|area3}})}                        -
       {NODATALength|DATALength(                                      -
           0|*|length1 {0|*|length2 {0|*|length3}})}                 -
       {NOVAlidrc|VAlidrc(rc,...)}                                    -
       {NOGoodrc|Goodrc(rc,...)}                                      -
       {NODIsablerc|DISABLERc(rc)}                                    -
       {DEFaultrc(rc)}                                                -
```

EXIT5   Specifies that the EXIT5 exit point is to be activated.

NOEXIT5   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named EXIT5 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

LIBRARY   Specifies the loading of a EXIT5 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for EXIT5 modules.

              library.dsn
                  Specifies the name of a private **authorized** library used to locate and load the ISPF EXIT5 user exit. The library name should be enclosed in single quotes (').

                  Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

NOEXITS   Specifies that any active EXIT5 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of EXIT5 user exits be activated. This can be specified at initialization, or later to load and activate EXIT5 user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3

The module name of the user exit that is assigned to the specified EXIT5 exit.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP Specifies that all active backup ISPF user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup ISPF user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3

The module name of the backup user exit that is assigned to the specified ISPF exit.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup ISPF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that a TSO message will be sent if any ISPF exit ABENDs.

NOABENDNOTIFY

Specifies that no messages will be sent for ISPF exit ABENDs.

id1, id2, id3 You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

id1

id2

id3 The TSO userid that is to be notified if the corresponding user exit module should ABEND.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for EXIT5 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
     The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

NODATAAREA
     Specifies that any active dataareas are to be disabled. This is only effective after initialization.

DATAAREA(...)
     Specifies that the list of dataareas are to be activated. This can be specified at initialization, or later to load and activate a dataarea for the specified exit that was not activated at initialization.

     Note: The length of the dataarea is specified by the DATALENGTH keyword documented below.

area1

area2

area3
     The name of the dataarea that will be assigned for this user exit.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the dataarea list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the dataarea.

     Note: These dataareas may be shared between exits based upon the name of the dataarea. Please refer to the ISPF Planning and Customizing manual for more information about dataareas.

DATALENGTH(...)

Specifies that the list of datalengths are to be activated. This can be specified at initialization, or later to load and activate a datalength for the specified exit that was not activated at initialization.

Note: The DATALENGTHs correspond to the DATAAREA names documented above.

length1

length2

length3

The length of the dataarea that will be assigned for this user exit.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the datalength list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the datalength.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by EXIT5 user exit modules. A good return code allows subsequent EXIT5 user exit modules to be called. OS/EM provides a default list. For example, if a ISPF user exit for EXIT5 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

NODISABLERC turns off disable return code checking for the exit point.

rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc Default return codes values are any numeric value

EXIT6

The **TSO command end** exit provides for monitoring of TSO commands invoked through ISPF.

OS/EM supplies only basic exit control functions for this exit.

```
OS$CNTL ISPF                                                       -
 {NOABendnotify|ABendnotify(                                       -
      0|*|id1 {0|*|id2 {0|*|id3}})}                                -
 {LIBrary(library.dsn)}                                            -
 {NOEXIT6|EXIT6(                                           -
      {ENable|DISABLE}                                             -
      {NUmber( num1 num2 num3 )}                                   -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}          -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}       -
      {NOABendnotify|ABendnotify(                                  -
         (0|*|id1a {0|*|id2a {0|*|id3a}} )}                        -
         (0|*|id1b {0|*|id2b {0|*|id3b}} )}                        -
         (0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                     -
      {NOLIMit|LIMit(                                              -
        (jobmask1,...)|*|0                                         -
       {(jobmask2,...)|*|0                                         -
       {(jobmask3,...)|*|0}})}                                    -
      {NODATAArea|DATAArea(                                        -
           0|*|area1 {0|*|area2 {0|*|area3}})}                     -
      {NODATALength|DATALength(                                    -
           0|*|length1 {0|*|length2 {0|*|length3}})}              -
      {NOVAlidrc|VAlidrc(rc,...)}                                  -
      {NOGoodrc|Goodrc(rc,...)}                                    -
      {NODIsablerc|DISABLERc(rc)}                                  -
      {DEFaultrc(rc)}                                              -
```

EXIT6   Specifies that the EXIT6 exit point is to be activated.

NOEXIT6   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named EXIT6 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

LIBRARY   Specifies the loading of a EXIT6 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for EXIT6 modules.

        library.dsn

            Specifies the name of a private **authorized** library used to locate and load the ISPF EXIT6 user exit. The library name should be enclosed in single quotes (').

            Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

NOEXITS   Specifies that any active EXIT6 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of EXIT6 user exits be activated. This can be specified at in-
itialization, or later to load and activate EXIT6 user exits that were not activated at in-
itialization. The exits will be called in the order listed.

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the user exit that is assigned to the specified EXIT6 exit.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this
> position of the user exit list is not to be changed. As a default, the asterisk would
> be omitted where it would normally be implied.
>
> **0**   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ISPF user exits are to be disabled. This is only effective
after initialization.

BACKUP(...)   Specifies that the list of backup ISPF user exits are to be activated. Backup exits are
only called if the primary exit is not present, usually due to a primary exit failure. This
can be specified at initialization, or later to load and activate backup user exits that were
not activated at initialization. (The backup User exit modules will be called in the order
listed).

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the backup user exit that is assigned to the specified ISPF
>> exit.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this
> position of the backup ISPF user exit list is not to be changed. As a default, the
> asterisk would be omitted where it would normally be implied.
>
> **0**   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
> Specifies that a TSO message will be sent if any ISPF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for ISPF exit ABENDs.
>
> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names
> to be notified in the case of an ABEND. (See "NFYGROUPS" on
> page SYS-1.)
>
> **id1**
>
> **id2**
>
> **id3**   The TSO userid that is to be notified if the corresponding user exit module should
> ABEND.

*	An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
0	A zero (0) can be used to negate a previous entry of the notify TSO user list.
LIMIT	Specifies that Job name limits are requested, to limit user exit modules for EXIT6 to a specific Jobname(s) or a Jobname mask(s).
NOLIMIT	The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

NODATAAREA
Specifies that any active dataareas are to be disabled. This is only effective after initialization.

DATAAREA(...)
Specifies that the list of dataareas are to be activated. This can be specified at initialization, or later to load and activate a dataarea for the specified exit that was not activated at initialization.

Note: The length of the dataarea is specified by the DATALENGTH keyword documented below.

area1

area2

area3
The name of the dataarea that will be assigned for this user exit.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the dataarea list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the dataarea.

Note: These dataareas may be shared between exits based upon the name of the dataarea. Please refer to the ISPF Planning and Customizing manual for more information about dataareas.

DATALENGTH(...)
Specifies that the list of datalengths are to be activated. This can be specified at initialization, or later to load and activate a datalength for the specified exit that was not activated at initialization.

Note: The DATALENGTHs correspond to the DATAAREA names documented above.

length1

length2

length3
The length of the dataarea that will be assigned for this user exit.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the datalength list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the datalength.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by EXIT6 user exit modules. A good return code allows subsequent EXIT6 user exit modules to be called. OS/EM provides a default list. For example, if a ISPF user exit for EXIT6 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
NODISABLERC turns off disable return code checking for the exit point.

rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc Default return codes values are any numeric value

EXIT7

The **LIBDEF service** exit provides for restrictions of the use of the LIBDEF service.

OS/EM supplies only basic exit control functions for this exit.

```
OS$CNTL ISPF                                                        -
  {NOABendnotify|ABendnotify(                                       -
       0|*|id1 {0|*|id2 {0|*|id3}})}                               -
  {LIBrary(library.dsn)}                                           -
  {NOEXIT7|EXIT7(                                                  -
       {ENable|DISABLE}                                            -
       {NUmber( num1 num2 num3 )}                                  -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}         -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}       -
       {NOABendnotify|ABendnotify(                                 -
          (0|*|id1a {0|*|id2a {0|*|id3a}} )}                      -
          (0|*|id1b {0|*|id2b {0|*|id3b}} )}                      -
          (0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                   -
       {NOLIMit|LIMit(                                             -
         (jobmask1,...)|*|0                                        -
        {(jobmask2,...)|*|0                                        -
        {(jobmask3,...)|*|0}})}                                   -
       {NODATAArea|DATAArea(                                       -
           0|*|area1 {0|*|area2 {0|*|area3}})}                    -
       {NODATALength|DATALength(                                   -
           0|*|length1 {0|*|length2 {0|*|length3}})}              -
       {NOVAlidrc|VAlidrc(rc,...)}                                 -
       {NOGoodrc|Goodrc(rc,...)}                                   -
       {NODIsablerc|DISABLERc(rc)}                                 -
       {DEFaultrc(rc)}                                             -
```

EXIT7   Specifies that the EXIT7 exit point is to be activated.

NOEXIT7   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named EXIT7 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

LIBRARY   Specifies the loading of a EXIT7 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for EXIT7 modules.

> **library.dsn**
>> Specifies the name of a private **authorized** library used to locate and load the ISPF EXIT7 user exit. The library name should be enclosed in single quotes (').
>
>> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

NOEXITS   Specifies that any active EXIT7 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of EXIT7 user exits be activated. This can be specified at initialization, or later to load and activate EXIT7 user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the user exit that is assigned to the specified EXIT7 exit.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0**   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP Specifies that all active backup ISPF user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup ISPF user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the backup user exit that is assigned to the specified ISPF exit.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup ISPF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0**   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
> Specifies that a TSO message will be sent if any ISPF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for ISPF exit ABENDs.

> > **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)
> >
> > **id1**
> >
> > **id2**
> >
> > **id3**   The TSO userid that is to be notified if the corresponding user exit module should ABEND.

| | * | An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied. |

| | **0** | A zero (0) can be used to negate a previous entry of the notify TSO user list. |

LIMIT Specifies that Job name limits are requested, to limit user exit modules for EXIT7 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
> The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

* An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

NODATAAREA
Specifies that any active dataareas are to be disabled. This is only effective after initialization.

DATAAREA(...)
Specifies that the list of dataareas are to be activated. This can be specified at initialization, or later to load and activate a dataarea for the specified exit that was not activated at initialization.

Note: The length of the dataarea is specified by the DATALENGTH keyword documented below.

area1

area2

area3
> The name of the dataarea that will be assigned for this user exit.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the dataarea list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the dataarea.

Note: These dataareas may be shared between exits based upon the name of the dataarea. Please refer to the ISPF Planning and Customizing manual for more information about dataareas.

DATALENGTH(...)

Specifies that the list of datalengths are to be activated. This can be specified at initialization, or later to load and activate a datalength for the specified exit that was not activated at initialization.

Note: The DATALENGTHs correspond to the DATAAREA names documented above.

length1

length2

length3

The length of the dataarea that will be assigned for this user exit.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the datalength list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the datalength.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by EXIT7 user exit modules. A good return code allows subsequent EXIT7 user exit modules to be called. OS/EM provides a default list. For example, if a ISPF user exit for EXIT7 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

NODISABLERC turns off disable return code checking for the exit point.

rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc Default return codes values are any numeric value

EXIT8

The **RESERVE** exit allows use of your own method of serializing resources in addition to the RESERVE done by ISPF.

OS/EM supplies only basic exit control functions for this exit.

```
OS$CNTL ISPF                                                    -
  {NOABendnotify|ABendnotify(                                   -
       0|*|id1 {0|*|id2 {0|*|id3}})}                            -
  {LIBrary(library.dsn)}                                        -
  {NOEXIT8|EXIT8(                                               -
       {ENable|DISABLE}                                         -
       {NUmber( num1 num2 num3 )}                               -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}       -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}     -
       {NOABendnotify|ABendnotify(                              -
          (0|*|id1a {0|*|id2a {0|*|id3a}} )}                    -
          (0|*|id1b {0|*|id2b {0|*|id3b}} )}                    -
          (0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                 -
       {NOLIMit|LIMit(                                          -
         (jobmask1,...)|*|0                                     -
        {(jobmask2,...)|*|0                                     -
        {(jobmask3,...)|*|0}})}                                 -
       {NODATAArea|DATAArea(                                    -
           0|*|area1 {0|*|area2 {0|*|area3}})}                  -
       {NODATALength|DATALength(                                -
           0|*|length1 {0|*|length2 {0|*|length3}})}            -
       {NOVAlidrc|VAlidrc(rc,...)}                              -
       {NOGoodrc|Goodrc(rc,...)}                                -
       {NODIsablerc|DISABLERc(rc)}                              -
       {DEFaultrc(rc)}                                          -
```

EXIT8　　　　Specifies that the EXIT8 exit point is to be activated.

NOEXIT8　　　The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE　　　Specifies that the named EXIT8 exit point is be passed control for exit module execution.

DISABLE　　　The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

LIBRARY　　　Specifies the loading of a EXIT8 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for EXIT8 modules.

　　　　　　　library.dsn
　　　　　　　　　Specifies the name of a private **authorized** library used to locate and load the ISPF EXIT8 user exit. The library name should be enclosed in single quotes (').

　　　　　　　　　Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

NOEXITS　　　Specifies that any active EXIT8 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of EXIT8 user exits be activated. This can be specified at initialization, or later to load and activate EXIT8 user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**
>
> **exit2**
>
> **exit3**
> > The module name of the user exit that is assigned to the specified EXIT8 exit.
>
> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0** A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP Specifies that all active backup ISPF user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup ISPF user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**
>
> **exit2**
>
> **exit3**
> > The module name of the backup user exit that is assigned to the specified ISPF exit.
>
> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup ISPF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0** A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
> Specifies that a TSO message will be sent if any ISPF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for ISPF exit ABENDs.

> > **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)
> >
> > **id1**
> >
> > **id2**
> >
> > **id3** The TSO userid that is to be notified if the corresponding user exit module should ABEND.

*	An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
0	A zero (0) can be used to negate a previous entry of the notify TSO user list.
LIMIT	Specifies that Job name limits are requested, to limit user exit modules for EXIT8 to a specific Jobname(s) or a Jobname mask(s).
NOLIMIT	The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
> The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

* An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

NODATAAREA
Specifies that any active dataareas are to be disabled. This is only effective after initialization.

DATAAREA(...)
Specifies that the list of dataareas are to be activated. This can be specified at initialization, or later to load and activate a dataarea for the specified exit that was not activated at initialization.

Note: The length of the dataarea is specified by the DATALENGTH keyword documented below.

area1

area2

area3
> The name of the dataarea that will be assigned for this user exit.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the dataarea list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the dataarea.

Note: These dataareas may be shared between exits based upon the name of the dataarea. Please refer to the ISPF Planning and Customizing manual for more information about dataareas.

DATALENGTH(...)

Specifies that the list of datalengths are to be activated. This can be specified at initialization, or later to load and activate a datalength for the specified exit that was not activated at initialization.

Note: The DATALENGTHs correspond to the DATAAREA names documented above.

length1

length2

length3
The length of the dataarea that will be assigned for this user exit.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the datalength list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the datalength.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by EXIT8 user exit modules. A good return code allows subsequent EXIT8 user exit modules to be called. OS/EM provides a default list. For example, if a ISPF user exit for EXIT8 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
NODISABLERC turns off disable return code checking for the exit point.

rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc Default return codes values are any numeric value

EXIT9

The **RELEASE** exit provides for the release of any resources acquired at the RESERVE user exit.

OS/EM supplies only basic exit control functions for this exit.

```
OS$CNTL ISPF                                                         -
 {NOABendnotify|ABendnotify(                                         -
       0|*|id1 {0|*|id2 {0|*|id3}})}                                 -
 {LIBrary(library.dsn)}                                              -
 {NOEXIT9|EXIT9(                                                -
       {ENable|DISABLE}                                             -
       {NUmber( num1 num2 num3 )}                                   -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}          -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}       -
       {NOABendnotify|ABendnotify(                                  -
          (0|*|id1a {0|*|id2a {0|*|id3a}} )}                        -
          (0|*|id1b {0|*|id2b {0|*|id3b}} )}                        -
          (0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                     -
       {NOLIMit|LIMit(                                              -
         (jobmask1,...)|*|0                                         -
        {(jobmask2,...)|*|0                                         -
        {(jobmask3,...)|*|0}})}                                     -
       {NODATAArea|DATAArea(                                        -
          0|*|area1 {0|*|area2 {0|*|area3}})}                       -
       {NODATALength|DATALength(                                    -
          0|*|length1 {0|*|length2 {0|*|length3}})}                -
       {NOVAlidrc|VAlidrc(rc,...)}                                  -
       {NOGoodrc|Goodrc(rc,...)}                                    -
       {NODIsablerc|DISABLERc(rc)}                                  -
       {DEFaultrc(rc)}                                              -
```

EXIT9   Specifies that the EXIT9 exit point is to be activated.

NOEXIT9   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named EXIT9 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

LIBRARY   Specifies the loading of a EXIT9 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for EXIT9 modules.

        library.dsn
           Specifies the name of a private **authorized** library used to locate and load the ISPF EXIT9 user exit. The library name should be enclosed in single quotes (').

           Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

NOEXITS   Specifies that any active EXIT9 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of EXIT9 user exits be activated. This can be specified at initialization, or later to load and activate EXIT9 user exits that were not activated at initialization. The exits will be called in the order listed.

    exit1

    exit2

    exit3
        The module name of the user exit that is assigned to the specified EXIT9 exit.

    * An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0 A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP Specifies that all active backup ISPF user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup ISPF user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

    exit1

    exit2

    exit3
        The module name of the backup user exit that is assigned to the specified ISPF exit.

    * An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup ISPF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0 A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
    Specifies that a TSO message will be sent if any ISPF exit ABENDs.

NOABENDNOTIFY
    Specifies that no messages will be sent for ISPF exit ABENDs.

    id1, id2, id3 You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

    id1

    id2

    id3 The TSO userid that is to be notified if the corresponding user exit module should ABEND.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for EXIT9 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

NODATAAREA
Specifies that any active dataareas are to be disabled. This is only effective after initialization.

DATAAREA(...)
Specifies that the list of dataareas are to be activated. This can be specified at initialization, or later to load and activate a dataarea for the specified exit that was not activated at initialization.

Note: The length of the dataarea is specified by the DATALENGTH keyword documented below.

area1

area2

area3
The name of the dataarea that will be assigned for this user exit.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the dataarea list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the dataarea.

Note: These dataareas may be shared between exits based upon the name of the dataarea. Please refer to the ISPF Planning and Customizing manual for more information about dataareas.

DATALENGTH(...)
Specifies that the list of datalengths are to be activated. This can be specified at initialization, or later to load and activate a datalength for the specified exit that was not activated at initialization.

Note: The DATALENGTHs correspond to the DATAAREA names documented above.

length1

length2

length3
The length of the dataarea that will be assigned for this user exit.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the datalength list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the datalength.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by EXIT9 user exit modules. A good return code allows subsequent EXIT9 user exit modules to be called. OS/EM provides a default list. For example, if a ISPF user exit for EXIT9 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
NODISABLERC turns off disable return code checking for the exit point.

rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc   Default return codes values are any numeric value

EXIT10

The **Logical screen start** exit allows for installation-wide exits to gather accounting and monitoring information for each logical screen.

OS/EM supplies only basic exit control functions for this exit.

```
OS$CNTL ISPF                                                   -
 {NOABendnotify|ABendnotify(                                   -
      0|*|id1 {0|*|id2 {0|*|id3}})}                            -
 {LIBrary(library.dsn)}                                        -
 {NOEXIT10|EXIT10(                                        -
      {ENable|DISABLE}                                         -
      {NUmber( num1 num2 num3 )}                               -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}       -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}     -
      {NOABendnotify|ABendnotify(                              -
        (0|*|id1a {0|*|id2a {0|*|id3a}} )}                     -
        (0|*|id1b {0|*|id2b {0|*|id3b}} )}                     -
        (0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                  -
      {NOLIMit|LIMit(                                          -
        (jobmask1,...)|*|0                                     -
       {(jobmask2,...)|*|0                                     -
       {(jobmask3,...)|*|0}})}                                 -
      {NODATAArea|DATAArea(                                    -
          0|*|area1 {0|*|area2 {0|*|area3}})}                  -
      {NODATALength|DATALength(                                -
          0|*|length1 {0|*|length2 {0|*|length3}})}           -
      {NOVAlidrc|VAlidrc(rc,...)}                              -
      {NOGoodrc|Goodrc(rc,...)}                                -
      {NODIsablerc|DISABLERc(rc)}                              -
      {DEFaultrc(rc)}                                          -
```

EXIT10   Specifies that the EXIT10 exit point is to be activated.

NOEXIT10   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named EXIT10 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

LIBRARY   Specifies the loading of a EXIT10 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for EXIT10 modules.

        library.dsn
            Specifies the name of a private **authorized** library used to locate and load the ISPF EXIT10 user exit. The library name should be enclosed in single quotes (').

            Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

NOEXITS   Specifies that any active EXIT10 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of EXIT10 user exits be activated. This can be specified at initialization, or later to load and activate EXIT10 user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**
>
> **exit2**
>
> **exit3**
> > The module name of the user exit that is assigned to the specified EXIT10 exit.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0**   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ISPF user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ISPF user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**
>
> **exit2**
>
> **exit3**
> > The module name of the backup user exit that is assigned to the specified ISPF exit.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup ISPF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0**   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
> Specifies that a TSO message will be sent if any ISPF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for ISPF exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)
>
> **id1**
>
> **id2**
>
> **id3**   The TSO userid that is to be notified if the corresponding user exit module should ABEND.

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*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for EXIT10 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

NODATAAREA
Specifies that any active dataareas are to be disabled. This is only effective after initialization.

DATAAREA(...)
Specifies that the list of dataareas are to be activated. This can be specified at initialization, or later to load and activate a dataarea for the specified exit that was not activated at initialization.

Note: The length of the dataarea is specified by the DATALENGTH keyword documented below.

area1

area2

area3
The name of the dataarea that will be assigned for this user exit.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the dataarea list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the dataarea.

Note: These dataareas may be shared between exits based upon the name of the dataarea. Please refer to the ISPF Planning and Customizing manual for more information about dataareas.

DATALENGTH(...)
Specifies that the list of datalengths are to be activated. This can be specified at initialization, or later to load and activate a datalength for the specified exit that was not activated at initialization.

Note: The DATALENGTHs correspond to the DATAAREA names documented above.

length1

length2

length3
The length of the dataarea that will be assigned for this user exit.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the datalength list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the datalength.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by EXIT10 user exit modules. A good return code allows subsequent EXIT10 user exit modules to be called. OS/EM provides a default list. For example, if a ISPF user exit for EXIT10 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
NODISABLERC turns off disable return code checking for the exit point.

rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc Default return codes values are any numeric value

EXIT11

The **Logical screen end** exit gathers accounting and monitoring information for each logical screen.

OS/EM supplies only basic exit control functions for this exit.

```
OS$CNTL ISPF                                                        -
 {NOABendnotify|ABendnotify(                                        -
      0|*|id1 {0|*|id2 {0|*|id3}})}                                 -
 {LIBrary(library.dsn)}                                             -
 {NOEXIT11|EXIT11(                                            -
      {ENable|DISABLE}                                             -
      {NUmber( num1 num2 num3 )}                                   -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}          -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}        -
      {NOABendnotify|ABendnotify(                                  -
        (0|*|id1a {0|*|id2a {0|*|id3a}} )}                         -
        (0|*|id1b {0|*|id2b {0|*|id3b}} )}                         -
        (0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                      -
      {NOLIMit|LIMit(                                              -
        (jobmask1,...)|*|0                                         -
       {(jobmask2,...)|*|0                                         -
       {(jobmask3,...)|*|0}})}                                     -
      {NODATAArea|DATAArea(                                        -
          0|*|area1 {0|*|area2 {0|*|area3}})}                      -
      {NODATALength|DATALength(                                    -
          0|*|length1 {0|*|length2 {0|*|length3}})}               -
      {NOVAlidrc|VAlidrc(rc,...)}                                  -
      {NOGoodrc|Goodrc(rc,...)}                                    -
      {NODIsablerc|DISABLERc(rc)}                                  -
      {DEFaultrc(rc)}                                              -
```

EXIT11   Specifies that the EXIT11 exit point is to be activated.

NOEXIT11   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named EXIT11 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

LIBRARY   Specifies the loading of a EXIT11 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for EXIT11 modules.

            library.dsn
                Specifies the name of a private **authorized** library used to locate and load the ISPF EXIT11 user exit. The library name should be enclosed in single quotes (').

                Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

NOEXITS   Specifies that any active EXIT11 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of EXIT11 user exits be activated. This can be specified at in-
itialization, or later to load and activate EXIT11 user exits that were not activated at
initialization. The exits will be called in the order listed.

    exit1

    exit2

    exit3
        The module name of the user exit that is assigned to the specified EXIT11 exit.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this
position of the user exit list is not to be changed. As a default, the asterisk would
be omitted where it would normally be implied.

    0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ISPF user exits are to be disabled. This is only effective
after initialization.

BACKUP(...)   Specifies that the list of backup ISPF user exits are to be activated. Backup exits are
only called if the primary exit is not present, usually due to a primary exit failure. This
can be specified at initialization, or later to load and activate backup user exits that were
not activated at initialization. (The backup User exit modules will be called in the order
listed).

    exit1

    exit2

    exit3
        The module name of the backup user exit that is assigned to the specified ISPF
exit.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this
position of the backup ISPF user exit list is not to be changed. As a default, the
asterisk would be omitted where it would normally be implied.

    0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
    Specifies that a TSO message will be sent if any ISPF exit ABENDs.

NOABENDNOTIFY
    Specifies that no messages will be sent for ISPF exit ABENDs.

    id1, id2, id3   You may specify up to three TSO IDs or notification group names
to be notified in the case of an ABEND. (See "NFYGROUPS" on
page SYS-1.)

    id1

    id2

    id3   The TSO userid that is to be notified if the corresponding user exit module should
ABEND.

*	An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
0	A zero (0) can be used to negate a previous entry of the notify TSO user list.
LIMIT	Specifies that Job name limits are requested, to limit user exit modules for EXIT11 to a specific Jobname(s) or a Jobname mask(s).
NOLIMIT	The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
> The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
> A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

NODATAAREA
> Specifies that any active dataareas are to be disabled. This is only effective after initialization.

DATAAREA(...)
> Specifies that the list of dataareas are to be activated. This can be specified at initialization, or later to load and activate a dataarea for the specified exit that was not activated at initialization.

> **Note:** The length of the dataarea is specified by the DATALENGTH keyword documented below.

area1

area2

area3
> The name of the dataarea that will be assigned for this user exit.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the dataarea list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
> A zero (0) can be used to negate a previous entry of the dataarea.

> **Note:** These dataareas may be shared between exits based upon the name of the dataarea. Please refer to the ISPF Planning and Customizing manual for more information about dataareas.

DATALENGTH(...)
Specifies that the list of datalengths are to be activated. This can be specified at in-itialization, or later to load and activate a datalength for the specified exit that was not activated at initialization.

Note: The DATALENGTHs correspond to the DATAAREA names documented above.

length1

length2

length3
The length of the dataarea that will be assigned for this user exit.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the datalength list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the datalength.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

 rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by EXIT11 user exit modules. A good return code allows subsequent EXIT11 user exit modules to be called. OS/EM provides a default list. For example, if a ISPF user exit for EXIT11 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

 rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
NODISABLERC turns off disable return code checking for the exit point.

 rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

 rc Default return codes values are any numeric value

EXIT12

The **ISPF/PDF service start** exit monitors ISPF and PDF dialog services invoked through the ISPLINK or ISPEXEC interfaces.

OS/EM supplies only basic exit control functions for this exit.

```
OS$CNTL ISPF                                                      -
 {NOABendnotify|ABendnotify(                                      -
       0|*|id1 {0|*|id2 {0|*|id3}})}                             -
 {LIBrary(library.dsn)}                                          -
 {NOEXIT12|EXIT12(                                                -
       {ENable|DISABLE}                                          -
       {NUmber( num1 num2 num3 )}                                -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}        -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}      -
       {NOABendnotify|ABendnotify(                               -
          (0|*|id1a {0|*|id2a {0|*|id3a}} )}                     -
          (0|*|id1b {0|*|id2b {0|*|id3b}} )}                     -
          (0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                  -
       {NOLIMit|LIMit(                                           -
         (jobmask1,...)|*|0                                      -
        {(jobmask2,...)|*|0                                      -
        {(jobmask3,...)|*|0}})}                                  -
       {NODATAArea|DATAArea(                                     -
          0|*|area1 {0|*|area2 {0|*|area3}})}                    -
       {NODATALength|DATALength(                                 -
          0|*|length1 {0|*|length2 {0|*|length3}})}             -
       {NOVAlidrc|VAlidrc(rc,...)}                               -
       {NOGoodrc|Goodrc(rc,...)}                                 -
       {NODIsablerc|DISABLERc(rc)}                               -
       {DEFaultrc(rc)}                                           -
```

EXIT12   Specifies that the EXIT12 exit point is to be activated.

NOEXIT12   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named EXIT12 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

LIBRARY   Specifies the loading of a EXIT12 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for EXIT12 modules.

        library.dsn
           Specifies the name of a private **authorized** library used to locate and load the ISPF EXIT12 user exit. The library name should be enclosed in single quotes (').

           Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

NOEXITS   Specifies that any active EXIT12 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of EXIT12 user exits be activated. This can be specified at initialization, or later to load and activate EXIT12 user exits that were not activated at initialization. The exits will be called in the order listed.

        exit1

        exit2

        exit3
            The module name of the user exit that is assigned to the specified EXIT12 exit.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ISPF user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ISPF user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

        exit1

        exit2

        exit3
            The module name of the backup user exit that is assigned to the specified ISPF exit.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup ISPF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
        Specifies that a TSO message will be sent if any ISPF exit ABENDs.

NOABENDNOTIFY
        Specifies that no messages will be sent for ISPF exit ABENDs.

        id1, id2, id3   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

        id1

        id2

        id3   The TSO userid that is to be notified if the corresponding user exit module should ABEND.

| | * | An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied. |
| | **0** | A zero (0) can be used to negate a previous entry of the notify TSO user list. |

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for EXIT12 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
   The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

* An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

NODATAAREA
   Specifies that any active dataareas are to be disabled. This is only effective after initialization.

DATAAREA(...)
   Specifies that the list of dataareas are to be activated. This can be specified at initialization, or later to load and activate a dataarea for the specified exit that was not activated at initialization.

   Note: The length of the dataarea is specified by the DATALENGTH keyword documented below.

area1

area2

area3
   The name of the dataarea that will be assigned for this user exit.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the dataarea list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the dataarea.

   Note: These dataareas may be shared between exits based upon the name of the dataarea. Please refer to the ISPF Planning and Customizing manual for more information about dataareas.

DATALENGTH(...)

Specifies that the list of datalengths are to be activated. This can be specified at initialization, or later to load and activate a datalength for the specified exit that was not activated at initialization.

Note: The DATALENGTHs correspond to the DATAAREA names documented above.

length1

length2

length3

The length of the dataarea that will be assigned for this user exit.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the datalength list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the datalength.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by EXIT12 user exit modules. A good return code allows subsequent EXIT12 user exit modules to be called. OS/EM provides a default list. For example, if a ISPF user exit for EXIT12 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

NODISABLERC turns off disable return code checking for the exit point.

rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc Default return codes values are any numeric value

EXIT13

The **ISPF/PDF service end** exit marks the termination of ISPF or PDF dialog services invoked through the ISPLINK or ISPEXEC interfaces.

OS/EM supplies only basic exit control functions for this exit.

```
OS$CNTL ISPF                                                            -
  {NOABendnotify|ABendnotify(                                           -
        0|*|id1 {0|*|id2 {0|*|id3}})}                                   -
  {LIBrary(library.dsn)}                                                -
  {NOEXIT13|EXIT13(                                               -
        {ENable|DISABLE}                                               -
        {NUmber( num1 num2 num3 )}                                     -
        {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}            -
        {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}        -
        {NOABendnotify|ABendnotify(                                    -
          (0|*|id1a {0|*|id2a {0|*|id3a}} )}                          -
          (0|*|id1b {0|*|id2b {0|*|id3b}} )}                          -
          (0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                       -
        {NOLIMit|LIMit(                                                -
          (jobmask1,...)|*|0                                          -
         {(jobmask2,...)|*|0                                          -
         {(jobmask3,...)|*|0}})}                                      -
        {NODATAArea|DATAArea(                                          -
           0|*|area1 {0|*|area2 {0|*|area3}})}                        -
        {NODATALength|DATALength(                                      -
           0|*|length1 {0|*|length2 {0|*|length3}})}                  -
        {NOVAlidrc|VAlidrc(rc,...)}                                    -
        {NOGoodrc|Goodrc(rc,...)}                                      -
        {NODIsablerc|DISABLERc(rc)}                                    -
        {DEFaultrc(rc)}                                                -
```

EXIT13   Specifies that the EXIT13 exit point is to be activated.

NOEXIT13   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named EXIT13 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

LIBRARY   Specifies the loading of a EXIT13 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for EXIT13 modules.

           library.dsn
               Specifies the name of a private **authorized** library used to locate and load the ISPF EXIT13 user exit. The library name should be enclosed in single quotes (').

               Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

NOEXITS   Specifies that any active EXIT13 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of EXIT13 user exits be activated. This can be specified at initialization, or later to load and activate EXIT13 user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**
>
> **exit2**
>
> **exit3**
> > The module name of the user exit that is assigned to the specified EXIT13 exit.
>
> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0** A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP Specifies that all active backup ISPF user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup ISPF user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**
>
> **exit2**
>
> **exit3**
> > The module name of the backup user exit that is assigned to the specified ISPF exit.
>
> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup ISPF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0** A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
> Specifies that a TSO message will be sent if any ISPF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for ISPF exit ABENDs.

> > **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)
> >
> > **id1**
> >
> > **id2**
> >
> > **id3** The TSO userid that is to be notified if the corresponding user exit module should ABEND.

> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0** A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT Specifies that Job name limits are requested, to limit user exit modules for EXIT13 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT The NO option can be used to nullify the option for Job name limits.

> **jobmask1**
>
> **jobmask2**
>
> **jobmask3**
> The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.
>
> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0** A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

NODATAAREA
Specifies that any active dataareas are to be disabled. This is only effective after initialization.

DATAAREA(...)
Specifies that the list of dataareas are to be activated. This can be specified at initialization, or later to load and activate a dataarea for the specified exit that was not activated at initialization.

Note: The length of the dataarea is specified by the DATALENGTH keyword documented below.

> **area1**
>
> **area2**
>
> **area3**
> The name of the dataarea that will be assigned for this user exit.
>
> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the dataarea list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0** A zero (0) can be used to negate a previous entry of the dataarea.

Note: These dataareas may be shared between exits based upon the name of the dataarea. Please refer to the ISPF Planning and Customizing manual for more information about dataareas.

DATALENGTH(...)
Specifies that the list of datalengths are to be activated. This can be specified at initialization, or later to load and activate a datalength for the specified exit that was not activated at initialization.

Note: The DATALENGTHs correspond to the DATAAREA names documented above.

length1

length2

length3
The length of the dataarea that will be assigned for this user exit.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the datalength list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the datalength.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by EXIT13 user exit modules. A good return code allows subsequent EXIT13 user exit modules to be called. OS/EM provides a default list. For example, if a ISPF user exit for EXIT13 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
NODISABLERC turns off disable return code checking for the exit point.

rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc Default return codes values are any numeric value

EXIT14

The **SWAP logical screens** exit indicates a change of the active logical screen. Together with the logical screen start and end installation-wide exits, the routine can monitor resource use for each ISPF logical screen.

OS/EM supplies only basic exit control functions for this exit.

```
OS$CNTL ISPF                                              -
 {NOABendnotify|ABendnotify(                              -
      0|*|id1 {0|*|id2 {0|*|id3}})}                       -
 {LIBrary(library.dsn)}                                   -
 {NOEXIT14|EXIT14(                                        -
      {ENable|DISABLE}                                    -
      {NUmber( num1 num2 num3 )}                          -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}  -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})} -
      {NOABendnotify|ABendnotify(                         -
        (0|*|id1a {0|*|id2a {0|*|id3a}} )}                -
        (0|*|id1b {0|*|id2b {0|*|id3b}} )}                -
        (0|*|id1c {0|*|id2c {0|*|id3c}} )} )}             -
      {NOLIMit|LIMit(                                     -
        (jobmask1,...)|*|0                                -
       {(jobmask2,...)|*|0                                -
       {(jobmask3,...)|*|0}})}                            -
      {NODATAArea|DATAArea(                               -
          0|*|area1 {0|*|area2 {0|*|area3}})}             -
      {NODATALength|DATALength(                           -
          0|*|length1 {0|*|length2 {0|*|length3}})}       -
      {NOVAlidrc|VAlidrc(rc,...)}                         -
      {NOGoodrc|Goodrc(rc,...)}                           -
      {NODIsablerc|DISABLERc(rc)}                         -
      {DEFaultrc(rc)}                                     -
```

EXIT14 Specifies that the EXIT14 exit point is to be activated.

NOEXIT14 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named EXIT14 exit point is be passed control for exit module execution.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

LIBRARY Specifies the loading of a EXIT14 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for EXIT14 modules.

    library.dsn
      Specifies the name of a private **authorized** library used to locate and load the ISPF EXIT14 user exit. The library name should be enclosed in single quotes (').

      Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

NOEXITS Specifies that any active EXIT14 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of EXIT14 user exits be activated. This can be specified at in-
itialization, or later to load and activate EXIT14 user exits that were not activated at
initialization. The exits will be called in the order listed.

     exit1

     exit2

     exit3
         The module name of the user exit that is assigned to the specified EXIT14 exit.

     *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this
         position of the user exit list is not to be changed. As a default, the asterisk would
         be omitted where it would normally be implied.

     0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ISPF user exits are to be disabled. This is only effective
after initialization.

BACKUP(...)   Specifies that the list of backup ISPF user exits are to be activated. Backup exits are
only called if the primary exit is not present, usually due to a primary exit failure. This
can be specified at initialization, or later to load and activate backup user exits that were
not activated at initialization. (The backup User exit modules will be called in the order
listed).

     exit1

     exit2

     exit3
         The module name of the backup user exit that is assigned to the specified ISPF
         exit.

     *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this
         position of the backup ISPF user exit list is not to be changed. As a default, the
         asterisk would be omitted where it would normally be implied.

     0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
     Specifies that a TSO message will be sent if any ISPF exit ABENDs.

NOABENDNOTIFY
     Specifies that no messages will be sent for ISPF exit ABENDs.

     id1, id2, id3   You may specify up to three TSO IDs or notification group names
         to be notified in the case of an ABEND. (See "NFYGROUPS" on
         page SYS-1.)

     id1

     id2

     id3   The TSO userid that is to be notified if the corresponding user exit module should
         ABEND.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for EXIT14 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
     The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

NODATAAREA
     Specifies that any active dataareas are to be disabled. This is only effective after initialization.

DATAAREA(...)
     Specifies that the list of dataareas are to be activated. This can be specified at initialization, or later to load and activate a dataarea for the specified exit that was not activated at initialization.

     Note: The length of the dataarea is specified by the DATALENGTH keyword documented below.

area1

area2

area3
     The name of the dataarea that will be assigned for this user exit.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the dataarea list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the dataarea.

     Note: These dataareas may be shared between exits based upon the name of the dataarea. Please refer to the ISPF Planning and Customizing manual for more information about dataareas.

DATALENGTH(...)
Specifies that the list of datalengths are to be activated. This can be specified at initialization, or later to load and activate a datalength for the specified exit that was not activated at initialization.

Note: The DATALENGTHs correspond to the DATAAREA names documented above.

length1

length2

length3
The length of the dataarea that will be assigned for this user exit.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the datalength list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the datalength.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by EXIT14 user exit modules. A good return code allows subsequent EXIT14 user exit modules to be called. OS/EM provides a default list. For example, if a ISPF user exit for EXIT14 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
NODISABLERC turns off disable return code checking for the exit point.

rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc Default return codes values are any numeric value

EXIT15

The **DISPLAY service start** exit provides for tailoring of panels to be displayed.

OS/EM supplies only basic exit control functions for this exit.

```
OS$CNTL ISPF                                                         -
  {NOABendnotify|ABendnotify(                                        -
        0|*|id1 {0|*|id2 {0|*|id3}})}                               -
  {LIBrary(library.dsn)}                                            -
  {NOEXIT15|EXIT15(                                                  -
        {ENable|DISABLE}                                            -
        {NUmber( num1 num2 num3 )}                                  -
        {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}          -
        {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}        -
        {NOABendnotify|ABendnotify(                                 -
          (0|*|id1a {0|*|id2a {0|*|id3a}} )}                        -
          (0|*|id1b {0|*|id2b {0|*|id3b}} )}                        -
          (0|*|id1c {0|*|id2c {0|*|id3c}} )} )}                     -
        {NOLIMit|LIMit(                                             -
          (jobmask1,...)|*|0                                        -
         {(jobmask2,...)|*|0                                        -
         {(jobmask3,...)|*|0}})}                                    -
        {NODATAArea|DATAArea(                                       -
            0|*|area1 {0|*|area2 {0|*|area3}})}                     -
        {NODATALength|DATALength(                                   -
            0|*|length1 {0|*|length2 {0|*|length3}})}               -
        {NOVAlidrc|VAlidrc(rc,...)}                                 -
        {NOGoodrc|Goodrc(rc,...)}                                   -
        {NODIsablerc|DISABLERc(rc)}                                 -
        {DEFaultrc(rc)}                                             -
```

EXIT15   Specifies that the EXIT15 exit point is to be activated.

NOEXIT15   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named EXIT15 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

LIBRARY   Specifies the loading of a EXIT15 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for EXIT15 modules.

        library.dsn
          Specifies the name of a private **authorized** library used to locate and load the ISPF EXIT15 user exit. The library name should be enclosed in single quotes (').

          Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

NOEXITS   Specifies that any active EXIT15 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of EXIT15 user exits be activated. This can be specified at initialization, or later to load and activate EXIT15 user exits that were not activated at initialization. The exits will be called in the order listed.

    exit1

    exit2

    exit3
        The module name of the user exit that is assigned to the specified EXIT15 exit.

    * An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0 A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP Specifies that all active backup ISPF user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup ISPF user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

    exit1

    exit2

    exit3
        The module name of the backup user exit that is assigned to the specified ISPF exit.

    * An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup ISPF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0 A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
    Specifies that a TSO message will be sent if any ISPF exit ABENDs.

NOABENDNOTIFY
    Specifies that no messages will be sent for ISPF exit ABENDs.

    id1, id2, id3 You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

    id1

    id2

    id3 The TSO userid that is to be notified if the corresponding user exit module should ABEND.

*	An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
0	A zero (0) can be used to negate a previous entry of the notify TSO user list.
LIMIT	Specifies that Job name limits are requested, to limit user exit modules for EXIT15 to a specific Jobname(s) or a Jobname mask(s).
NOLIMIT	The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

> The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

> **0** A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

NODATAAREA

> Specifies that any active dataareas are to be disabled. This is only effective after initialization.

DATAAREA(...)

> Specifies that the list of dataareas are to be activated. This can be specified at initialization, or later to load and activate a dataarea for the specified exit that was not activated at initialization.

> **Note:** The length of the dataarea is specified by the DATALENGTH keyword documented below.

area1

area2

area3

> The name of the dataarea that will be assigned for this user exit.

> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the dataarea list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

> **0** A zero (0) can be used to negate a previous entry of the dataarea.

> **Note:** These dataareas may be shared between exits based upon the name of the dataarea. Please refer to the ISPF Planning and Customizing manual for more information about dataareas.

DATALENGTH(...)
>Specifies that the list of datalengths are to be activated. This can be specified at initialization, or later to load and activate a datalength for the specified exit that was not activated at initialization.
>
>**Note:** The DATALENGTHs correspond to the DATAAREA names documented above.

>**length1**

>**length2**

>**length3**
>>The length of the dataarea that will be assigned for this user exit.

>*****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the datalength list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

>**0**   A zero (0) can be used to negate a previous entry of the datalength.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

>**rc**   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by EXIT15 user exit modules. A good return code allows subsequent EXIT15 user exit modules to be called. OS/EM provides a default list. For example, if a ISPF user exit for EXIT15 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

>**rc**   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
>NODISABLERC turns off disable return code checking for the exit point.

>**rc**   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

>**rc**   Default return codes values are any numeric value

EXIT16

The **Log, list, and temporary dataset allocation** exit controls data set naming conventions for log, list, and temporary data sets.

OS/EM provides optional control functions for this exit.

```
        OS$CNTL ISPF                                                -
         {NOABendnotify|ABendnotify(                                -
              0|*|id1 {0|*|id2 {0|*|id3}})}                         -
         {LIBrary(library.dsn)}                                     -
         {NOEXIT16|EXIT16(                                  -
              {ENable|DISABLE}                                      -
              {NUmber( num1 num2 num3 )}                            -
              {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})}    -
              {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})}  -
              {NOABendnotify|ABendnotify(                           -
                (0|*|id1a {0|*|id2a {0|*|id3a}} )}                  -
                (0|*|id1b {0|*|id2b {0|*|id3b}} )}                  -
                (0|*|id1c {0|*|id2c {0|*|id3c}} )} )}               -
              {NOLIMit|LIMit(                                       -
                (jobmask1,...)|*|0                                  -
               {(jobmask2,...)|*|0                                  -
               {(jobmask3,...)|*|0}})}                              -
              {NODATAArea|DATAArea(                                 -
                  0|*|area1 {0|*|area2 {0|*|area3}})}               -
              {NODATALength|DATALength(                             -
                  0|*|length1 {0|*|length2 {0|*|length3}})}         -
              {NOVAlidrc|VAlidrc(rc,...)}                           -
              {NOGoodrc|Goodrc(rc,...)}                             -
              {NODIsablerc|DISABLERc(rc)}                           -
              {DEFaultrc(rc)}                                       -
              {NOOPtions|OPtions(
                      {NOABendnotify|ABendnotify(ID)}
                      {FIrst|LAst}
                      {NOLOgprefix|LOgprefix(prefix)}
                      {NOLIstprefix|LIstprefix(prefix)}
                      {NOTEmpprefix|TEmpprefix(prefix)}       )}
```

EXIT16   Specifies that the EXIT16 exit point is to be activated.

NOEXIT16   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named EXIT16 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

LIBRARY   Specifies the loading of a EXIT16 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for EXIT16 modules.

        library.dsn
            Specifies the name of a private **authorized** library used to locate and load the ISPF EXIT16 user exit. The library name should be enclosed in single quotes (').

Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

NOEXITS   Specifies that any active EXIT16 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of EXIT16 user exits be activated. This can be specified at initialization, or later to load and activate EXIT16 user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3
    The module name of the user exit that is assigned to the specified EXIT16 exit.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ISPF user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ISPF user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
    The module name of the backup user exit that is assigned to the specified ISPF exit.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup ISPF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
    Specifies that a TSO message will be sent if any ISPF exit ABENDs.

NOABENDNOTIFY
    Specifies that no messages will be sent for ISPF exit ABENDs.

id1, id2, id3   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

id1

id2

id3   The TSO userid that is to be notified if the corresponding user exit module should ABEND.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for EXIT16 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

NODATAAREA

Specifies that any active dataareas are to be disabled. This is only effective after initialization.

DATAAREA(...)

Specifies that the list of dataareas are to be activated. This can be specified at initialization, or later to load and activate a dataarea for the specified exit that was not activated at initialization.

Note: The length of the dataarea is specified by the DATALENGTH keyword documented below.

area1

area2

area3
The name of the dataarea that will be assigned for this user exit.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the dataarea list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the dataarea.

Note: These dataareas may be shared between exits based upon the name of the dataarea. Please refer to the ISPF Planning and Customizing manual for more information about dataareas.

DATALENGTH(...)
Specifies that the list of datalengths are to be activated. This can be specified at initialization, or later to load and activate a datalength for the specified exit that was not activated at initialization.

Note: The DATALENGTHs correspond to the DATAAREA names documented above.

length1

length2

length3
The length of the dataarea that will be assigned for this user exit.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the datalength list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the datalength.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by EXIT16 user exit modules. A good return code allows subsequent EXIT16 user exit modules to be called. OS/EM provides a default list. For example, if a ISPF user exit for EXIT16 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
NODISABLERC turns off disable return code checking for the exit point.

rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has

occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc   Default return codes values are any numeric value

EXIT16 Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for EXIT16

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for EXIT16.

Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

ABENDNOTIFY
Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3
The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

FIRST

LAST   Specifies whether the optional OS/EM JCL Standards functions for EXIT16 will be applied before or after the user exits are invoked.

Note: OS/EM control functions are invoked FIRST by default.

LOGPREFIX(prefix)
Specify the 1 to 8 character prefix to be inserted into the name of the LOG dataset. A system symbolic may also be specified. Begin the symbolic with the normal **&** (ampersand).

NOLOGPREFIX
No prefix will be inserted into the LOG dataset name.

LISTPREFIX(prefix)
Specify the 1 to 8 character prefix to be inserted into the name of the LIST dataset. A system symbolic may also be specified. Begin the symbolic with the normal **&** (ampersand).

NOLISTPREFIX
No prefix will be inserted into the LIST dataset name.

TEMPPREFIX(prefix)
Specify the 1 to 8 character prefix to be inserted into the name of any temporary data-

sets ISPF may allocate. A system symbolic may also be specified. Begin the symbolic with the normal **&** (ampersand).

NOTEMPPREFIX
No prefix will be inserted into temporary ISPF datasets.

EXIT16 Example

The following example shows how to turn on the optional EXIT16 LOG and LIST prefixes.

```
OS$CNTL ISPF EXIT16(OPTIONS(LOGPREFIX(TSTTSO) LISTPREFIX(TSTTSO)))
```

In this example both the LOG and LIST datasets will have TSTTSO inserted after the TSOID.

The LOG dataset would look something like:

```
SPJRT.TSTTSO.SPFLOG1.LIST
```

While the LIST dataset would look like:

```
SPJRT.TSTTSO.SPF1.LIST
```

System Requirements

OS/EM provides a version of ISPEXITS to allow it to dynamically load and delete any of the ISPF Installation Wide Exits. IBM provides a default module of this name and if you already run ISPF exits you will have your own version. You must ensure that ISPEXITS is **not** in a STEPLIB in any ISPF logon procedure, otherwise ISPEXITS will be loaded from the STEPLIB and not from the OS/EM load library. Any exit (and associated data area) coded in your ISPEXITS must be defined to OS/EM via the Basic Exits Function.

In addition, if you have never activated the ISPF Installation Wide Exits, you must enable them by either coding the option on the ISPMTAIL macro or with the ISPCCONF command. See the ISPF Planning and Customizing manual section Tailoring ISPF Defaults for more information.

JES2 Command

The OS$CNTL JES2 command specifies all the basic and optional control functions for JES2.

```
OS$CNTL JES2                                                     -
        {JESName(XXXX {YYYYY})}                                  -
        {NOABendnotify|ABendnotify(                              -
           0|*|id1 {0|*|id2 {0|*|id3}} ) }                       -
        {LIBrary(library.dsn)}                                   -
        {NOAUtoinstall|AUtoinstall}                              -
         NOEXITn|EXITn(                                         -(
           {ENable|DISABLE}                                      -
           {NOAUtoinstall|AUinstall}                             -
           {NUmber( num1 num2 num3 )}                            -
           {NOExits|Exits(                                       -
               lmod:exit1|*|0                                   -
              {lmod:exit2|*|0                                   -
              {lmod:exit3|*|0}})}                               -
           {NOBAckups|BAckups(                                   -
               lmod:exit1|*|0                                   -
              {lmod:exit2|*|0                                   -
              {lmod:exit3|*|0}})}                               -
           {NOABendnotify|ABendnotify(                           -
              (id1a|*|0 {id1b|*|0 {id1c|*|0}})                  -
              (id2a|*|0 {id2b|*|0 {id2c|*|0}})                  -
              (id3a|*|0 {id3b|*|0 {id3c|*|0}})})                -
           {NOLIMits|LIMits(                                     -
               (jobmask1,...)|*|0                               -
              {(jobmask2,...)|*|0                               -
              {(jobmask3,...)|*|0}})}                           -
           {NOVAlidrc|VAlidrc(rc,...)}                           -
           {NOGOodrc|GOodrc(rc,...)}                             -
           {NODISablerc|DISABLERc(rc)}                           -
           {DEFaultrc(rc)}                                       -
           {Key(0|1)}}                                           -
           {JOBnameloc(jobnamelocspec)}                          -
                                                 )}
```

JESNAME(XXXX YYYYY)

    Optional keyword which indicates that you are supplying the name of the JES2 subsystem the command applies to. JES2 is the default.

XXXX   The four character identifier for this JES2 subsystem.

YYYYY   The optional JES2 version. This is used to tell OS/EM what level of code to use before the subsystem actually starts. If there is a mismatch when the subsystem starts, only the OS/EM code is reloaded. Acceptable values are:

- OS270

- OS280

- OS210

- ZS102

- ZS104

- ZS105

LIBRARY   Specifies the loading of an User exit module from a private Authorized library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for loading User exit modules.

library.dsn
Specifies the name of a private Authorized library named. The library name should be enclosed in single quotes (').

ABENDNOTIFY
Specifies that a TSO message will be sent if any JES2 exit ABENDs.

NOABENDNOTIFY
Specifies that no messages will be sent for JES2 exit ABENDs.

id1, id2, id3   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

AUTOINSTALL
This option tells OS/EM to add any user exits specified in JESPARMS to OS/EM's internal control blocks as if the exits had been specifically defined by **OS$CNTL JES2** commands.

Note: AUTOINSTALL is the default, and it must be active at this level to allow use of the AUTOINSTALL option at the individual exit point level.

NOAUTOINSTALL
If NOAUTOINSTALL is specified, user exits in JESPARMS will not be controlled by OS/EM and the use of AUTOINSTALL at the exit point level is disabled.

EXIT00 ...

EXIT255   Specifies which of the JES2 exits - exits 0 through 255 - are to be activated.

NOEXIT00 ...

NOEXIT255   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   ENABLE causes an exitpoint to be enabled after a failure of the OS/EM exit controller caused the exit to be disabled. Due to the exit environment JES2 establishes, merely reloading the exit controller will not automatically activate the associated user exits as is the case with the other, non-JES2, points. Use of this keyword will activate an exit after the controller has been reloaded.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously, are retained and will not have to be re-specified if the exit is enabled again.

Note: If you have any questions as to the state of a particular JES2 exit, a QUERY command may be issued for the exit. If the exit is marked as DISABLED, issue a JES2 command for the exit with the ENABLE keyword.

An example of the QUERY command for JES2 EXIT2 would be:

```
OS$CNTL QUERY JES2(EXIT2)
```

AUTOINSTALL

If specified, any user exits found in JESPARMS for this exit point will automaticaly be controlled by OS/EM without the need to specify them via **OS$CNTL JES2** commands.

Note: AUTOINSTALL must be specified (or defaulted) at the top level for this JES to allow use at the exit point level.

NOAUTOINSTALL

If specified, user exits for this exit point found in JESPARMS will be ignored by OS/EM.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active JES2 EXITn user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of JES2 EXITn user exits are to be activated. This can be specified at initialization, or later to load and activate JES2 EXITn user exits that were not activated at initialization. The exits will be called in the order listed.

lmod:exit1

lmod:exit2

lmod:exit3

The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.

This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

0   A zero (0) can be used to inactivate and delete a previously specified JES2 exit.

Note: JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

NOBACKUP   Specifies that any active backup user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup user exits are to be activated. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. The backup User exit modules will be called in the order listed.

> **lmod:exit1**

> **lmod:exit2**

> **lmod:exit3**
> The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.
>
> **Note:** This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

> **0**   A zero (0) can be used to inactivate and delete a previously specified JES2 exit.
>
> **Note:** JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

ABENDNOTIFY
> Specifies that when a XIT16 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a XIT16 exit module has ABENDed.

NOABENDNOTIFY
> The NO option can be used to nullify the option to notify a TSO user of XIT16 exit module ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.

> **(id1a,id1b,id1c)**
> The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

> **(id2a,id2b,id2c)**
> The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

> **(id3a,id3b,id3c)**
> The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.

> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

> **0**   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for JES2 EXITn to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

              jobmask1

              jobmask2

              jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

              *   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

              0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. Use this option with extreme caution.

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

              rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by JES2 user exit modules. A good return code allows subsequent JES2 user exit modules to be called. OS/EM provides a default list. For example, if a JES2 user exit for JES2 EXITn set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

              rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules, that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
NODISABLERC turns off disable return code checking for the exit point.

              rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. Use this option with extreme caution.

              rc   Default return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

KEY   Specifies the storage key for this JES2 exit, this is provided for user exit modules that are reentrant in the JES2 sense. Also see IBM JES2 User Modifications and Macros for further detail.

Note: OS/EM recommends all JES2 exits be MVS reentrant and avoid using the KEY option.

0   Specifies the JES2 User exit user be loaded data into key 0 storage.

1   Specifies the JES2 User exit user will be loaded into key 1 storage.

JOBNAMELOC

jobnamelocspec
Specifies the location of the Jobname specified using TSO TEST addressing specification parameters. This parameter should be used with extreme caution as any miscalculation may not be pointing to the Jobname.

EXIT0

OS/EM provides basic exit functions for JES2 Exit0 although OS/EM has its own exit here to support other extended functions.

```
OS$CNTL JES2                                                         -
        {JESName(XXXX {YYYYY})}                                      -
        {NOABendnotify|ABendnotify(                                  -
          0|*|id1 {0|*|id2 {0|*|id3}} ) }                            -
        {LIBrary(library.dsn)}                                       -
        {NOAUtoinstall|AUtoinstall}                                  -
         NOEXIT0|EXIT0(                                  -
           {ENable|DISABLE}                                          -
           {NOAUtoinstall|AUinstall}                                 -
           {NUmber( num1 num2 num3 )}                                -
           {NOExits|Exits(                                           -
               lmod:exit1|*|0                                -
               {lmod:exit2|*|0                               -
               {lmod:exit3|*|0}})}                            -
           {NOBAckups|BAckups(                                       -
               lmod:exit1|*|0                                -
               {lmod:exit2|*|0                               -
               {lmod:exit3|*|0}})}                            -
           {NOABendnotify|ABendnotify(                                -
           (id1a|*|0 {id1b|*|0 {id1c|*|0}})                   -
           (id2a|*|0 {id2b|*|0 {id2c|*|0}})                   -
           (id3a|*|0 {id3b|*|0 {id3c|*|0}})})                 -
           {NOLIMits|LIMits(                                          -
           (jobmask1,...)|*|0                               -
           {(jobmask2,...)|*|0                              -
           {(jobmask3,...)|*|0}})}                           -
           {NOVAlidrc|VAlidrc(rc,...)}                               -
           {NOGOodrc|GOodrc(rc,...)}                                 -
           {NODISablerc|DISABLERc(rc)}                              -
           {DEFaultrc(rc)}                                          -
           {Key(0|1)}}                                              -
        {JOBnameloc(jobnamelocspec)}                                 -
        {OPTions|NOOptions(                                          -
           {FIrst|LAst}                                             -
           {NOABendnotify|Abendnotify(                               -
              *|0|id1 {*|0|id2 {*|0|id3}} ) }  )}
```

JESNAME(XXXX YYYYY)

          Optional keyword which indicates that you are supplying the name of the JES2 subsystem the command applies to. JES2 is the default.

XXXX   The four character identifier for this JES2 subsystem.

YYYYY   The optional JES2 version. This is used to tell OS/EM what level of code to use before the subsystem actually starts. If there is a mismatch when the subsystem starts, only the OS/EM code is reloaded. Acceptable values are:

- OS270

- OS280

- OS210

- ZS102

- ZS104

- ZS105

LIBRARY Specifies the loading of an User exit module from a private Authorized library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for loading User exit modules.

> **library.dsn**
>> Specifies the name of a private Authorized library named. The library name should be enclosed in single quotes (').

ABENDNOTIFY
>> Specifies that a TSO message will be sent if any JES2 exit ABENDs.

NOABENDNOTIFY
>> Specifies that no messages will be sent for JES2 exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

AUTOINSTALL
>> This option tells OS/EM to add any user exits specified in JESPARMS to OS/EM's internal control blocks as if the exits had been specifically defined by **OS$CNTL JES2** commands.
>>
>> **Note:** AUTOINSTALL is the default, and it must be active at this level to allow use of the AUTOINSTALL option at the individual exit point level.

NOAUTOINSTALL
>> If NOAUTOINSTALL is specified, user exits in JESPARMS will not be controlled by OS/EM and the use of AUTOINSTALL at the exit point level is disabled.

EXIT00 ...

EXIT255 Specifies which of the JES2 exits - exits 0 through 255 - are to be activated.

NOEXIT00 ...

NOEXIT255 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE ENABLE causes an exitpoint to be enabled after a failure of the OS/EM exit controller caused the exit to be disabled. Due to the exit environment JES2 establishes, merely reloading the exit controller will not automatically activate the associated user exits as is the case with the other, non-JES2, points. Use of this keyword will activate an exit after the controller has been reloaded.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously, are retained and will not have to be re-specified if the exit is enabled again.

> **Note:** If you have any questions as to the state of a particular JES2 exit, a QUERY command may be issued for the exit. If the exit is marked as DISABLED, issue a JES2 command for the exit with the ENABLE keyword.
>
> An example of the QUERY command for JES2 EXIT2 would be:

```
OS$CNTL QUERY JES2(EXIT2)
```

AUTOINSTALL
>> If specified, any user exits found in JESPARMS for this exit point will automaticaly be controlled by OS/EM without the need to specify them via **OS$CNTL JES2** commands.

Note: AUTOINSTALL must be specified (or defaulted) at the top level for this JES to allow use at the exit point level.

NOAUTOINSTALL

If specified, user exits for this exit point found in JESPARMS will be ignored by OS/EM.

NUMBER You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS Specifies that any active JES2 EXIT0 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of JES2 EXIT0 user exits are to be activated. This can be specified at initialization, or later to load and activate JES2 EXIT0 user exits that were not activated at initialization. The exits will be called in the order listed.

lmod:exit1

lmod:exit2

lmod:exit3

The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.

This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

* An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

0 A zero (0) can be used to inactivate and delete a previously specified JES2 exit.

Note: JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

NOBACKUP Specifies that any active backup user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup user exits are to be activated. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. The backup User exit modules will be called in the order listed.

lmod:exit1

lmod:exit2

lmod:exit3
> The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.
>
> **Note:** This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

0
> A zero (0) can be used to inactivate and delete a previously specified JES2 exit.
>
> **Note:** JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

ABENDNOTIFY
> Specifies that when a XIT16 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a XIT16 exit module has ABENDed.

NOABENDNOTIFY
> The NO option can be used to nullify the option to notify a TSO user of XIT16 exit module ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
> The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
> The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
> The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
> A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for JES2 EXIT0 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

> **jobmask1**

jobmask2

jobmask3
> The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
> A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. Use this option with extreme caution.

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

> **rc**   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by JES2 user exit modules. A good return code allows subsequent JES2 user exit modules to be called. OS/EM provides a default list. For example, if a JES2 user exit for JES2 EXIT0 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

> **rc**   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules, that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
> NODISABLERC turns off disable return code checking for the exit point.

> **rc**   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. Use this option with extreme caution.

> **rc**   Default return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

KEY   Specifies the storage key for this JES2 exit, this is provided for user exit modules that are reentrant in the JES2 sense. Also see IBM JES2 User Modifications and Macros for further detail.

Note: OS/EM recommends all JES2 exits be MVS reentrant and avoid using the KEY option.

0   Specifies the JES2 User exit user be loaded data into key 0 storage.

1   Specifies the JES2 User exit user will be loaded into key 1 storage.

JOBNAMELOC

   jobnamelocspec
   Specifies the location of the Jobname specified using TSO TEST addressing specification parameters. This parameter should be used with extreme caution as any miscalculation may not be pointing to the Jobname.

EXIT0 Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for JES2 EXIT0

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for JES2 EXIT0.

   Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

FIRST

LAST   Specifies whether the optional OS/EM JCL Standards functions for JES2 EXIT0 will be applied before or after the user exits are invoked.

   Note: OS/EM control functions are invoked FIRST by default.

ABENDNOTIFY
   Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY
   The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

   Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

   id1 id2 id3
            The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

   '*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

   0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

EXIT2

OS/EM provides optional functions for JES2 Exit2 thru the use of the Surrogate Password function.

```
OS$CNTL JES2                                                          -
        {JESName(XXXX {YYYYY})}                                       -
        {NOABendnotify|ABendnotify(                                   -
          0|*|id1 {0|*|id2 {0|*|id3}} ) }                             -
        {LIBrary(library.dsn)}                                        -
        {NOAUtoinstall|AUtoinstall}                                   -
         NOEXIT2|EXIT2(                                   -
           {ENable|DISABLE}                                           -
           {NOAUtoinstall|AUinstall}                                  -
           {NUmber( num1 num2 num3 )}                                 -
           {NOExits|Exits(                                            -
              lmod:exit1|*|0                                 -
             {lmod:exit2|*|0                                 -
             {lmod:exit3|*|0}})}                             -
           {NOBAckups|BAckups(                                        -
              lmod:exit1|*|0                                 -
             {lmod:exit2|*|0                                 -
             {lmod:exit3|*|0}})}                             -
           {NOABendnotify|ABendnotify(                                -
             (id1a|*|0 {id1b|*|0 {id1c|*|0}})                -
             (id2a|*|0 {id2b|*|0 {id2c|*|0}})                -
             (id3a|*|0 {id3b|*|0 {id3c|*|0}})})              -
           {NOLIMits|LIMits(                                          -
             (jobmask1,...)|*|0                              -
             {(jobmask2,...)|*|0                             -
             {(jobmask3,...)|*|0}})}                         -
           {NOVAlidrc|VAlidrc(rc,...)}                               -
           {NOGOodrc|GOodrc(rc,...)}                                 -
           {NODISablerc|DISABLERc(rc)}                               -
           {DEFaultrc(rc)}                                           -
           {Key(0|1)}}                                               -
           {JOBnameloc(jobnamelocspec)}                              -
           {OPTions|NOOptions(                                        -
             {FIrst|LAst}                                            -
             {NOAbendnotify|Abendnotify(                             -
                *|0|id1 {*|0|id2 {*|0|id3}} ) }                -
             {NOPasswords|Passwords(                                 -
                {DELete|Load(pass.dsn)}                       -
                {NOJobs|Jobs{(jobnames,...)}}                 -
                {NOStcs|Stcs{(stcnames,...)}}                 -
                {NOTsus|Tsus{(tsusnames,...)}}  )}            -
             {NOADdtsopass|ADdtsopass}                               -
             {NOREptsoq|REptsoq}                                     -
                                              )}
```

JESNAME(XXXX YYYYY)

> Optional keyword which indicates that you are supplying the name of the JES2 sub-system the command applies to. JES2 is the default.

XXXX The four character identifier for this JES2 subsystem.

YYYYY The optional JES2 version. This is used to tell OS/EM what level of code to use before the subsystem actually starts. If there is a mismatch when the subsystem starts, only the OS/EM code is reloaded. Acceptable values are:

- OS270

- OS280

- OS210

- ZS102

- ZS104

- ZS105

LIBRARY Specifies the loading of an User exit module from a private Authorized library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for loading User exit modules.

> **library.dsn**
>> Specifies the name of a private Authorized library named. The library name should be enclosed in single quotes (').

ABENDNOTIFY

Specifies that a TSO message will be sent if any JES2 exit ABENDs.

NOABENDNOTIFY

Specifies that no messages will be sent for JES2 exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

AUTOINSTALL

This option tells OS/EM to add any user exits specified in JESPARMS to OS/EM's internal control blocks as if the exits had been specifically defined by **OS$CNTL JES2** commands.

Note: AUTOINSTALL is the default, and it must be active at this level to allow use of the AUTOINSTALL option at the individual exit point level.

NOAUTOINSTALL

If NOAUTOINSTALL is specified, user exits in JESPARMS will not be controlled by OS/EM and the use of AUTOINSTALL at the exit point level is disabled.

EXIT00 ...

EXIT255 Specifies which of the JES2 exits - exits 0 through 255 - are to be activated.

NOEXIT00 ...

NOEXIT255 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE ENABLE causes an exitpoint to be enabled after a failure of the OS/EM exit controller caused the exit to be disabled. Due to the exit environment JES2 establishes, merely reloading the exit controller will not automatically activate the associated user exits as is the case with the other, non-JES2, points. Use of this keyword will activate an exit after the controller has been reloaded.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously, are retained and will not have to be re-specified if the exit is enabled again.

Note: If you have any questions as to the state of a particular JES2 exit, a QUERY command may be issued for the exit. If the exit is marked as DISABLED, issue a JES2 command for the exit with the ENABLE keyword.

An example of the QUERY command for JES2 EXIT2 would be:

```
OS$CNTL QUERY JES2(EXIT2)
```

AUTOINSTALL

If specified, any user exits found in JESPARMS for this exit point will automaticaly be controlled by OS/EM without the need to specify them via **OS$CNTL JES2** commands.

Note: AUTOINSTALL must be specified (or defaulted) at the top level for this JES to allow use at the exit point level.

NOAUTOINSTALL

If specified, user exits for this exit point found in JESPARMS will be ignored by OS/EM.

NUMBER You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS Specifies that any active JES2 EXIT2 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of JES2 EXIT2 user exits are to be activated. This can be specified at initialization, or later to load and activate JES2 EXIT2 user exits that were not activated at initialization. The exits will be called in the order listed.

lmod:exit1

lmod:exit2

lmod:exit3

The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.

This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

* An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

0 A zero (0) can be used to inactivate and delete a previously specified JES2 exit.

Note: JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

NOBACKUP Specifies that any active backup user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup user exits are to be activated. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. The backup User exit modules will be called in the order listed.

> **lmod:exit1**
>
> **lmod:exit2**
>
> **lmod:exit3**
> The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.
>
> **Note:** This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.
>
> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.
>
> **0** A zero (0) can be used to inactivate and delete a previously specified JES2 exit.
>
> **Note:** JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

ABENDNOTIFY
Specifies that when a JES2 EXIT0 Optional exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a JES2 EXIT0 Optional exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of JES2 EXIT0 Optional exit module ABENDs.

> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.

> **(id1a,id1b,id1c)**
> The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.
>
> **(id2a,id2b,id2c)**
> The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.
>
> **(id3a,id3b,id3c)**
> The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.
>
> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0** A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for JES2 EXIT2 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. Use this option with extreme caution.

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by JES2 user exit modules. A good return code allows subsequent JES2 user exit modules to be called. OS/EM provides a default list. For example, if a JES2 user exit for JES2 EXIT2 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules, that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
NODISABLERC turns off disable return code checking for the exit point.

rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. Use this option with extreme caution.

rc   Default return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

KEY   Specifies the storage key for this JES2 exit, this is provided for user exit modules that are reentrant in the JES2 sense. Also see IBM JES2 User Modifications and Macros for further detail.

> **Note:** OS/EM recommends all JES2 exits be MVS reentrant and avoid using the KEY option.

> **0**   Specifies the JES2 User exit user be loaded data into key 0 storage.

> **1**   Specifies the JES2 User exit user will be loaded into key 1 storage.

JOBNAMELOC

> **jobnamelocspec**
> Specifies the location of the Jobname specified using TSO TEST addressing specification parameters. This parameter should be used with extreme caution as any miscalculation may not be pointing to the Jobname.

EXIT2 Options

The optional functions are available for JES2 EXIT2.

The optional password function of EXIT2 reads the OS/EM password dataset to load passwords into an in-storage table. The password is placed into the JCL when the PASSWORD option is activated.

This feature can be used for submitting jobs across NJE Nodes, or providing surrogate password propagation.

The intended use of this function is to supply passwords to jobs submitted by started tasks, TSO users, or other batch jobs so that these jobs can properly access RACF protected datasets. Your installation might, for example, have a job scheduling system installed. If you run it as a started task, and name it via this command, jobs which this scheduling system submits would be eligible to have passwords added to the JOB statement.

This capability can avoid some audit and operational exposures associated with every job submitted by the Scheduling System having the highest level of access that is required for one job or system like system backups which require RACF OPERATION privilege.

The password will be added if the submitted job's JOB statement has a USER=userid parameter that matches a USERID in the OS/EM password dataset.

Typically, you would define one or more userids that represent your production jobs. These userids would have RACF access to production datasets. Jobs which your scheduling system submits would have a JOB statement that included the USER=userid parameter. The OS/EM password dataset would include statements with these userids and their associated RACF passwords. When such jobs are submitted, the appropriate password would be added.

You can create as many userids as are necessary within your installation.

The OS/EM password dataset consists of one statement per userid, with the userid in positions 1-8 and the password in positions 10-17. The userid is defined to RACF and the password is the RACF password for that userid. The dataset is user maintained and should be RACF protected to limit access to authorized users only.

It is your responsibility to keep this password dataset current and correct. OS/EM will use whatever password is indicated for the userid. If the password is not correct for the userid, the submitted job will fail with a password violation.

Note: To keep the password dataset maintenance to a minimum, the RACF password for each userid you define should be specified as NEVER CHANGE.

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for JES2 EXIT2

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for JES2 EXIT2.

Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

FIRST

LAST
Specifies whether the optional OS/EM JCL Standards functions for JES2 EXIT2 will be applied before or after the user exits are invoked.

Note: OS/EM control functions are invoked FIRST by default.

ABENDNOTIFY
Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3
The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

PASSWORD
Activates the optional OS/EM surrogate PASSWORD function.

NOPASSWORD
Specify the NO option to disable the surrogate PASSWORD function after it has been activated.

LOAD

DELETE
Requests the password dataset to be loaded or deleted.

pass.dsn

pass.dsn(member)
Defines the OS/EM password dataset, or member of the OS/EM password dataset to be loaded.

Note: If this operand is omitted, SYS1.RACFPASS will be the assumed dataset name.

JOBS

Specifies if surrogate password processing is to be active for jobs submitted by other jobs for other RACF users.

jobnames

An optional list which specifies the jobs and jobnames that are eligible to have passwords added to jobs for other RACF users which these jobs submit. If the list is omitted, all jobs will have passwords added to the jobs which they submit.

NOJOBS

Surrogate Password processing for jobs can be disabled by specifying the NO option.

STCS

Specifies if surrogate password processing is to be active for started tasks that submit other jobs for other RACF users.

stcnames

An optional list which specifies the started tasks jobnames that are eligible to have passwords added to jobs for other RACF users which these started tasks submit. If the list is omitted, all started tasks will have passwords added to the jobs which they submit.

NOSTCS

Surrogate password processing for started tasks can be disabled by specifying the NO options.

TSOS

TSUS

Specifies if surrogate password processing is to be active for TSO users that submit jobs for other RACF users.

tsusnames

An optional list which specifies the TSO userids that are eligible to have passwords added to jobs for other RACF users which these TSO users submit. If the list is omitted, all TSO users will have passwords added to the jobs which they submit.

NOTSUS

NOTSOS

Surrogate password processing for TSO users can be disabled by entering the NO option.

Note: JOBNAMEs, STC, and TSO userids may be specified, with the same masking characters as volume masks (see "Volume/Jobname Masks" on page C-1).

ADDTSOPASS

NOADDTSOPASS

Adds the TSO password and userid to jobs submitted by the TSO user.

Note: This option requires that OS/EM's IKJEFLD1 propagate the RACF password in the TSB control block. See TSO exit IKJEFLD1 optional function.

REPTSOQ

NOREPTSOQ
Replaces one to eight question marks (?) with the TSO user's password - PASS-
WORD=????????.

EXIT2 Option Example

The following command will activate the OS/EM optional processing for JESEXIT02. No user exits are
specified; therefore, only OS/EM processing will be done.

```
OS$CNTL JES2(NOEXITS(OPTIONS( –
   PASSWORD( –
      STCS –
      TSOS))))
```

Password processing will be done for started tasks and for TSO submitted jobs. Since no limiting is
specified, no specific started tasks or TSO ids are listed, all jobs submitted through started tasks or TSO
will have passwords supplied for the submitted jobs.

The default password dataset, SYS1.RACFPASS, will be used to obtain the passwords for each userid
coded on the JOB statement of each submitted job. If the userid cannot be found in the password dataset,
the jobs will be submitted without a password being added.

OS/EM Surrogate Password Function: You have defined a production userid PRODTION to your se-
curity system. You have assigned the password QWERTY to this userid and given the id the proper ac-
cess to your production datasets. All production jobs are submitted through a scheduling system.

The entry in the OS/EM password dataset would be:

```
PRODTION  QWERTY
```

Each production job statement must contain a USER=PRODTION parameter. Each time a job is sub-
mitted with this userid, OS/EM will supply the proper password 'QWERTY'.

EXIT4

OS/EM provides optional functions for JES2 Exit4 thru the use of the EZ-Proclib(R) to JCLLIB Statements function.

```
OS$CNTL JES2                                                       -
        {JESName(XXXX {YYYYY})}                                    -
        {NOABendnotify|ABendnotify(                                -
          0|*|id1 {0|*|id2 {0|*|id3}} ) }                         -
        {LIBrary(library.dsn)}                                     -
        {NOAUtoinstall|AUtoinstall}                                -
         NOEXIT4|EXIT4(                                            -
           {ENable|DISABLE}                                        -
           {NOAUtoinstall|AUinstall}                               -
           {NUmber( num1 num2 num3 )}                              -
           {NOExits|Exits(                                         -
               lmod:exit1|*|0                                      -
              {lmod:exit2|*|0                                      -
              {lmod:exit3|*|0}})}                                  -
           {NOBAckups|BAckups(                                     -
               lmod:exit1|*|0                                      -
              {lmod:exit2|*|0                                      -
              {lmod:exit3|*|0}})}                                  -
           {NOABendnotify|ABendnotify(                             -
              (id1a|*|0 {id1b|*|0 {id1c|*|0}})                     -
              (id2a|*|0 {id2b|*|0 {id2c|*|0}})                     -
              (id3a|*|0 {id3b|*|0 {id3c|*|0}})})                   -
           {NOLIMits|LIMits(                                       -
              (jobmask1,...)|*|0                                   -
              {(jobmask2,...)|*|0                                  -
              {(jobmask3,...)|*|0}})}                              -
           {NOVAlidrc|VAlidrc(rc,...)}                             -
           {NOGOodrc|GOodrc(rc,...)}                               -
           {NODISablerc|DISABLERc(rc)}                             -
           {DEFaultrc(rc)}                                         -
           {Key(0|1)}}                                             -
        {JOBnameloc(jobnamelocspec)}                               -
        {OPTions|NOOptions(                                        -
           {FIrst|LAst}                                            -
           {NOAbendnotify|Abendnotify(                             -
              *|0|id1 {*|0|id2 {*|0|id3}} ) }                      -
           {NOEZProclib|EZProclib}                                 -
                                            )}
```

JESNAME(XXXX YYYYY)

           Optional keyword which indicates that you are supplying the name of the JES2 subsystem the command applies to. JES2 is the default.

XXXX   The four character identifier for this JES2 subsystem.

YYYYY   The optional JES2 version. This is used to tell OS/EM what level of code to use before the subsystem actually starts. If there is a mismatch when the subsystem starts, only the OS/EM code is reloaded. Acceptable values are:

- OS270

- OS280

- OS210

- ZS102

- ZS104

- ZS105

LIBRARY   Specifies the loading of an User exit module from a private Authorized library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for loading User exit modules.

library.dsn
Specifies the name of a private Authorized library named. The library name should be enclosed in single quotes (').

ABENDNOTIFY
Specifies that a TSO message will be sent if any JES2 exit ABENDs.

NOABENDNOTIFY
Specifies that no messages will be sent for JES2 exit ABENDs.

id1, id2, id3   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

AUTOINSTALL
This option tells OS/EM to add any user exits specified in JESPARMS to OS/EM's internal control blocks as if the exits had been specifically defined by **OS$CNTL JES2** commands.

Note: AUTOINSTALL is the default, and it must be active at this level to allow use of the AUTOINSTALL option at the individual exit point level.

NOAUTOINSTALL
If NOAUTOINSTALL is specified, user exits in JESPARMS will not be controlled by OS/EM and the use of AUTOINSTALL at the exit point level is disabled.

EXIT00 ...

EXIT255   Specifies which of the JES2 exits - exits 0 through 255 - are to be activated.

NOEXIT00 ...

NOEXIT255   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   ENABLE causes an exitpoint to be enabled after a failure of the OS/EM exit controller caused the exit to be disabled. Due to the exit environment JES2 establishes, merely reloading the exit controller will not automatically activate the associated user exits as is the case with the other, non-JES2, points. Use of this keyword will activate an exit after the controller has been reloaded.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously, are retained and will not have to be re-specified if the exit is enabled again.

Note: If you have any questions as to the state of a particular JES2 exit, a QUERY command may be issued for the exit. If the exit is marked as DISABLED, issue a JES2 command for the exit with the ENABLE keyword.

An example of the QUERY command for JES2 EXIT2 would be:

```
OS$CNTL QUERY JES2(EXIT2)
```

AUTOINSTALL
If specified, any user exits found in JESPARMS for this exit point will automaticaly

be controlled by OS/EM without the need to specify them via **OS$CNTL JES2** commands.

Note: AUTOINSTALL must be specified (or defaulted) at the top level for this JES to allow use at the exit point level.

NOAUTOINSTALL

If specified, user exits for this exit point found in JESPARMS will be ignored by OS/EM.

NUMBER You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

> **num1, num2, num3**
>
> > Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
> >
> > If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS Specifies that any active JES2 EXIT4 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of JES2 EXIT4 user exits are to be activated. This can be specified at initialization, or later to load and activate JES2 EXIT4 user exits that were not activated at initialization. The exits will be called in the order listed.

> **lmod:exit1**
>
> **lmod:exit2**
>
> **lmod:exit3**
>
> > The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.
> >
> > This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.
>
> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.
>
> **0** A zero (0) can be used to inactivate and delete a previously specified JES2 exit.
>
> > **Note:** JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

NOBACKUP Specifies that any active backup user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup user exits are to be activated. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. The backup User exit modules will be called in the order listed.

lmod:exit1

lmod:exit2

lmod:exit3
> The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.
>
> **Note:** This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

0
> A zero (0) can be used to inactivate and delete a previously specified JES2 exit.
>
> **Note:** JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

ABENDNOTIFY
> Specifies that when a JES2 EXIT2 Optional exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a JES2 EXIT2 Optional exit module has ABENDed.

NOABENDNOTIFY
> The NO option can be used to nullify the option to notify a TSO user of JES2 EXIT2 Optional exit module ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
> The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
> The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
> The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
> A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for JES2 EXIT4 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
   The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. Use this option with extreme caution.

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by JES2 user exit modules. A good return code allows subsequent JES2 user exit modules to be called. OS/EM provides a default list. For example, if a JES2 user exit for JES2 EXIT4 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules, that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
   NODISABLERC turns off disable return code checking for the exit point.

rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. Use this option with extreme caution.

rc   Default return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

KEY   Specifies the storage key for this JES2 exit, this is provided for user exit modules that are reentrant in the JES2 sense. Also see IBM JES2 User Modifications and Macros for further detail.

Note: OS/EM recommends all JES2 exits be MVS reentrant and avoid using the KEY option.

    0   Specifies the JES2 User exit user be loaded data into key 0 storage.

    1   Specifies the JES2 User exit user will be loaded into key 1 storage.

JOBNAMELOC

    jobnamelocspec
        Specifies the location of the Jobname specified using TSO TEST addressing specification parameters. This parameter should be used with extreme caution as any miscalculation may not be pointing to the Jobname.

EXIT4 Options

The optional functions are available for JES2 EXIT4.

The optional EZ-Proclib function of EXIT4 scans JCL when it is interpreted for a PROCLIB statement. If found, the statement is changed to a comment and the specified libraries are then placed in a JCLLIB statement.

The intended use of this function is to allow removal of the EZ-Proclib(R) product without the need to recode your JCL.

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for JES2 EXIT4

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for JES2 EXIT4.

Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

    FIRST

    LAST
        Specifies whether the optional OS/EM JCL Standards functions for JES2 EXIT4 will be applied before or after the user exits are invoked.

        Note: OS/EM control functions are invoked FIRST by default.

    ABENDNOTIFY
        Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

    NOABENDNOTIFY
        The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

        Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

    id1 id2 id3
            The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

EZPROCLIB
Activates the optional OS/EM EZ-PROCLIB(R) to JCLLIB Statements function.

NOEZPROCLIB
Specify the NO option to disable the EZ-PROCLIB(R) function.

EXIT4 Option Example

The following command will activate the OS/EM optional processing for JESEXIT04. No user exits are specified; therefore, only OS/EM processing will be done.

```
OS$CNTL JES2 EXIT4(NOEXITS(OPTIONS(EZPROCLIB)))
```

Note: EZ-Proclib(R) is a registered tradmark of Computer Associates.

EXIT5

OS/EM provides optional functions for JES2 Exit5 thru the use of the Job Routing functions.
```
   OS$CNTL JES2                                                          -
           {JESName(XXXX {YYYYY})}                                       -
           {NOABendnotify|ABendnotify(                                   -
              0|*|id1 {0|*|id2 {0|*|id3}} ) }                            -
           {LIBrary(library.dsn)}                                        -
           {NOAUtoinstall|AUtoinstall}                                   -
           NOEXIT5|EXIT5(                                                -
              {ENable|DISABLE}                                           -
              {NOAUtoinstall|AUinstall}                                  -
              {NUmber( num1 num2 num3 )}                                 -
              {NOExits|Exits(                                            -
                  lmod:exit1|*|0                                    -
                 {lmod:exit2|*|0                                    -
                 {lmod:exit3|*|0}})}                                -
              {NOBAckups|BAckups(                                        -
                  lmod:exit1|*|0                                    -
                 {lmod:exit2|*|0                                    -
                 {lmod:exit3|*|0}})}                                -
              {NOABendnotify|ABendnotify(                                -
                 (id1a|*|0 {id1b|*|0 {id1c|*|0}})                        -
                 (id2a|*|0 {id2b|*|0 {id2c|*|0}})                        -
                 (id3a|*|0 {id3b|*|0 {id3c|*|0}})})                      -
              {NOLIMits|LIMits(                                          -
                  (jobmask1,...)|*|0                                     -
                 {(jobmask2,...)|*|0                                     -
                 {(jobmask3,...)|*|0}})}                                 -
              {NOVAlidrc|VAlidrc(rc,...)}                                -
              {NOGOodrc|GOodrc(rc,...)}                                  -
              {NODISablerc|DISABLERc(rc)}                                -
              {DEFaultrc(rc)}                                            -
              {Key(0|1)}}                                                -
           {JOBnameloc(jobnamelocspec)}                                  -
           {OPTions|NOOptions(                                           -
              {FIRST|LAST}                                               -
              {NOABENDNOTIFY|ABENDNOTIFY(                                -
                  *|0|id1 {*|0|id2 {*|0|id3}} )}                         -
              {TRace|NOTRace}                                            -
              {NOJOBRoute|JOBRoute(                                      -
                 RESourcedsn(dsname)                                     -
                {NODEFaultresource|DEFaultresource(resourcename)}        -
                {NOSCHenvconvert|SCHenvconvert}                          -
                {NOSYsaffany|SYsaffany}                                  -
                {NOROute {( NNN )} |                                     -
                {ROute(NNN resourcename {ACcount ('xxx,xxx,xxx')}        -
                                        {DDname    (XXX XXX ...)}        -      -
                                        {DSname    (XXX XXX ...)}        -      -
                                        {EXecparm  (XXXXXXXXXXX)}        -      -
                                        {JOBClass  (XXX XXX ...)}        -      -
                                        {JOBName   (XXX XXX ...)}        -      -
                                        {MEmber    (XXX XXX ...)}        -      -
                                        {PGmname   (XXX XXX ...)}        -      -
                                        {RAcfgroup(XXX XXX ...)}         -      -
                                        {SChenv    (XXX XXX ...)}        -      -
                                        {SErvclass(XXX XXX ...)}         -      -
                                        {SRCName   (XXX XXX ...)}        -      -
```

```
                                              {SRCPrgm  (XXX XXX ...)}      –        –
                                              {SRCType  (Job|Tsu|Stc)}      –        –
                                              {UNitname (XXX XXX ...)}      –        –
                                              {USerid   (XXX XXX ...)} )} –        –
                       {NOMSgnum|MSgnum(OLD:NEW ...)}                 –
                       {JECL(                                    –
                            {CNtl(SHR|EXC)}                      –
                            {THread(SHR|EXC)}                    –
                            {AFter(  {NOJOB( IGNORE|FAIL|WAIT)}  –
                                     {NOSPC( IGNORE|FAIL)}       –
                                     {MULT ( IGNORE|FAIL|OK)}    –
                                     {IMPOS( IGNORE|CANCEL|HOLD)} )}   –
                            {BEfore( {NOJOB( IGNORE|FAIL|OK)}   –
                                     {NOSPC( IGNORE|FAIL)}       –
                                     {MULT ( IGNORE|FAIL|OK)}    –
                            {EXclude({NOJOB( IGNORE|FAIL|OK)}   –
                                     {NOSPC( IGNORE|FAIL)}       –
                                     {MULT ( IGNORE|FAIL|OK)}    –
                            {PRed(   {NOJOB( IGNORE|FAIL|WAIT)}  –
                                     {NOSPC( IGNORE|FAIL)}       –
                                     {MULT ( IGNORE|FAIL|OK)}    –
                                     {IMPOS( IGNORE|CANCEL|HOLD)} )}   –
                            {WIth(   {NOJOB( IGNORE|FAIL|WAIT)}  –
                                     {NOSPC( IGNORE|FAIL)}       –
                                     {MULT ( IGNORE|FAIL|OK)}    –
                                     {IMPOS( IGNORE|CANCEL|HOLD)} )} )}
```

JESNAME(XXXX YYYYY)
> Optional keyword which indicates that you are supplying the name of the JES2 sub-system the command applies to. JES2 is the default.

XXXX   The four character identifier for this JES2 subsystem.

YYYYY   The optional JES2 version. This is used to tell OS/EM what level of code to use before the subsystem actually starts. If there is a mismatch when the subsystem starts, only the OS/EM code is reloaded. Acceptable values are:

- OS270

- OS280

- OS210

- ZS102

- ZS104

- ZS105

LIBRARY   Specifies the loading of an User exit module from a private Authorized library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for loading User exit modules.

> **library.dsn**
> > Specifies the name of a private Authorized library named. The library name should be enclosed in single quotes (').

ABENDNOTIFY
> Specifies that a TSO message will be sent if any JES2 exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for JES2 exit ABENDs.

id1, id2, id3   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

AUTOINSTALL

This option tells OS/EM to add any user exits specified in JESPARMS to OS/EM's internal control blocks as if the exits had been specifically defined by **OS$CNTL JES2** commands.

Note: AUTOINSTALL is the default, and it must be active at this level to allow use of the AUTOINSTALL option at the individual exit point level.

NOAUTOINSTALL

If NOAUTOINSTALL is specified, user exits in JESPARMS will not be controlled by OS/EM and the use of AUTOINSTALL at the exit point level is disabled.

EXIT00 ...

EXIT255   Specifies which of the JES2 exits - exits 0 through 255 - are to be activated.

NOEXIT00 ...

NOEXIT255   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   ENABLE causes an exitpoint to be enabled after a failure of the OS/EM exit controller caused the exit to be disabled. Due to the exit environment JES2 establishes, merely reloading the exit controller will not automatically activate the associated user exits as is the case with the other, non-JES2, points. Use of this keyword will activate an exit after the controller has been reloaded.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously, are retained and will not have to be re-specified if the exit is enabled again.

Note: If you have any questions as to the state of a particular JES2 exit, a QUERY command may be issued for the exit. If the exit is marked as DISABLED, issue a JES2 command for the exit with the ENABLE keyword.

An example of the QUERY command for JES2 EXIT2 would be:

```
OS$CNTL QUERY JES2(EXIT2)
```

AUTOINSTALL

If specified, any user exits found in JESPARMS for this exit point will automaticaly be controlled by OS/EM without the need to specify them via **OS$CNTL JES2** commands.

Note: AUTOINSTALL must be specified (or defaulted) at the top level for this JES to allow use at the exit point level.

NOAUTOINSTALL

If specified, user exits for this exit point found in JESPARMS will be ignored by OS/EM.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS Specifies that any active JES2 EXIT5 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of JES2 EXIT5 user exits are to be activated. This can be specified at initialization, or later to load and activate JES2 EXIT5 user exits that were not activated at initialization. The exits will be called in the order listed.

> **lmod:exit1**
>
> **lmod:exit2**
>
> **lmod:exit3**
>> The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.
>>
>> This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.
>
> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.
>
> **0** A zero (0) can be used to inactivate and delete a previously specified JES2 exit.
>
>> **Note:** JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

NOBACKUP Specifies that any active backup user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup user exits are to be activated. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. The backup User exit modules will be called in the order listed.

> **lmod:exit1**
>
> **lmod:exit2**
>
> **lmod:exit3**
>> The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.
>>
>> **Note:** This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.
>
> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

0   A zero (0) can be used to inactivate and delete a previously specified JES2 exit.

Note: JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

ABENDNOTIFY

Specifies that when a JES2 EXIT4 Optional exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a JES2 EXIT4 Optional exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of JES2 EXIT4 Optional exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for JES2 EXIT5 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. Use this option with extreme caution.

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

    rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by JES2 user exit modules. A good return code allows subsequent JES2 user exit modules to be called. OS/EM provides a default list. For example, if a JES2 user exit for JES2 EXIT5 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

    rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules, that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
                   NODISABLERC turns off disable return code checking for the exit point.

    rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. Use this option with extreme caution.

    rc   Default return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

KEY   Specifies the storage key for this JES2 exit, this is provided for user exit modules that are reentrant in the JES2 sense. Also see IBM JES2 User Modifications and Macros for further detail.

    Note: OS/EM recommends all JES2 exits be MVS reentrant and avoid using the KEY option.

    0   Specifies the JES2 User exit user be loaded data into key 0 storage.

    1   Specifies the JES2 User exit user will be loaded into key 1 storage.

JOBNAMELOC

    jobnamelocspec
                   Specifies the location of the Jobname specified using TSO TEST addressing specification parameters. This parameter should be used with extreme caution as any miscalculation may not be pointing to the Jobname.

EXIT5 Options

Optional functions are available for JES2 EXIT5.

The optional JOB ROUTING function of EXIT5 allows routing jobs between CPUs in a multi access spool (MAS) based on defined resource names and their availability. Use the $QA and $QD commands to manage resource names on each system running OS/EM Job Routing (See "Appendix F. JES2 Commands for Job Routing" on page F-1.) The routing may be controlled by JCL statements placed within the joblib member, or by specifing routing control information with the EXIT5 optional parameters described below. An optional default resource may be specified that will be added to a job which otherwise would not have a resource attached to it. You may have a **total of 127 routes per job**, either JCL statements, automatic routing provided by OS/EM or a combination of both. This option also allows changing the service class, job class or priority, scheduling environment or execution node based upon the same selection criteria as job routing by using the reserved resource names of: **CHANGE_JOBCLASS_x_yy**, **CHANGE_SCHEDENV_xxxxxxxx**, **CHANGE_SRVCLASS_xxxxxxx** or **CHANGE_XEQNODE_xxxxxxxx**.

Note: Any job submitted with a valid JES2 node on a /*ROUTE XEQ node JECL statement will be routed by JES2 to the specified node **before** OS/EM is given a chance to modify any settings.

See "Appendix F. JES2 Commands for Job Routing" on page F-1 for an explanation of the JES2 commands available and "Appendix G. JCL Statements for Job Routing" on page G-1 for the JCL statements available.

Note: The Job Routing Communications dataset must be on DASD shared by each LPAR within the MAS. Additionally the Job Routing function must be enabled on each LPAR within a MAS concurrently. Failure to do so will result in jobs not being allowed to execute on LPARs where Job Routing is active if they have been through the interpreter on a LPAR without Job Routing. Conversely, LPARs within the MAS without Job Routing active may select jobs for execution without the specified resources.

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for JES2 EXIT5

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for JES2 EXIT5.

> **Note:** The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

> **FIRST**

> **LAST**
> Specifies whether the optional OS/EM JCL Standards functions for JES2 EXIT5 will be applied before or after the user exits are invoked.

> **Note:** OS/EM control functions are invoked FIRST by default.

> **ABENDNOTIFY**
> Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

> **NOABENDNOTIFY**
> The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.

> **id1 id2 id3**
> > The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

TRACE
Write GTF Trace records for critical control blocks, used in Problem Determination for OS/EM Optional functions in conjunction with OS/EM support.

NOTRACE
Disables GTF trace records (This is the default)

JOBROUTE
Activates the optional OS/EM Job Routing function.

NOJOBROUTE
Specify the NO option to disable the Job Routing function after it has been activated.

RESOURCEDSN(dsname)
Specify the dataset name of the sequential file which will store the resource name information.

This dataset must be shared by each system in the MAS. The dataset format must be: Physical Sequential, Record format of F and have a maximum logical record length of 32719. To calculate the proper record size use the formula: $(45 * MAX\_\#\_RESOURCE\_ENTRIES) + 4$. It is recommended that the maximum size of 32719 be used as the file only stores 32 records and does not take much space.

Note: Each MAS must have a unique resource dataset. Sharing the resource dataset between multiple MASes may produce unpredictable results.

NODEFAULTRESOURCE

DEFAULTRESOURCE
Any job going through conversion which does not contain an OS/EM job routing card (/*ROUTE XEQ resourcename) or match an automatic routing group will have this resource name added to the job.

NOSCHENVCONVERT

SCHENVCONVERT
This keyword will cause OS/EM to scan for the keyword SCHENV= on the JOBCARD statement and remove it. It then inserts an OS/EM Job Routing JECL statement using the scheduling environment name just removed as the resource name.

Note: If you are using OS/EM Job Routing to assign a Scheduling Environment based on some selection criteria it will still be assigned, as that processing occurs after any original SCHENV keyword has been converted to a route statement. This means that your jobs could end up having a route statement with the original scheduling environment name as the resource and a SCHENV keyword generated based on your selection criteria.

NOSYSAFFANY

SYSAFFANY

Specifying this keyword will cause OS/EM to set a job's system affinity (SYSAFF) to ANY, if and only if, the job has been assigned one or more OS/EM Job Route resources. The job route resources may be from either JECL control cards (/*ROUTE resource) or automatically generated.

Note: You may use both SCHENVCONVERT and SYSAFFANY. The system affinity change occurs after any schedule environments have been replaced with ROUTE statements.

Additional notes:

1. It is highly recommended that this option be activated if Resource Routing is being utilized.

2. JES2 will continue to use the original SYSAFF specification to determine where JCL conversion takes place. Setting the SYSAFF to ANY occurs after JCL conversion and prior to queuing the job for exectuion.

3. The independent mode status is not affected by this option. In other words, if the job routing condition is met, a job with SYSAFF=(CPU1,IND) would be changed to SYSAFF=(ANY,IND). In this way, systems can be placed into independent mode and still participate fully in resource routing.

ROUTE

There may be up to 999 different sets of routing rules or routing groups.

Note: Although you may enter up to 999 different sets, each ROUTE keyword must be issued with it's own OS$CNTL command.

N   Routing group number, 1 to 999.

resourcename

The name of the resource where the attached jobs will be routed. The resource name may be up to 44 characters long. There are four reserved resource names used for changing the service class, job class/priority, scheduling environment or XEQ node. They are: **CHANGE_SRVCLASS_xxxxxxxx**, **CHANGE_JOBCLASS_x_yy**, **CHANGE_SCHEDENV_zzzzzzzz** or **CHANGE_XEQNODE_nnnnnnnn**. where 'xxxxxxxx' is the new service class to use, 'x' is the new job class, 'yy' is the new priority, 'zzzzzzzz' is the new scheduling environment and 'nnnnnnnn' is the new node name. If any submitted jobs match on the selector types below, their service class, job class/priority or scheduling environment will be changed to the class specified.

Selector Types. Each selector type may contain multiple names or masks with the execption of **EXECPARM** which may only have one parm specified.

ACCOUNT('xxx,xxx,...')

Enter (within parens) a quoted string listing the account number field(s) to be selected. Use apostrophes (') not quotation marks (") to delimit this field. Use any of the OS/EM standard mask characters (see "Volume/Jobname Masks" on page C-1) to identify the string. Only one ACCOUNT selection may be specified per routing group.

DDNAME(xxx xxx ...)
> Enter (within parens) the DD names or DD name masks that are to be routed to the specified resource.

DSNAME(xxx xxx ...)
> Enter (within parens) the dataset names or dataset name masks that are to be routed to the specified resource.

EXECPARM('xxxxxxxx')
> Enter (within parens and apostrophes) the execution parm or execution parm mask that is to be routed to the specified resource. Only one EXECPARM may be specified per routing group.

JOBCLASS(x x x . . .)
> Enter (within parens) the jobclasses that are to be routed to the specified resource.

JOBNAME(xxx xxx ...)
> Enter (within parens) the job names or job name masks that are to be routed to the specified resource.

JOBTIME(xxx:xxx xxx ...)
> Enter (within parens) the time values to be matched. The JOBTIME parameters are entered as MMMMMM.SS, where MMMMMM may be from 0 to 357912 minutes and SS may be from 0 to 59 seconds. JOBTIME may also be entered as a range by separating the beginning and ending values with a colon (:), i.e. 0.10:2.0 would specify a range beginning with zero minutes and 10 seconds to two minutes and zero seconds. Leading and trailing zeros may be dropped, i.e. the above could also be entered as .10:2 for ten seconds to 2 minutes.

PGMNAME(xxx xxx ...)
> Enter (within parens) the program names or program name masks that are to be routed to the specified resource.

RACFGROUP(xxx xxx ...)
> Enter (within parens) the RACF groups or RACF group masks that are to be routed to the specified resource.

SERVCLS(xxx xxx ...)
> Enter (within parens) the workload manager service classes that are to be routed to the specified resource.

SRCNAME(xxx xxx ...)
> Enter (within parens) the name of the submitter of this job. This may be a jobname, a TSO User ID or the name of a started task. Standard mask characters may be used.

SRCPRGM(xxx xxx ...)
> Enter (within parens) the program name that submitted this job. Standard mask characters may be used.

SRCTYPE(JOB|TSU|STC)
> The submitting job type, either a batch job, a TSO user or a started task.

UNITNAME(xxx xxx ...)
> Enter (within parens) the unit names or unit name masks that are to be routed to the specified resource.

USERID(xxx xxx ...)

> Enter (within parens) the user IDs or user ID masks that are to be routed to the specified resource.

> **Note:** If JOBCLASS or SERVCLS is used for job routing, unpredictible results will occur if the class is changed after the job has been submitted.

Multiple names/masks within a selector type are considered to be **OR** conditions. That is, if any of them are matched the condition is satisfied. Specifying multiple selector types, however, is considered to be an **AND** condition. All selector types must have a match in order for the Resource Name to be assigned to the job.

For example, if the following entry was used:

```
ROUTE (1 RES_TEST DDNAME(SYSUT2 SPECIAL) JOBNAME(TSYS- TDEV-))
```

Only those jobs which had jobnames beginning with TSYS **or** TDEV that also had a DDNAME of SPECIAL **or** a DDNAME of SYSUT2 in their JCL streams would be assigned the resource of RES_TEST.

On the other hand, if you only wanted TSYS jobs with a SYSUT2 DDNAME and only those TDEV jobs with a SPECIAL DDNAME to be assigned the resource RES_TEST you could code two Routing Groups and specify the RES_TEST for both.

You would specify:

```
ROUTE (1 RES_TEST DDNAME(SYSUT2) JOBNAME(TSYS-))
ROUTE (2 RES_TEST DDNAME(SPECIAL) JOBNAME(TDEV-))
```

In this way, TDEV jobs with a SYSUT2 DDNAME and TSYS jobs with a SPECIAL DDNAME would **not** be assigned the resource as they would in the first example.

MSGNUM

> To revert to the original MELLON message numbers, enter the OS/EM number and the MELLON number seperated by the colon(:).

> Refer to "Appendix H. $HASP Messages for Job Routing" on page H-1 for the acceptable message numbers.

```
MSGNUM(976:576 977:577)
```

NOMSGNUM

> Causes OS/EM to use its original message numbers.

JECL

> Allows default settings for JECL statements to be specified.

> **CNTL**

>> Specify whether use of /*CNTL resources will be exclusive or shared.

>> **SHR**

>>> Specifies the default action for /*CNTL statements. SHR will allow simultaneous use of the resource.

EXC

Specifies the default action for /*CNTL statements. EXC will enforce single streaming of jobs asking for the same resource.

THREAD

Specify whether use of /*THREAD resources will be exclusive or shared.

SHR

Specifies the default action for /*THREAD statements. SHR will allow simultaneous use of the resource.

EXC

Specifies the default action for /*THREAD statements. EXC will enforce single streaming of jobs asking for the same resource.

AFTER

Specify the default actions to be performed for the /*AFTER statement.

NOJOB

Specify action to be taken if the specified job is not in the execute queue.

IGNORE

Indicates that the card is to be treated as a comment.

FAIL

Indicates that the job is to be failed by passing a return code of 12 back to JES2.

WAIT

Indicates that the job is to wait until a job with the specified jobname is read into the system.

NOSPC

Specify the action to be taken if the specific job (jobname with jobnumber) is not in the execute queue.

IGNORE

Indicates that the card is to be treated as a comment.

FAIL

Indicates that the job is to be failed by passing a return code of 12 back to JES2.

MULT

Specify the action to be taken if there are multiple matching jobnames in the system.

IGNORE

Indicates that the card is to be treated as a comment.

FAIL

Indicates that the job is to be failed by passing a return code of 12 back to JES2.

OK Indicates that the statement will apply to all jobs with the specified jobname.

IMPOS

Specify the action to be taken if the specific jobname and

jobnumber specified has already left the execution queue. i.e. the request of AFTER, PRED or WITH is impossible to fulfill.

IGNORE
> Indicates that the card is to be treated as a comment.

CANCEL
> Indicates that the job will be cancelled. i.e. $PJOBxxxx.

HOLD
> The job is placed on hold. Operator intervention will be required to release or cancel the job.

BEFORE
Specify the default actions to be performed for the /*BEFORE statement.

NOJOB
> Specify action to be taken if the specified job is not in the execute queue.

> **IGNORE**
>> Indicates that the card is to be treated as a comment.

> **FAIL**
>> Indicates that the job is to be failed by passing a return code of 12 back to JES2.

> **OK** Indicates that the job may run. If the specified job comes into the system, it will be held until this job ends.

NOSPC
> Specify the action to be taken if the specific job (jobname with jobnumber) is not in the execute queue.

> **IGNORE**
>> Indicates that the card is to be treated as a comment.

> **FAIL**
>> Indicates that the job is to be failed by passing a return code of 12 back to JES2.

MULT
> Specify the action to be taken if there are multiple matching jobnames in the system.

> **IGNORE**
>> Indicates that the card is to be treated as a comment.

> **FAIL**
>> Indicates that the job is to be failed by passing a return code of 12 back to JES2.

> **OK** Indicates that the statement will apply to all jobs with the specified jobname.

EXCLUDE
Specify the default actions to be performed for the /*EXCLUDE statement.

NOJOB
> Specify action to be taken if the specified job is not in the execute queue.

IGNORE

> Indicates that the card is to be treated as a comment.

FAIL

> Indicates that the job is to be failed by passing a return code of 12 back to JES2.

OK   Indicates that the job may run. If the specified job comes into the system, it will be held until this job ends.

NOSPC

Specify the action to be taken if the specific job (jobname with jobnumber) is not in the execute queue.

IGNORE

> Indicates that the card is to be treated as a comment.

FAIL

> Indicates that the job is to be failed by passing a return code of 12 back to JES2.

MULT

Specify the action to be taken if there are multiple matching jobnames in the system.

IGNORE

> Indicates that the card is to be treated as a comment.

FAIL

> Indicates that the job is to be failed by passing a return code of 12 back to JES2.

OK   Indicates that the statement will apply to all jobs with the specified jobname.

PRED

Specify the default actions to be performed for the /*PRED statement.

NOJOB

Specify action to be taken if the specified job is not in the execute queue.

IGNORE

> Indicates that the card is to be treated as a comment.

FAIL

> Indicates that the job is to be failed by passing a return code of 12 back to JES2.

WAIT

> Indicates that the job is to wait until a job with the specified jobname is read into the system.

NOSPC

Specify the action to be taken if the specific job (jobname with jobnumber) is not in the execute queue.

IGNORE

> Indicates that the card is to be treated as a comment.

FAIL
Indicates that the job is to be failed by passing a return code of 12 back to JES2.

MULT
Specify the action to be taken if there are multiple matching jobnames in the system.

IGNORE
Indicates that the card is to be treated as a comment.

FAIL
Indicates that the job is to be failed by passing a return code of 12 back to JES2.

OK Indicates that the statement will apply to all jobs with the specified jobname.

IMPOS
Specify the action to be taken if the specific jobname and jobnumber specified has already left the execution queue. i.e. the request of AFTER, PRED or WITH is impossible to fulfill.

IGNORE
Indicates that the card is to be treated as a comment.

CANCEL
Indicates that the job will be cancelled. i.e. $PJOBxxxx.

HOLD
The job is placed on hold. Operator intervention will be required to release or cancel the job.

WITH
Specify the default actions to be performed for the /*WITH statement.

NOJOB
Specify action to be taken if the specified job is not in the execute queue.

IGNORE
Indicates that the card is to be treated as a comment.

FAIL
Indicates that the job is to be failed by passing a return code of 12 back to JES2.

WAIT
Indicates that the job is to wait until a job with the specified jobname is read into the system.

NOSPC
Specify the action to be taken if the specific job (jobname with jobnumber) is not in the execute queue.

IGNORE
Indicates that the card is to be treated as a comment.

FAIL
Indicates that the job is to be failed by passing a return code of 12 back to JES2.

MULT

Specify the action to be taken if there are multiple matching jobnames in the system.

IGNORE

Indicates that the card is to be treated as a comment.

FAIL

Indicates that the job is to be failed by passing a return code of 12 back to JES2.

OK   Indicates that the statement will apply to all jobs with the specified jobname.

IMPOS

Specify the action to be taken if the specific jobname and jobnumber specified has already left the execution queue. i.e. the request of AFTER, PRED or WITH is impossible to fulfill.

IGNORE

Indicates that the card is to be treated as a comment.

CANCEL

Indicates that the job will be cancelled. i.e. $PJOBxxxx.

HOLD

The job is placed on hold. Operator intervention will be required to release or cancel the job.

EXIT6

JCL Controls allow installations to control various JCL parameters utilizing an external table with OS/EM and/or utilize an External Security Manager for checking whether Users have access to a particular resource.

Exit6 also has an optional job time function, which will insert a time parameter if missing, and/or override the time specified on the job card.

The optional functions of EXIT6 enable the user to validate many MVS JCL functions. The JCL parameters that can be validated or optionally checked against an external Security Manager (RACF, CA-ACF2 and CA-TOPSECRET) are: MVS Job accounting numbers (up to six), ADDRSPC, BURST, CHARS, COPIES, DATACLASS, DEST, DPRTY, FLASH, DPRTY, EXPDT, FCB, FLASH, FORM, FORMDEF, MODIFY, MGMTCLASS, MSGCLASS, OUTPRTY, PAGEDEF, PERFORM, PRMODE, PROTECT (RACF Only), PRTY, RETPD, SYSOUT, SUBSYS, TIME, UCS, USERLIB, WRITER, and specific DDNAMES.

```
    OS$CNTL JES2                                                   -
            {JESName(XXXX {YYYYY})}                                -
            {NOABendnotify|ABendnotify(                            -
               0|*|id1 {0|*|id2 {0|*|id3}} ) ) }                   -
            {LIBrary(library.dsn)}                                 -
            {NOAUtoinstall|AUtoinstall}                            -
             NOEXIT6|EXIT6(                                    -
               {ENable|DISABLE}                                    -
               {NOAUtoinstall|AUinstall}                           -
               {NUmber( num1 num2 num3 )}                          -
               {NOExits|Exits(                                     -
                   lmod:exit1|*|0                             -
                   {lmod:exit2|*|0                            -
                   {lmod:exit3|*|0}})}                        -
               {NOBAckups|BAckups(                                 -
                   lmod:exit1|*|0                             -
                   {lmod:exit2|*|0                            -
                   {lmod:exit3|*|0}})}                        -
               {NOABendnotify|ABendnotify(                         -
                   (id1a|*|0 {id1b|*|0 {id1c|*|0}})           -
                   (id2a|*|0 {id2b|*|0 {id2c|*|0}})           -
                   (id3a|*|0 {id3b|*|0 {id3c|*|0}})})         -
               {NOLIMits|LIMits(                                   -
                   (jobmask1,...)|*|0                         -
                   {(jobmask2,...)|*|0                        -
                   {(jobmask3,...)|*|0}})}                    -
               {NOVAlidrc|VAlidrc(rc,...)}                         -
               {NOGOodrc|GOodrc(rc,...)}                           -
               {NODISablerc|DISABLERc(rc)}                         -
               {DEFaultrc(rc)}                                     -
               {Key(0|1)}}                                         -
            {JOBnameloc(jobnamelocspec)}                           -
            {OPTions|NOOptions(                                    -
               {FIrst|LAst}                                        -
               {NOABendnotify|ABendnotify(                         -
                   *|0|id1 {*|0|id2 {*|0|id3}} )}             -
               {NOJOBTimerequired|JOBTimerequired}                 -
               {NOSEtjobtime|SEtjobtime(                           -
                   {NOINsert|INsert{(jobclasslist)}}         -
                   {NOMAximum|MAximum{(jobclasslist)}}       -
                   {NONOLImit|NOLImit{(jobclasslist)}}       -
```

```
                    {NOHIgh|HIgh{(jobclasslist)}                      -
                    {NOLOw|LOw{(jobclasslist)}  )}                    -
               {NOTSuacct|TSuacct}                                    -
               {NOJCl|JCl}                                            -
                 {NOACct1|ACct1(                                      -
                    NOALlow|ALlow(allowlist,...)|                     -
                    NODISALlow|DISALlow(disallowlist,...)|            -
                    NOCHeck|CHeck(checklist,...)                      -
                    OTher(ALlow|DISALlow|CHeck)                       -
                    UNdefined(ALlow|DISALlow)                         -
                    CHar|NUmeric )}                                   -
                 {NOACct2|ACct2(                                      -
                    NOALlow|ALlow(allowlist,...)|                     -
                    NODISALlow|DISALlow(disallowlist,...)|            -
                    NOCHeck|CHeck(checklist,...)                      -
                    OTher(ALlow|DISALlow|CHeck)                       -
                    UNdefined(ALlow|DISALlow)                         -
                    CHar|NUmeric )}                                   -
                 {NOACct3|ACct3(                                      -
                    NOALlow|ALlow(allowlist,...)|                     -
                    NODISALlow|DISALlow(disallowlist,...)|            -
                    NOCHeck|CHeck(checklist,...)                      -
                    OTher(ALlow|DISALlow|CHeck)                       -
                    UNdefined(ALlow|DISALlow)                         -
                    CHar|NUmeric )}                                   -
                 {NOACct4|ACct4(                                      -
                    NOALlow|ALlow(allowlist,...)|                     -
                    NODISALlow|DISALlow(disallowlist,...)|            -
                    NOCHeck|CHeck(checklist,...)                      -
                    OTher(ALlow|DISALlow|CHeck)                       -
                    UNdefined(ALlow|DISALlow)                         -
                    CHar|NUmeric )}                                   -
                 {NOACct5|ACct5(                                      -
                    NOALlow|ALlow(allowlist,...)|                     -
                    NODISALlow|DISALlow(disallowlist,...)|            -
                    NOCHeck|CHeck(checklist,...)                      -
                    OTher(ALlow|DISALlow|CHeck)                       -
                    UNdefined(ALlow|DISALlow)                         -
                    CHar|NUmeric )}                                   -
                 {NOACct6|ACct6(                                      -
                    NOALlow|ALlow(allowlist,...)|                     -
                    NODISALlow|DISALlow(disallowlist,...)|            -
                    NOCHeck|CHeck(checklist,...)                      -
                    OTher(ALlow|DISALlow|CHeck)                       -
                    UNdefined(ALlow|DISALlow)                         -
                    CHar|NUmeric )}                                   -
                 {NOADdrspc|ADdrspc(                                  -
                    NOALlow|ALlow(allowlist,...)|                     -
                    NODISALlow|DISALlow(disallowlist,...)|            -
                    NOCHeck|CHeck(checklist,...)                      -
                    OTher(ALlow|DISALlow|CHeck)                       -
                    UNdefined(ALlow|DISALlow) )}                      -
                 {NOBUrst|BUrst(                                      -
                    NOALlow|ALlow(allowlist,...)|                     -
                    NODISALlow|DISALlow(disallowlist,...)|            -
                    NOCHeck|CHeck(checklist,...)                      -
                    OTher(ALlow|DISALlow|CHeck)                       -
                    UNdefined(ALlow|DISALlow) )}                      -
                 {NOCHars|CHars(                                      -
```

```
               NOALlow|ALlow(allowlist,...)|                          -
               NODISALlow|DISALlow(disallowlist,...)|                 -
               NOCHeck|CHeck(checklist,...)                           -
               OTher(ALlow|DISALlow|CHeck)                            -
               UNdefined(ALlow|DISALlow) )}                           -
          {NOCOpies|COpies(                                           -
               NOALlow|ALlow(allowlist,...)|                          -
               NODISALlow|DISALlow(disallowlist,...)|                 -
               NOCHeck|CHeck(checklist,...)                           -
               OTher(ALlow|DISALlow|CHeck)                            -
               UNdefined(ALlow|DISALlow) )}                           -
          {NODAtaclass|DAtaclass(                                     -
               NOALlow|ALlow(allowlist,...)|                          -
               NODISALlow|DISALlow(disallowlist,...)|                 -
               NOCHeck|CHeck(checklist,...)                           -
               OTher(ALlow|DISALlow|CHeck)                            -
               UNdefined(ALlow|DISALlow) )}                           -
          {NODDnames|DDnames(                                         -
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               NODISALlow|DISALlow(disallowlist,...)|                 -
               NOCHeck|CHeck(checklist,...)                           -
               OTher(ALlow|DISALlow|CHeck)                            -
               UNdefined(ALlow|DISALlow) )}                           -
          {NODPrty|DPrty(                                             -
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               NODISALlow|DISALlow(disallowlist,...)|                 -
               NOCHeck|CHeck(checklist,...)                           -
               OTher(ALlow|DISALlow|CHeck)                            -
               UNdefined(ALlow|DISALlow) )}                           -
          {NOMGmtclass|MGmtclass(                                     -
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               NODISALlow|DISALlow(disallowlist,...)|                 -
               NOCHeck|CHeck(checklist,...)                           -
               OTher(ALlow|DISALlow|CHeck)                            -
               UNdefined(ALlow|DISALlow) )}                           -
          {NOMSgclass|MSgclass(                                       -
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               NODISALlow|DISALlow(disallowlist,...)|                 -
               NOCHeck|CHeck(checklist,...)                           -
               OTher(ALlow|DISALlow|CHeck)                            -
               UNdefined(ALlow|DISALlow) )}                           -
          {NOPRotect|PRotect(                                         -
               NOALlow|ALlow(allowlist,...)|                          -
               NODISALlow|DISALlow(disallowlist,...)|                 -
               NOCHeck|CHeck(checklist,...)                           -
               OTher(ALlow|DISALlow|CHeck)                            -
               UNdefined(ALlow|DISALlow) )}                           -
          {NOPErform|PErform(                                         -
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               NODISALlow|DISALlow(disallowlist,...)|                 -
               NOCHeck|CHeck(checklist,...)                           -
               OTher(ALlow|DISALlow|CHeck)                            -
               UNdefined(ALlow|DISALlow) )}                           -
          {NOPRty|PRty(                                               -
               NOALlow|ALlow(allowlist,...)|                          -
               NODISALlow|DISALlow(disallowlist,...)|                 -
               NOCHeck|CHeck(checklist,...)                           -
               OTher(ALlow|DISALlow|CHeck)                            -
               UNdefined(ALlow|DISALlow) )}                           -
```

```
{NOSTorclass|STorclass(                                         –
    NOALlow|ALlow(allowlist,...)|                               –
    NODISALlow|DISALlow(disallowlist,...)|                      –
    NOCHeck|CHeck(checklist,...)                                –
    OTher(ALlow|DISALlow|CHeck)                                 –
    UNdefined(ALlow|DISALlow) )}                                –
{NOSUbsys|SUbsys(                                               –
    NOALlow|ALlow(allowlist,...)|                               –
    NODISALlow|DISALlow(disallowlist,...)|                      –
    NOCHeck|CHeck(checklist,...)                                –
    OTher(ALlow|DISALlow|CHeck)                                 –
    UNdefined(ALlow|DISALlow) )}                                –
{NOTime|Time(                                                   –
    NOALlow|ALlow(allowlist,...)|                               –
    NODISALlow|DISALlow(disallowlist,...)|                      –
    NOCHeck|CHeck(checklist,...)                                –
    OTher(ALlow|DISALlow|CHeck)                                 –
    UNdefined(ALlow|DISALlow) )}                                –
{NOUnit|Unit(                                                   –
    NOALlow|ALlow(allowlist,...)|                               –
    NODISALlow|DISALlow(disallowlist,...)|                      –
    NOCHeck|CHeck(checklist,...)                                –
    OTher(ALlow|DISALlow|CHeck)                                 –
    UNdefined(ALlow|DISALlow) )}                                –
{NOSYsout|SYsout(                                               –
    NOALlow|ALlow(allowlist,...)|                               –
    NODISALlow|DISALlow(disallowlist,...)|                      –
    NOCHeck|CHeck(checklist,...)                                –
    OTher(ALlow|DISALlow|CHeck)                                 –
    UNdefined(ALlow|DISALlow) )}                                –
{NODEst|DEst(                                                   –
    NOALlow|ALlow(allowlist,...)|                               –
    NODISALlow|DISALlow(disallowlist,...)|                      –
    NOCHeck|CHeck(checklist,...)                                –
    OTher(ALlow|DISALlow|CHeck)                                 –
    UNdefined(ALlow|DISALlow) )}                                –
{NOFCb|FCb(                                                     –
    NOALlow|ALlow(allowlist,...)|                               –
    NODISALlow|DISALlow(disallowlist,...)|                      –
    NOCHeck|CHeck(checklist,...)                                –
    OTher(ALlow|DISALlow|CHeck)                                 –
    UNdefined(ALlow|DISALlow) )}                                –
{NOFLash|FLash(                                                 –
    NOALlow|ALlow(allowlist,...)|                               –
    NODISALlow|DISALlow(disallowlist,...)|                      –
    NOCHeck|CHeck(checklist,...)                                –
    OTher(ALlow|DISALlow|CHeck)                                 –
    UNdefined(ALlow|DISALlow) )}                                –
{NOFOrm|FOrm(                                                   –
    NOALlow|ALlow(allowlist,...)|                               –
    NODISALlow|DISALlow(disallowlist,...)|                      –
    NOCHeck|CHeck(checklist,...)                                –
    OTher(ALlow|DISALlow|CHeck)                                 –
    UNdefined(ALlow|DISALlow) )}                                –
{NOMOdify|MOdify(                                               –
    NOALlow|ALlow(allowlist,...)|                               –
    NODISALlow|DISALlow(disallowlist,...)|                      –
    NOCHeck|CHeck(checklist,...)                                –
    OTher(ALlow|DISALlow|CHeck)                                 –
```

```
                    UNdefined(ALlow|DISALlow) )}                       -
         {NOUcs|Ucs(                                                   -
                    NOALlow|ALlow(allowlist,...)|                      -
                    NODISALlow|DISALlow(disallowlist,...)|             -
                    NOCHeck|CHeck(checklist,...)                       -
                    OTher(ALlow|DISALlow|CHeck)                        -
                    UNdefined(ALlow|DISALlow) )}                       -
         {NOWriter|Writer(                                             -
                    NOALlow|ALlow(allowlist,...)|                      -
                    NODISALlow|DISALlow(disallowlist,...)|             -
                    NOCHeck|CHeck(checklist,...)                       -
                    OTher(ALlow|DISALlow|CHeck)                        -
                    UNdefined(ALlow|DISALlow) )}                       -
         {NOEXpdt|EXpdt(                                               -
                    NOALlow|ALlow(allowlist,...)|                      -
                    NODISALlow|DISALlow(disallowlist,...)|             -
                    NOCHeck|CHeck(checklist,...)                       -
                    OTher(ALlow|DISALlow|CHeck)                        -
                    UNdefined(ALlow|DISALlow) )}                       -
         {NORetpd|REtpd(                                               -
                    NOALlow|ALlow(allowlist,...)|                      -
                    NODISALlow|DISALlow(disallowlist,...)|             -
                    NOCHeck|CHeck(checklist,...)                       -
                    OTher(ALlow|DISALlow|CHeck)                        -
                    UNdefined(ALlow|DISALlow) )}                       -
         {NOUNit|UNit(                                                 -
                    NOALlow|ALlow(allowlist,...)|                      -
                    NODISALlow|DISALlow(disallowlist,...)|             -
                    NOCHeck|CHeck(checklist,...)                       -
                    OTher(ALlow|DISALlow|CHeck)                        -
                    UNdefined(ALlow|DISALlow) )}                       -
         {NOUSerlib|USerlib(                                           -
                    NOALlow|ALlow(allowlist,...)|                      -
                    NODISALlow|DISALlow(disallowlist,...)|             -
                    NOCHeck|CHeck(checklist,...)                       -
                    OTher(ALlow|DISALlow|CHeck)                        -
                    UNdefined(ALlow|DISALlow) )}                       -
         {NOFOrmdef|FOrmdef(                                           -
                    NOALlow|ALlow(allowlist,...)|                      -
                    NODISALlow|DISALlow(disallowlist,...)|             -
                    NOCHeck|CHeck(checklist,...)                       -
                    OTher(ALlow|DISALlow|CHeck)                        -
                    UNdefined(ALlow|DISALlow) )}                       -
         {NOOUtprty|OUtprty(                                           -
                    NOALlow|ALlow(allowlist,...)|                      -
                    NODISALlow|DISALlow(disallowlist,...)|             -
                    NOCHeck|CHeck(checklist,...)                       -
                    OTher(ALlow|DISALlow|CHeck)                        -
                    UNdefined(ALlow|DISALlow) )}                       -
         {NOPAgedef|PAgedef(                                           -
                    NOALlow|ALlow(allowlist,...)|                      -
                    NODISALlow|DISALlow(disallowlist,...)|             -
                    NOCHeck|CHeck(checklist,...)                       -
                    OTher(ALlow|DISALlow|CHeck)                        -
                    UNdefined(ALlow|DISALlow) )}                       -
         {NOPRmode|PRmode(                                             -
                    NOALlow|ALlow(allowlist,...)|                      -
                    NODISALlow|DISALlow(disallowlist,...)|             -
                    NOCHeck|CHeck(checklist,...)                       -
```

```
                    OTher(ALlow│DISALlow│CHeck)                              -
                    UNdefined(ALlow│DISALlow) )}                             -
                                                      )}
```

JESNAME(XXXX YYYYY)
 Optional keyword which indicates that you are supplying the name of the JES2 sub-
 system the command applies to. JES2 is the default.

XXXX The four character identifier for this JES2 subsystem.

YYYYY The optional JES2 version. This is used to tell OS/EM what level of code to use before
 the subsystem actually starts. If there is a mismatch when the subsystem starts, only
 the OS/EM code is reloaded. Acceptable values are:

 - OS270

 - OS280

 - OS210

 - ZS102

 - ZS104

 - ZS105

LIBRARY Specifies the loading of an User exit module from a private Authorized library named
 library.dsn. If this parameter is omitted then the normal MVS search criteria is used
 for loading User exit modules.

 library.dsn
  Specifies the name of a private Authorized library named. The library name
  should be enclosed in single quotes (').

ABENDNOTIFY
 Specifies that a TSO message will be sent if any JES2 exit ABENDs.

NOABENDNOTIFY
 Specifies that no messages will be sent for JES2 exit ABENDs.

 id1, id2, id3 You may specify up to three TSO IDs or notification group names
  to be notified in the case of an ABEND. (See "NFYGROUPS" on
  page SYS-1.)

AUTOINSTALL
 This option tells OS/EM to add any user exits specified in JESPARMS to OS/EM's
 internal control blocks as if the exits had been specifically defined by **OS$CNTL JES2**
 commands.

 Note: AUTOINSTALL is the default, and it must be active at this level to allow use
 of the AUTOINSTALL option at the individual exit point level.

NOAUTOINSTALL
 If NOAUTOINSTALL is specified, user exits in JESPARMS will not be controlled by
 OS/EM and the use of AUTOINSTALL at the exit point level is disabled.

EXIT00 ...

EXIT255 Specifies which of the JES2 exits - exits 0 through 255 - are to be activated.

NOEXIT00 ...

NOEXIT255 The NO option can be used to completely nullify the exit point and disable and reset
 any options in effect for it.

ENABLE   ENABLE causes an exitpoint to be enabled after a failure of the OS/EM exit controller caused the exit to be disabled. Due to the exit environment JES2 establishes, merely reloading the exit controller will not automatically activate the associated user exits as is the case with the other, non-JES2, points. Use of this keyword will activate an exit after the controller has been reloaded.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously, are retained and will not have to be re-specified if the exit is enabled again.

Note: If you have any questions as to the state of a particular JES2 exit, a QUERY command may be issued for the exit. If the exit is marked as DISABLED, issue a JES2 command for the exit with the ENABLE keyword.

An example of the QUERY command for JES2 EXIT2 would be:

```
OS$CNTL QUERY JES2(EXIT2)
```

AUTOINSTALL

If specified, any user exits found in JESPARMS for this exit point will automaticaly be controlled by OS/EM without the need to specify them via **OS$CNTL JES2** commands.

Note: AUTOINSTALL must be specified (or defaulted) at the top level for this JES to allow use at the exit point level.

NOAUTOINSTALL

If specified, user exits for this exit point found in JESPARMS will be ignored by OS/EM.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active JES2 EXIT6 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of JES2 EXIT6 user exits are to be activated. This can be specified at initialization, or later to load and activate JES2 EXIT6 user exits that were not activated at initialization. The exits will be called in the order listed.

lmod:exit1

lmod:exit2

lmod:exit3

The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.

This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

* An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

0 A zero (0) can be used to inactivate and delete a previously specified JES2 exit.

> **Note:** JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

NOBACKUP Specifies that any active backup user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup user exits are to be activated. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. The backup User exit modules will be called in the order listed.

lmod:exit1

lmod:exit2

lmod:exit3
The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.

> **Note:** This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

* An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

0 A zero (0) can be used to inactivate and delete a previously specified JES2 exit.

> **Note:** JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

ABENDNOTIFY
Specifies that when a JES2 EXIT5 Optional exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a JES2 EXIT5 Optional exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of JES2 EXIT5 Optional exit module ABENDs.

> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
> The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
> The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
> A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for JES2 EXIT6 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
> The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
> A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. Use this option with extreme caution.

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by JES2 user exit modules. A good return code allows subsequent JES2 user exit modules to be called. OS/EM provides a default list. For example, if a JES2 user exit for JES2 EXIT6 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules, that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

NODISABLERC turns off disable return code checking for the exit point.

rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. Use this option with extreme caution.

rc   Default return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

KEY   Specifies the storage key for this JES2 exit, this is provided for user exit modules that are reentrant in the JES2 sense. Also see IBM JES2 User Modifications and Macros for further detail.

Note: OS/EM recommends all JES2 exits be MVS reentrant and avoid using the KEY option.

0   Specifies the JES2 User exit user be loaded data into key 0 storage.

1   Specifies the JES2 User exit user will be loaded into key 1 storage.

JOBNAMELOC

jobnamelocspec

Specifies the location of the Jobname specified using TSO TEST addressing specification parameters. This parameter should be used with extreme caution as any miscalculation may not be pointing to the Jobname.

EXIT6 Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for JES2 EXIT6

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for JES2 EXIT6.

Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

FIRST

LAST   Specifies whether the optional OS/EM JCL Standards functions for JES2 EXIT6 will be applied before or after the user exits are invoked.

Note: OS/EM control functions are invoked FIRST by default.

ABENDNOTIFY

Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3

The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

JOBTIMEREQUIRED

Specifying this option requires all jobs entering the system to contain a job time parameter. If the time parameter is missing the job is flushed. This option takes precedence over the **INSERT** parameter below.

SETJOBTIME   Allows you to control by job class the insertion of a missing time parameter and/or override the time specified on the job card.

JOBCANCEL

Specifying **JOBCANCEL** causes jobs to be cancelled if the **MAXIMUM, NOLIMIT** or **HIGH** options are specified.

NOJOBCANCEL

This allows the jobs time option to be reset instead of the job being cancelled.

INSERT

If insert is specified and a jobcard does not have the time parameter coded, the job's time limit is set to match the time specified for that class in the JES2 initialization parameter for the jobclass the job is being submitted to.

jobclass

A list of execution Job classes to which the control definition is applied, TSU, TSO, and/or STC are valid entries. A colon (:) may be used to specify an inclusive range of classes. For example, A:Z may be entered to specify classes A through Z.

NOINSERT

If NOINSERT is specified, no time insertion occurs.

MAXIMUM

If MAXIMUM is specified and the jobcard has TIME=MAXIMUM coded, execution time is reset to match the time specified for that class in the JES2 initialization parameter for the jobclass the job is being submitted to. If JOBCANCEL is specified, the job will be cancelled.

jobclass

A list of execution Job classes to which the control definition is applied, TSU, TSO, and/or STC are valid entries. A colon (:) may be used to specify an inclusive range of classes. For example, A:Z may be entered to specify classes A through Z.

NOMAXIMUM

If NOMAXIMUM is specified, the MAXIMUM parameter is not reset.

NOLIMIT

If NOLIMIT is specified and the jobcard has TIME=NOLIMIT or TIME=1440 coded, execution time is reset to match the time specified for that class in the JES2 initialization parameter for the jobclass the job is being submitted to. If JOBCANCEL is specified, the job will be cancelled.

jobclass

A list of execution Job classes to which the control definition is applied, TSU, TSO, and/or STC are valid entries. A colon (:) may be used to specify an inclusive range of classes. For example, A:Z may be entered to specify classes A through Z.

NONOLIMIT

if NONOLIMIT is specified, than the time parameter is not reset.

HIGH

If HIGH is specified and the jobcard's time parameter is set higher than the time specified in JES2 for that class, the execution time is reset to match that specified in the JES2 initialization parameter for the jobclass the job is being submitted to. If JOBCANCEL is specified, the job will be cancelled.

jobclass

A list of execution Job classes to which the control definition is applied, TSU, TSO, and/or STC are valid entries. A colon (:) may be used to specify an inclusive range of classes. For example, A:Z may be entered to specify classes A through Z.

NOHIGH

If NOHIGH is specified, than this check is not performed.

LOW

If LOW is specified and the jobcard's time parameter is set lower than that specified in JES2, the execution time is reset to match the JES2 initialization parameter for the jobclass the job is being submitted to.

jobclass

A list of execution Job classes to which the control definition is applied, TSU, TSO, and/or STC are valid entries. A colon (:) may be used to specify an inclusive range of classes. For example, A:Z may be entered to specify classes A through Z.

NOLOW

If NOLOW is specified, than this check is not performed.

TSUACCT   Apply Account Number controls to TSO users.

NOTSUACCT   Account Number controls are only applied to batch jobs.

JCL   Activates the optional OS/EM JCL validation functions.

NOJCL   Specify the NO option to disable the JCL validation functions.

ACCT1

Specifies validation for the Account Number ACCT1

NOACCT1

Disables validation for the Account Number ACCT1

ALLOW

Specifies that a list of the Account Number ACCT1 values will be provided and the value of Account Number ACCT1 will be checked against the allowlist that follows.

If the value of Account Number ACCT1 is not found in the allowlist, then the OTHER option that is defined for Account Number ACCT1 will determine if the Account Number ACCT1 is allowed.

See the OTHER option for the Account Number ACCT1 for determining the action to be taken if the value of Account Number ACCT1 is not found.

allowlist
> A list of values of Account Number ACCT1 that are allowed

NOALLOW
Specifying NOALLOW disables a previously defined allowlist for the Account Number ACCT1

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW
> Specifies that a list of values of the Account Number ACCT1 will be provided and the value of Account Number ACCT1 will be checked against the disallowlist that follows.
>
> The value of Account Number ACCT1 is checked to verify that is not a value that is disallowed. If the value of Account Number ACCT1 is not found in the disallowlist, then the OTHER option that is defined for Account Number ACCT1 will determine if the value of Account Number ACCT1 is allowed.
>
> See the OTHER option for Account Number ACCT1 for determining the action to be taken if the value of Account Number ACCT1 is not found in the disallowlist.
>
> **disallowlist**
>> A list of values of the Account Number ACCT1 that are disallowed.

NODISALLOW
> Specifying NODISALLOW disables a previously defined disallowlist for the Account Number ACCT1

CHECK w/list
> Specifies that a list of values of Account Number ACCT1 will be provided and the value of Account Number ACCT1 will be checked against the checklist of values that follows.
>
> If the value of Account Number ACCT1 matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of Account Number ACCT1
>
> If the value of Account Number ACCT1 is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.
>
> If the value of Account Number ACCT1 is not defined in the checklist then the OTHER option that is defined for Account Number ACCT1 will determine if the value of Account Number ACCT1 is allowed. See the OTHER option for Account Number ACCT1 for determining the action to be taken if the value of Account Number ACCT1 is not found in the checklist.

checklist

> A optional list of values of Account Number ACCT1 that are resource checked against the External Security Manager.

CHECK wo/list

> If no checklist is provided than the value of Account Number ACCT1 is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of Account Number ACCT1 is not defined to the External Security Manager.

NOCHECK

> Specifying NOCHECK disables checking for either CHECK with a checklist or without for the Account Number ACCT1 values

> **Note:** To define the resource Account Number ACCT1 to the External Security Manager, the resource name is 'JCL.ACCT1.acct1' acct1 is the value for the Account Number ACCT1, using the FACILITY function for RACF and CA-ACF2 or the IBMFAC function for CA-TOPSECRET.

OTHER

> Specifies the action to be taken if a value of Account Number ACCT1 is not found in an allowlist, disallowlist, or a checklist.

> **ALLOW**
>
> > Specifies the the value of Account Number ACCT1 is allowed when it is not found in an allowlist, disallowlist, or a checklist.

> **DISALLOW**
>
> > Specifies the the value of Account Number ACCT1 is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

> **CHECK**
>
> > Specifies the the value of Account Number ACCT1 is checked against the External Security Manager to determine if the User has access to the resource 'JCL.ACCT1.acct1' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED

> Specifies the action to be taken if a value of Account Number ACCT1 is not defined to the External Security Manager when the CHECK option has been specified.

> **ALLOW**
>
> > Specifies the the value of Account Number ACCT1 is allowed when it is not defined to the External Security Manager.

> **DISALLOW**
>
> > Specifies the the value of Account Number ACCT1 is disallowed when it is not defined to the External Security Manager.

CHARACTER

> Specifies that the account number must match exactly.

NUMERIC

> Specifies that for a numeric account number, leading zeros are ignored.

ACCT2

> Specifies validation for the Account Number ACCT2

NOACCT2
> Disables validation for the Account Number ACCT2

ALLOW
>> Specifies that a list of the Account Number ACCT2 values will be provided and the value of Account Number ACCT2 will be checked against the allowlist that follows.
>>
>> If the value of Account Number ACCT2 is not found in the allowlist, then the OTHER option that is defined for Account Number ACCT2 will determine if the Account Number ACCT2 is allowed.
>>
>> See the OTHER option for the Account Number ACCT2 for determining the action to be taken if the value of Account Number ACCT2 is not found.

allowlist
>> A list of values of Account Number ACCT2 that are allowed

NOALLOW
>> Specifying NOALLOW disables a previously defined allowlist for the Account Number ACCT2
>>
>> **Note:** ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW
>> Specifies that a list of values of the Account Number ACCT2 will be provided and the value of Account Number ACCT2 will be checked against the disallowlist that follows.
>>
>> The value of Account Number ACCT2 is checked to verify that is not a value that is disallowed. If the value of Account Number ACCT2 is not found in the disallowlist, then the OTHER option that is defined for Account Number ACCT2 will determine if the value of Account Number ACCT2 is allowed.
>>
>> See the OTHER option for Account Number ACCT2 for determining the action to be taken if the value of Account Number ACCT2 is not found in the disallowlist.

disallowlist
>> A list of values of the Account Number ACCT2 that are disallowed.

NODISALLOW
>> Specifying NODISALLOW disables a previously defined disallowlist for the Account Number ACCT2

CHECK w/list
>> Specifies that a list of values of Account Number ACCT2 will be provided and the value of Account Number ACCT2 will be checked against the checklist of values that follows.
>>
>> If the value of Account Number ACCT2 matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of Account Number ACCT2
>>
>> If the value of Account Number ACCT2 is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of Account Number ACCT2 is not defined in the checklist then the OTHER option that is defined for Account Number ACCT2 will determine if the value of Account Number ACCT2 is allowed. See the OTHER option for Account Number ACCT2 for determining the action to be taken if the value of Account Number ACCT2 is not found in the checklist.

checklist

> A optional list of values of Account Number ACCT2 that are resource checked against the External Security Manager.

CHECK wo/list

If no checklist is provided than the value of Account Number ACCT2 is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of Account Number ACCT2 is not defined to the External Security Manager.

NOCHECK

Specifying NOCHECK disables checking for either CHECK with a checklist or without for the Account Number ACCT2 values

Note: To define the resource Account Number ACCT2 to the External Security Manager, the resource name is 'JCL.ACCT2.acct2' acct2 is the value for the Account Number ACCT2, using the FACILITY function for RACF and CA-ACF2 or the IBMFAC function for CA-TOPSECRET.

OTHER

Specifies the action to be taken if a value of Account Number ACCT2 is not found in an allowlist, disallowlist, or a checklist.

ALLOW

> Specifies the the value of Account Number ACCT2 is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW

> Specifies the the value of Account Number ACCT2 is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

> Specifies the the value of Account Number ACCT2 is checked against the External Security Manager to determine if the User has access to the resource 'JCL.ACCT2.acct2' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED

Specifies the action to be taken if a value of Account Number ACCT2 is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW

> Specifies the the value of Account Number ACCT2 is allowed when it is not defined to the External Security Manager.

DISALLOW

> Specifies the the value of Account Number ACCT2 is disallowed when it is not defined to the External Security Manager.

CHARACTER

Specifies that the account number must match exactly.

NUMERIC

> Specifies that for a numeric account number, leading zeros are ignored.

ACCT3

Specifies validation for the Account Number ACCT3

NOACCT3

Disables validation for the Account Number ACCT3

ALLOW

> Specifies that a list of the Account Number ACCT3 values will be provided and the value of Account Number ACCT3 will be checked against the allowlist that follows.
>
> If the value of Account Number ACCT3 is not found in the allowlist, then the OTHER option that is defined for Account Number ACCT3 will determine if the Account Number ACCT3 is allowed.
>
> See the OTHER option for the Account Number ACCT3 for determining the action to be taken if the value of Account Number ACCT3 is not found.

> **allowlist**
>> A list of values of Account Number ACCT3 that are allowed

NOALLOW

> Specifying NOALLOW disables a previously defined allowlist for the Account Number ACCT3
>
> **Note:** ALLOW|NOALLOW,   DISALLOW|NODISALLOW,   and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW

> Specifies that a list of values of the Account Number ACCT3 will be provided and the value of Account Number ACCT3 will be checked against the disallowlist that follows.
>
> The value of Account Number ACCT3 is checked to verify that is not a value that is disallowed. If the value of Account Number ACCT3 is not found in the disallowlist, then the OTHER option that is defined for Account Number ACCT3 will determine if the value of Account Number ACCT3 is allowed.
>
> See the OTHER option for Account Number ACCT3 for determining the action to be taken if the value of Account Number ACCT3 is not found in the disallowlist.

> **disallowlist**
>> A list of values of the Account Number ACCT3 that are disallowed.

NODISALLOW

> Specifying NODISALLOW disables a previously defined disallowlist for the Account Number ACCT3

CHECK w/list

> Specifies that a list of values of Account Number ACCT3 will be provided and the value of Account Number ACCT3 will be checked against the checklist of values that follows.
>
> If the value of Account Number ACCT3 matches a value in the checklist, then it is also checked against the External Security Man-

ager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of Account Number ACCT3

If the value of Account Number ACCT3 is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of Account Number ACCT3 is not defined in the checklist then the OTHER option that is defined for Account Number ACCT3 will determine if the value of Account Number ACCT3 is allowed. See the OTHER option for Account Number ACCT3 for determining the action to be taken if the value of Account Number ACCT3 is not found in the checklist.

checklist
> A optional list of values of Account Number ACCT3 that are resource checked against the External Security Manager.

CHECK wo/list
If no checklist is provided than the value of Account Number ACCT3 is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of Account Number ACCT3 is not defined to the External Security Manager.

NOCHECK
Specifying NOCHECK disables checking for either CHECK with a checklist or without for the Account Number ACCT3 values

Note: To define the resource Account Number ACCT3 to the External Security Manager, the resource name is 'JCL.ACCT3.acct3' acct3 is the value for the Account Number ACCT3, using the FACILITY function for RACF and CA-ACF2 or the IBMFAC function for CA-TOPSECRET.

OTHER
Specifies the action to be taken if a value of Account Number ACCT3 is not found in an allowlist, disallowlist, or a checklist.

ALLOW
> Specifies the the value of Account Number ACCT3 is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW
> Specifies the the value of Account Number ACCT3 is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK
> Specifies the the value of Account Number ACCT3 is checked against the External Security Manager to determine if the User has access to the resource 'JCL.ACCT3.acct3' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED
Specifies the action to be taken if a value of Account Number ACCT3 is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW

Specifies the the value of Account Number ACCT3 is allowed when it is not defined to the External Security Manager.

DISALLOW

Specifies the the value of Account Number ACCT3 is disallowed when it is not defined to the External Security Manager.

CHARACTER

Specifies that the account number must match exactly.

NUMERIC

Specifies that for a numeric account number, leading zeros are ignored.

ACCT4

Specifies validation for the Account Number ACCT4

NOACCT4

Disables validation for the Account Number ACCT4

ALLOW

Specifies that a list of the Account Number ACCT4 values will be provided and the value of Account Number ACCT4 will be checked against the allowlist that follows.

If the value of Account Number ACCT4 is not found in the allowlist, then the OTHER option that is defined for Account Number ACCT4 will determine if the Account Number ACCT4 is allowed.

See the OTHER option for the Account Number ACCT4 for determining the action to be taken if the value of Account Number ACCT4 is not found.

allowlist

A list of values of Account Number ACCT4 that are allowed

NOALLOW

Specifying NOALLOW disables a previously defined allowlist for the Account Number ACCT4

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW

Specifies that a list of values of the Account Number ACCT4 will be provided and the value of Account Number ACCT4 will be checked against the disallowlist that follows.

The value of Account Number ACCT4 is checked to verify that is not a value that is disallowed. If the value of Account Number ACCT4 is not found in the disallowlist, then the OTHER option that is defined for Account Number ACCT4 will determine if the value of Account Number ACCT4 is allowed.

See the OTHER option for Account Number ACCT4 for determining the action to be taken if the value of Account Number ACCT4 is not found in the disallowlist.

disallowlist

A list of values of the Account Number ACCT4 that are disallowed.

NODISALLOW

Specifying NODISALLOW disables a previously defined disallowlist for the Account Number ACCT4

CHECK w/list

Specifies that a list of values of Account Number ACCT4 will be provided and the value of Account Number ACCT4 will be checked against the checklist of values that follows.

If the value of Account Number ACCT4 matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of Account Number ACCT4

If the value of Account Number ACCT4 is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of Account Number ACCT4 is not defined in the checklist then the OTHER option that is defined for Account Number ACCT4 will determine if the value of Account Number ACCT4 is allowed. See the OTHER option for Account Number ACCT4 for determining the action to be taken if the value of Account Number ACCT4 is not found in the checklist.

checklist

A optional list of values of Account Number ACCT4 that are resource checked against the External Security Manager.

CHECK wo/list

If no checklist is provided than the value of Account Number ACCT4 is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of Account Number ACCT4 is not defined to the External Security Manager.

NOCHECK

Specifying NOCHECK disables checking for either CHECK with a checklist or without for the Account Number ACCT4 values

Note: To define the resource Account Number ACCT4 to the External Security Manager, the resource name is 'JCL.ACCT4.acct4' acct4 is the value for the Account Number ACCT4, using the FACILITY function for RACF and CA-ACF2 or the IBMFAC function for CA-TOPSECRET.

OTHER

Specifies the action to be taken if a value of Account Number ACCT4 is not found in an allowlist, disallowlist, or a checklist.

ALLOW

Specifies the the value of Account Number ACCT4 is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW

Specifies the the value of Account Number ACCT4 is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

Specifies the the value of Account Number ACCT4 is checked

against the External Security Manager to determine if the User has access to the resource 'JCL.ACCT4.acct4' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED
Specifies the action to be taken if a value of Account Number ACCT4 is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW
Specifies the the value of Account Number ACCT4 is allowed when it is not defined to the External Security Manager.

DISALLOW
Specifies the the value of Account Number ACCT4 is disallowed when it is not defined to the External Security Manager.

CHARACTER
Specifies that the account number must match exactly.

NUMERIC
Specifies that for a numeric account number, leading zeros are ignored.

ACCT5
Specifies validation for the Account Number ACCT5

NOACCT5
Disables validation for the Account Number ACCT5

ALLOW
Specifies that a list of the Account Number ACCT5 values will be provided and the value of Account Number ACCT5 will be checked against the allowlist that follows.

If the value of Account Number ACCT5 is not found in the allowlist, then the OTHER option that is defined for Account Number ACCT5 will determine if the Account Number ACCT5 is allowed.

See the OTHER option for the Account Number ACCT5 for determining the action to be taken if the value of Account Number ACCT5 is not found.

allowlist
A list of values of Account Number ACCT5 that are allowed

NOALLOW
Specifying NOALLOW disables a previously defined allowlist for the Account Number ACCT5

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW
Specifies that a list of values of the Account Number ACCT5 will be provided and the value of Account Number ACCT5 will be checked against the disallowlist that follows.

The value of Account Number ACCT5 is checked to verify that is not a value that is disallowed. If the value of Account Number ACCT5 is not found in the disallowlist, then the OTHER option that is defined for Account Number ACCT5 will determine if the value of Account Number ACCT5 is allowed.

See the OTHER option for Account Number ACCT5 for determining the action to be taken if the value of Account Number ACCT5 is not found in the disallowlist.

disallowlist
> A list of values of the Account Number ACCT5 that are disallowed.

NODISALLOW
Specifying NODISALLOW disables a previously defined disallowlist for the Account Number ACCT5

CHECK w/list
Specifies that a list of values of Account Number ACCT5 will be provided and the value of Account Number ACCT5 will be checked against the checklist of values that follows.

If the value of Account Number ACCT5 matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of Account Number ACCT5

If the value of Account Number ACCT5 is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of Account Number ACCT5 is not defined in the checklist then the OTHER option that is defined for Account Number ACCT5 will determine if the value of Account Number ACCT5 is allowed. See the OTHER option for Account Number ACCT5 for determining the action to be taken if the value of Account Number ACCT5 is not found in the checklist.

checklist
> A optional list of values of Account Number ACCT5 that are resource checked against the External Security Manager.

CHECK wo/list
If no checklist is provided than the value of Account Number ACCT5 is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of Account Number ACCT5 is not defined to the External Security Manager.

NOCHECK
Specifying NOCHECK disables checking for either CHECK with a checklist or without for the Account Number ACCT5 values

Note: To define the resource Account Number ACCT5 to the External Security Manager, the resource name is 'JCL.ACCT5.acct5' acct5 is the value for the Account Number ACCT5, using the FACILITY function for RACF and CA-ACF2 or the IBMFAC function for CA-TOPSECRET.

OTHER
Specifies the action to be taken if a value of Account Number ACCT5 is not found in an allowlist, disallowlist, or a checklist.

ALLOW
> Specifies the the value of Account Number ACCT5 is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW

Specifies the the value of Account Number ACCT5 is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

Specifies the the value of Account Number ACCT5 is checked against the External Security Manager to determine if the User has access to the resource 'JCL.ACCT5.acct5' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED

Specifies the action to be taken if a value of Account Number ACCT5 is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW

Specifies the the value of Account Number ACCT5 is allowed when it is not defined to the External Security Manager.

DISALLOW

Specifies the the value of Account Number ACCT5 is disallowed when it is not defined to the External Security Manager.

CHARACTER

Specifies that the account number must match exactly.

NUMERIC

Specifies that for a numeric account number, leading zeros are ignored.

ACCT6

Specifies validation for the Account Number ACCT6

NOACCT6

Disables validation for the Account Number ACCT6

ALLOW

Specifies that a list of the Account Number ACCT6 values will be provided and the value of Account Number ACCT6 will be checked against the allowlist that follows.

If the value of Account Number ACCT6 is not found in the allowlist, then the OTHER option that is defined for Account Number ACCT6 will determine if the Account Number ACCT6 is allowed.

See the OTHER option for the Account Number ACCT6 for determining the action to be taken if the value of Account Number ACCT6 is not found.

allowlist

A list of values of Account Number ACCT6 that are allowed

NOALLOW

Specifying NOALLOW disables a previously defined allowlist for the Account Number ACCT6

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW

Specifies that a list of values of the Account Number ACCT6 will

be provided and the value of Account Number ACCT6 will be checked against the disallowlist that follows.

The value of Account Number ACCT6 is checked to verify that is not a value that is disallowed. If the value of Account Number ACCT6 is not found in the disallowlist, then the OTHER option that is defined for Account Number ACCT6 will determine if the value of Account Number ACCT6 is allowed.

See the OTHER option for Account Number ACCT6 for determining the action to be taken if the value of Account Number ACCT6 is not found in the disallowlist.

disallowlist
> A list of values of the Account Number ACCT6 that are disallowed.

NODISALLOW
Specifying NODISALLOW disables a previously defined disallowlist for the Account Number ACCT6

CHECK w/list
Specifies that a list of values of Account Number ACCT6 will be provided and the value of Account Number ACCT6 will be checked against the checklist of values that follows.

If the value of Account Number ACCT6 matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of Account Number ACCT6

If the value of Account Number ACCT6 is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of Account Number ACCT6 is not defined in the checklist then the OTHER option that is defined for Account Number ACCT6 will determine if the value of Account Number ACCT6 is allowed. See the OTHER option for Account Number ACCT6 for determining the action to be taken if the value of Account Number ACCT6 is not found in the checklist.

checklist
> A optional list of values of Account Number ACCT6 that are resource checked against the External Security Manager.

CHECK wo/list
If no checklist is provided than the value of Account Number ACCT6 is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of Account Number ACCT6 is not defined to the External Security Manager.

NOCHECK
Specifying NOCHECK disables checking for either CHECK with a checklist or without for the Account Number ACCT6 values

Note: To define the resource Account Number ACCT6 to the External Security Manager, the resource name is 'JCL.ACCT6.acct6' acct6 is the value for the Account Number ACCT6, using the FA-

CILITY function for RACF and CA-ACF2 or the IBMFAC function for CA-TOPSECRET.

OTHER
Specifies the action to be taken if a value of Account Number ACCT6 is not found in an allowlist, disallowlist, or a checklist.

ALLOW
Specifies the the value of Account Number ACCT6 is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW
Specifies the the value of Account Number ACCT6 is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK
Specifies the the value of Account Number ACCT6 is checked against the External Security Manager to determine if the User has access to the resource 'JCL.ACCT6.acct6' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED
Specifies the action to be taken if a value of Account Number ACCT6 is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW
Specifies the the value of Account Number ACCT6 is allowed when it is not defined to the External Security Manager.

DISALLOW
Specifies the the value of Account Number ACCT6 is disallowed when it is not defined to the External Security Manager.

CHARACTER
Specifies that the account number must match exactly.

NUMERIC
Specifies that for a numeric account number, leading zeros are ignored.

ADDRSPC
Specifies validation for the JCL parameter ADDRSPC

NOADDRSPC
Disables validation for the JCL parameter ADDRSPC

ALLOW
Specifies that a list of the JCL parameter ADDRSPC values will be provided and the value of JCL parameter ADDRSPC will be checked against the allowlist that follows.

If the value of JCL parameter ADDRSPC is not found in the allowlist, then the OTHER option that is defined for JCL parameter ADDRSPC will determine if the JCL parameter ADDRSPC is allowed.

See the OTHER option for the JCL parameter ADDRSPC for determining the action to be taken if the value of JCL parameter ADDRSPC is not found.

NOALLOW

Specifying NOALLOW disables a previously defined allowlist for the JCL parameter ADDRSPC

allowlist

A list of values of JCL parameter ADDRSPC that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW

Specifies that a list of values of the JCL parameter ADDRSPC will be provided and the value of JCL parameter ADDRSPC will be checked against the disallowlist that follows.

The value of JCL parameter ADDRSPC is checked to verify that it is not a value that is disallowed. If the value of JCL parameter ADDRSPC is not found in the disallowlist, then the OTHER option that is defined for JCL parameter ADDRSPC will determine if the value of JCL parameter ADDRSPC is allowed.

See the OTHER option for JCL parameter ADDRSPC for determining the action to be taken if the value of JCL parameter ADDRSPC is not found in the disallowlist.

NODISALLOW

Specifying NODISALLOW disables a previously defined disallowlist for the JCL parameter ADDRSPC

disallowlist

A list of values of the JCL parameter ADDRSPC that are disallowed.

CHECK w/list

Specifies that a list of values of JCL parameter ADDRSPC will be provided and the value of JCL parameter ADDRSPC will be checked against the checklist of values that follows.

If the value of JCL parameter ADDRSPC matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of JCL parameter ADDRSPC.

If the value of JCL parameter ADDRSPC is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of JCL parameter ADDRSPC is not defined in the checklist then the OTHER option that is defined for JCL parameter ADDRSPC will determine if the value of JCL parameter ADDRSPC is allowed.

See the OTHER option for JCL parameter ADDRSPC for determining the action to be taken if the value of JCL parameter ADDRSPC is not found in the checklist.

CHECK wo/list

If no checklist is provided than the value of JCL parameter ADDRSPC is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of JCL parameter ADDRSPC is not defined to the External Security Manager.

NOCHECK

Specifying NOCHECK disables checking for either CHECK with a checklist or without for the JCL parameter ADDRSPC values.

checklist

A optional list of values of JCL parameter ADDRSPC that are resource checked against the External Security Manager.

Note: To define the resource JCL parameter ADDRSPC to the External Security Manager, the resource name is 'JCL.ADDRSPC.addrspc' where addrspc is the value for the JCL parameter ADDRSPC, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER

Specifies the action to be taken if a value of JCL parameter ADDRSPC is not found in an allowlist, disallowlist, or a checklist.

ALLOW

Specifies the the value of JCL parameter ADDRSPC is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW

Specifies the the value of JCL parameter ADDRSPC is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

Specifies the the value of JCL parameter ADDRSPC is checked against the External Security Manager to determine if the User has access to the resource 'JCL.ADDRSPC.addrspc' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED

Specifies the action to be taken if a value of JCL parameter ADDRSPC is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW

Specifies the the value of JCL parameter ADDRSPC is allowed when it is not defined to the External Security Manager.

DISALLOW

Specifies the the value of JCL parameter ADDRSPC is disallowed when it is not defined to the External Security Manager.

DATACLASS

Specifies validation for the DFSMS JCL parameter DATACLASS

NODATACLASS

Disables validation for the DFSMS JCL parameter DATACLASS

ALLOW

Specifies that a list of the DFSMS JCL parameter DATACLASS values will be provided and the value of DFSMS JCL parameter DATACLASS will be checked against the allowlist that follows.

If the value of DFSMS JCL parameter DATACLASS is not found in the allowlist, then the OTHER option that is defined for DFSMS JCL parameter DATACLASS will determine if the DFSMS JCL parameter DATACLASS is allowed.

See the OTHER option for the DFSMS JCL parameter DATACLASS for determining the action to be taken if the value of DFSMS JCL parameter DATACLASS is not found.

NOALLOW

Specifying NOALLOW disables a previously defined allowlist for the DFSMS JCL parameter DATACLASS

allowlist

A list of values of DFSMS JCL parameter DATACLASS that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW

Specifies that a list of values of the DFSMS JCL parameter DATACLASS will be provided and the value of DFSMS JCL parameter DATACLASS will be checked against the disallowlist that follows.

The value of DFSMS JCL parameter DATACLASS is checked to verify that it is not a value that is disallowed. If the value of DFSMS JCL parameter DATACLASS is not found in the disallowlist, then the OTHER option that is defined for DFSMS JCL parameter DATACLASS will determine if the value of DFSMS JCL parameter DATACLASS is allowed.

See the OTHER option for DFSMS JCL parameter DATACLASS for determining the action to be taken if the value of DFSMS JCL parameter DATACLASS is not found in the disallowlist.

NODISALLOW

Specifying NODISALLOW disables a previously defined disallowlist for the DFSMS JCL parameter DATACLASS

disallowlist

A list of values of the DFSMS JCL parameter DATACLASS that are disallowed.

CHECK w/list

Specifies that a list of values of DFSMS JCL parameter DATACLASS will be provided and the value of DFSMS JCL parameter DATACLASS will be checked against the checklist of values that follows.

If the value of DFSMS JCL parameter DATACLASS matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of DFSMS JCL parameter DATACLASS.

If the value of DFSMS JCL parameter DATACLASS is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of DFSMS JCL parameter DATACLASS is not defined in the checklist then the OTHER option that is defined for DFSMS JCL parameter DATACLASS will determine if the value of DFSMS JCL parameter DATACLASS is allowed.

See the OTHER option for DFSMS JCL parameter DATACLASS for determining the action to be taken if the value of DFSMS JCL parameter DATACLASS is not found in the checklist.

CHECK wo/list

If no checklist is provided than the value of DFSMS JCL parameter DATACLASS is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of DFSMS JCL parameter DATACLASS is not defined to the External Security Manager.

NOCHECK

Specifying NOCHECK disables checking for either CHECK with a checklist or without for the DFSMS JCL parameter DATACLASS values.

checklist

A optional list of values of DFSMS JCL parameter DATACLASS that are resource checked against the External Security Manager.

Note: To define the resource DFSMS JCL parameter DATACLASS to the External Security Manager, the resource name is 'JCL.DATACLASS.dataclass' where dataclass is the value for the DFSMS JCL parameter DATACLASS, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER

Specifies the action to be taken if a value of DFSMS JCL parameter DATACLASS is not found in an allowlist, disallowlist, or a checklist.

ALLOW

Specifies the the value of DFSMS JCL parameter DATACLASS is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW

Specifies the the value of DFSMS JCL parameter DATACLASS is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

Specifies the the value of DFSMS JCL parameter DATACLASS is checked against the External Security Manager to determine if the User has access to the resource 'JCL.DATACLASS.dataclass' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED

Specifies the action to be taken if a value of DFSMS JCL parameter DATACLASS is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW

Specifies the the value of DFSMS JCL parameter DATACLASS is allowed when it is not defined to the External Security Manager.

DISALLOW

Specifies the the value of DFSMS JCL parameter DATACLASS is disallowed when it is not defined to the External Security Manager.

DDNAMES

Specifies validation for the specific (i.e. STEPCAT, JOBCAT) DDNAMES

NODDNAMES

Disables validation for the specific (i.e. STEPCAT, JOBCAT) DDNAMES

ALLOW

Specifies that a list of the specific (i.e. STEPCAT, JOBCAT) DDNAMES

values will be provided and the value of specific (i.e. STEPCAT, JOBCAT) DDNAMES will be checked against the allowlist that follows.

If the value of specific (i.e. STEPCAT, JOBCAT) DDNAMES is not found in the allowlist, then the OTHER option that is defined for specific (i.e. STEPCAT, JOBCAT) DDNAMES will determine if the specific (i.e. STEPCAT, JOBCAT) DDNAMES is allowed.

See the OTHER option for the specific (i.e. STEPCAT, JOBCAT) DDNAMES for determining the action to be taken if the value of specific (i.e. STEPCAT, JOBCAT) DDNAMES is not found.

NOALLOW

Specifying NOALLOW disables a previously defined allowlist for the specific (i.e. STEPCAT, JOBCAT) DDNAMES

allowlist

A list of values of specific (i.e. STEPCAT, JOBCAT) DDNAMES that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW

Specifies that a list of values of the specific (i.e. STEPCAT, JOBCAT) DDNAMES will be provided and the value of specific (i.e. STEPCAT, JOBCAT) DDNAMES will be checked against the disallowlist that follows.

The value of specific (i.e. STEPCAT, JOBCAT) DDNAMES is checked to verify that it is not a value that is disallowed. If the value of specific (i.e. STEPCAT, JOBCAT) DDNAMES is not found in the disallowlist, then the OTHER option that is defined for specific (i.e. STEPCAT, JOBCAT) DDNAMES will determine if the value of specific (i.e. STEPCAT, JOBCAT) DDNAMES is allowed.

See the OTHER option for specific (i.e. STEPCAT, JOBCAT) DDNAMES for determining the action to be taken if the value of specific (i.e. STEPCAT, JOBCAT) DDNAMES is not found in the disallowlist.

NODISALLOW

Specifying NODISALLOW disables a previously defined disallowlist for the specific (i.e. STEPCAT, JOBCAT) DDNAMES

disallowlist

A list of values of the specific (i.e. STEPCAT, JOBCAT) DDNAMES that are disallowed.

CHECK w/list

Specifies that a list of values of specific (i.e. STEPCAT, JOBCAT) DDNAMES will be provided and the value of specific (i.e. STEPCAT, JOBCAT) DDNAMES will be checked against the checklist of values that follows.

If the value of specific (i.e. STEPCAT, JOBCAT) DDNAMES matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of specific (i.e. STEPCAT, JOBCAT) DDNAMES.

If the value of specific (i.e. STEPCAT, JOBCAT) DDNAMES is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of specific (i.e. STEPCAT, JOBCAT) DDNAMES is not defined in the checklist then the OTHER option that is defined for specific (i.e. STEPCAT, JOBCAT) DDNAMES will determine if the value of specific (i.e. STEPCAT, JOBCAT) DDNAMES is allowed.

See the OTHER option for specific (i.e. STEPCAT, JOBCAT) DDNAMES for determining the action to be taken if the value of specific (i.e. STEPCAT, JOBCAT) DDNAMES is not found in the checklist.

CHECK wo/list

If no checklist is provided than the value of specific (i.e. STEPCAT, JOBCAT) DDNAMES is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of specific (i.e. STEPCAT, JOBCAT) DDNAMES is not defined to the External Security Manager.

NOCHECK

Specifying NOCHECK disables checking for either CHECK with a checklist or without for the specific (i.e. STEPCAT, JOBCAT) DDNAMES values.

checklist

A optional list of values of specific (i.e. STEPCAT, JOBCAT) DDNAMES that are resource checked against the External Security Manager.

Note: To define the resource specific (i.e. STEPCAT, JOBCAT) DDNAMES to the External Security Manager, the resource name is 'JCL.DDNAMES.ddname' where ddname is the value for the specific (i.e. STEPCAT, JOBCAT) DDNAMES, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER

Specifies the action to be taken if a value of specific (i.e. STEPCAT, JOBCAT) DDNAMES is not found in an allowlist, disallowlist, or a checklist.

ALLOW

Specifies the the value of specific (i.e. STEPCAT, JOBCAT) DDNAMES is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW

Specifies the the value of specific (i.e. STEPCAT, JOBCAT) DDNAMES is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

Specifies the the value of specific (i.e. STEPCAT, JOBCAT) DDNAMES is checked against the External Security Manager to determine if the User has access to the resource 'JCL.DDNAMES.ddname' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED

Specifies the action to be taken if a value of specific (i.e. STEPCAT, JOBCAT) DDNAMES is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW

Specifies the the value of specific (i.e. STEPCAT, JOBCAT)

DDNAMES is allowed when it is not defined to the External Security Manager.

DISALLOW
Specifies the the value of specific (i.e. STEPCAT, JOBCAT) DDNAMES is disallowed when it is not defined to the External Security Manager.

DPRTY
Specifies validation for the JCL parameter DPRTY

NODPRTY
Disables validation for the JCL parameter DPRTY

ALLOW
Specifies that a list of the JCL parameter DPRTY values will be provided and the value of JCL parameter DPRTY will be checked against the allowlist that follows.

If the value of JCL parameter DPRTY is not found in the allowlist, then the OTHER option that is defined for JCL parameter DPRTY will determine if the JCL parameter DPRTY is allowed.

See the OTHER option for the JCL parameter DPRTY for determining the action to be taken if the value of JCL parameter DPRTY is not found.

NOALLOW
Specifying NOALLOW disables a previously defined allowlist for the JCL parameter DPRTY

allowlist
A list of values of JCL parameter DPRTY that are allowed

Note: ALLOW|NOALLOW,   DISALLOW|NODISALLOW,   and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW
Specifies that a list of values of the JCL parameter DPRTY will be provided and the value of JCL parameter DPRTY will be checked against the disallowlist that follows.

The value of JCL parameter DPRTY is checked to verify that it is not a value that is disallowed. If the value of JCL parameter DPRTY is not found in the disallowlist, then the OTHER option that is defined for JCL parameter DPRTY will determine if the value of JCL parameter DPRTY is allowed.

See the OTHER option for JCL parameter DPRTY for determining the action to be taken if the value of JCL parameter DPRTY is not found in the disallowlist.

NODISALLOW
Specifying NODISALLOW disables a previously defined disallowlist for the JCL parameter DPRTY

disallowlist
A list of values of the JCL parameter DPRTY that are disallowed.

CHECK w/list
Specifies that a list of values of JCL parameter DPRTY will be provided and the value of JCL parameter DPRTY will be checked against the checklist of values that follows.

If the value of JCL parameter DPRTY matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of JCL parameter DPRTY.

If the value of JCL parameter DPRTY is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of JCL parameter DPRTY is not defined in the checklist then the OTHER option that is defined for JCL parameter DPRTY will determine if the value of JCL parameter DPRTY is allowed.

See the OTHER option for JCL parameter DPRTY for determining the action to be taken if the value of JCL parameter DPRTY is not found in the checklist.

CHECK wo/list

If no checklist is provided than the value of JCL parameter DPRTY is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of JCL parameter DPRTY is not defined to the External Security Manager.

NOCHECK

Specifying NOCHECK disables checking for either CHECK with a checklist or without for the JCL parameter DPRTY values.

checklist

A optional list of values of JCL parameter DPRTY that are resource checked against the External Security Manager.

Note: To define the resource JCL parameter DPRTY to the External Security Manager, the resource name is 'JCL.DPRTY.dprty' where dprty is the value for the JCL parameter DPRTY, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER

Specifies the action to be taken if a value of JCL parameter DPRTY is not found in an allowlist, disallowlist, or a checklist.

ALLOW

Specifies the the value of JCL parameter DPRTY is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW

Specifies the the value of JCL parameter DPRTY is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

Specifies the value of JCL parameter DPRTY is checked against the External Security Manager to determine if the User has access to the resource 'JCL.DPRTY.dprty' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED

Specifies the action to be taken if a value of JCL parameter DPRTY is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW

Specifies the the value of JCL parameter DPRTY is allowed when it is not defined to the External Security Manager.

DISALLOW
> Specifies the the value of JCL parameter DPRTY is disallowed when it is not defined to the External Security Manager.

MGMTCLASS
Specifies validation for the DFSMS JCL parameter MGMTCLASS

NOMGMTCLASS
Disables validation for the DFSMS JCL parameter MGMTCLASS

ALLOW
> Specifies that a list of the DFSMS JCL parameter MGMTCLASS values will be provided and the value of DFSMS JCL parameter MGMTCLASS will be checked against the allowlist that follows.
>
> If the value of DFSMS JCL parameter MGMTCLASS is not found in the allowlist, then the OTHER option that is defined for DFSMS JCL parameter MGMTCLASS will determine if the DFSMS JCL parameter MGMTCLASS is allowed.
>
> See the OTHER option for the DFSMS JCL parameter MGMTCLASS for determining the action to be taken if the value of DFSMS JCL parameter MGMTCLASS is not found.

NOALLOW
> Specifying NOALLOW disables a previously defined allowlist for the DFSMS JCL parameter MGMTCLASS

allowlist
> A list of values of DFSMS JCL parameter MGMTCLASS that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW
> Specifies that a list of values of the DFSMS JCL parameter MGMTCLASS will be provided and the value of DFSMS JCL parameter MGMTCLASS will be checked against the disallowlist that follows.
>
> The value of DFSMS JCL parameter MGMTCLASS is checked to verify that it is not a value that is disallowed. If the value of DFSMS JCL parameter MGMTCLASS is not found in the disallowlist, then the OTHER option that is defined for DFSMS JCL parameter MGMTCLASS will determine if the value of DFSMS JCL parameter MGMTCLASS is allowed.
>
> See the OTHER option for DFSMS JCL parameter MGMTCLASS for determining the action to be taken if the value of DFSMS JCL parameter MGMTCLASS is not found in the disallowlist.

NODISALLOW
> Specifying NODISALLOW disables a previously defined disallowlist for the DFSMS JCL parameter MGMTCLASS

disallowlist
> A list of values of the DFSMS JCL parameter MGMTCLASS that are disallowed.

CHECK w/list
> Specifies that a list of values of DFSMS JCL parameter MGMTCLASS will be provided and the value of DFSMS JCL parameter MGMTCLASS will be checked against the checklist of values that follows.

If the value of DFSMS JCL parameter MGMTCLASS matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of DFSMS JCL parameter MGMTCLASS.

If the value of DFSMS JCL parameter MGMTCLASS is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of DFSMS JCL parameter MGMTCLASS is not defined in the checklist then the OTHER option that is defined for DFSMS JCL parameter MGMTCLASS will determine if the value of DFSMS JCL parameter MGMTCLASS is allowed.

See the OTHER option for DFSMS JCL parameter MGMTCLASS for determining the action to be taken if the value of DFSMS JCL parameter MGMTCLASS is not found in the checklist.

CHECK wo/list

If no checklist is provided than the value of DFSMS JCL parameter MGMTCLASS is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of DFSMS JCL parameter MGMTCLASS is not defined to the External Security Manager.

NOCHECK

Specifying NOCHECK disables checking for either CHECK with a checklist or without for the DFSMS JCL parameter MGMTCLASS values.

checklist

A optional list of values of DFSMS JCL parameter MGMTCLASS that are resource checked against the External Security Manager.

Note: To define the resource DFSMS JCL parameter MGMTCLASS to the External Security Manager, the resource name is 'JCL.MGMTCLASS.mgmtclass' where mgmtclass is the value for the DFSMS JCL parameter MGMTCLASS, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER

Specifies the action to be taken if a value of DFSMS JCL parameter MGMTCLASS is not found in an allowlist, disallowlist, or a checklist.

ALLOW

Specifies the the value of DFSMS JCL parameter MGMTCLASS is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW

Specifies the the value of DFSMS JCL parameter MGMTCLASS is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

Specifies the the value of DFSMS JCL parameter MGMTCLASS is checked against the External Security Manager to determine if the User has access to the resource 'JCL.MGMTCLASS.mgmtclass' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED

Specifies the action to be taken if a value of DFSMS JCL parameter

MGMTCLASS is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW
>Specifies the the value of DFSMS JCL parameter MGMTCLASS is allowed when it is not defined to the External Security Manager.

DISALLOW
>Specifies the the value of DFSMS JCL parameter MGMTCLASS is disallowed when it is not defined to the External Security Manager.

MSGCLASS
Specifies validation for the JCL parameter MSGCLASS

NOMSGCLASS
Disables validation for the JCL parameter MSGCLASS

ALLOW
>Specifies that a list of the JCL parameter MSGCLASS values will be provided and the value of JCL parameter MSGCLASS will be checked against the allowlist that follows.
>
>If the value of JCL parameter MSGCLASS is not found in the allowlist, then the OTHER option that is defined for JCL parameter MSGCLASS will determine if the JCL parameter MSGCLASS is allowed.
>
>See the OTHER option for the JCL parameter MSGCLASS for determining the action to be taken if the value of JCL parameter MSGCLASS is not found.

NOALLOW
>Specifying NOALLOW disables a previously defined allowlist for the JCL parameter MSGCLASS

>**allowlist**
>>A list of values of JCL parameter MSGCLASS that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW
>Specifies that a list of values of the JCL parameter MSGCLASS will be provided and the value of JCL parameter MSGCLASS will be checked against the disallowlist that follows.
>
>The value of JCL parameter MSGCLASS is checked to verify that it is not a value that is disallowed. If the value of JCL parameter MSGCLASS is not found in the disallowlist, then the OTHER option that is defined for JCL parameter MSGCLASS will determine if the value of JCL parameter MSGCLASS is allowed.
>
>See the OTHER option for JCL parameter MSGCLASS for determining the action to be taken if the value of JCL parameter MSGCLASS is not found in the disallowlist.

NODISALLOW
>Specifying NODISALLOW disables a previously defined disallowlist for the JCL parameter MSGCLASS

>**disallowlist**
>>A list of values of the JCL parameter MSGCLASS that are disallowed.

CHECK w/list

Specifies that a list of values of JCL parameter MSGCLASS will be provided and the value of JCL parameter MSGCLASS will be checked against the checklist of values that follows.

If the value of JCL parameter MSGCLASS matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of JCL parameter MSGCLASS.

If the value of JCL parameter MSGCLASS is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of JCL parameter MSGCLASS is not defined in the checklist then the OTHER option that is defined for JCL parameter MSGCLASS will determine if the value of JCL parameter MSGCLASS is allowed.

See the OTHER option for JCL parameter MSGCLASS for determining the action to be taken if the value of JCL parameter MSGCLASS is not found in the checklist.

CHECK wo/list

If no checklist is provided than the value of JCL parameter MSGCLASS is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of JCL parameter MSGCLASS is not defined to the External Security Manager.

NOCHECK

Specifying NOCHECK disables checking for either CHECK with a checklist or without for the JCL parameter MSGCLASS values.

checklist

A optional list of values of JCL parameter MSGCLASS that are resource checked against the External Security Manager.

Note: To define the resource JCL parameter MSGCLASS to the External Security Manager, the resource name is 'JCL.MSGCLASS.msgclass' where msgclass is the value for the JCL parameter MSGCLASS, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER

Specifies the action to be taken if a value of JCL parameter MSGCLASS is not found in an allowlist, disallowlist, or a checklist.

ALLOW

Specifies the the value of JCL parameter MSGCLASS is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW

Specifies the the value of JCL parameter MSGCLASS is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

Specifies the the value of JCL parameter MSGCLASS is checked against the External Security Manager to determine if the User has access to the resource 'JCL.MSGCLASS.msgclass' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED

Specifies the action to be taken if a value of JCL parameter MSGCLASS

is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW
> Specifies the the value of JCL parameter MSGCLASS is allowed when it is not defined to the External Security Manager.

DISALLOW
> Specifies the the value of JCL parameter MSGCLASS is disallowed when it is not defined to the External Security Manager.

PROTECT
Specifies validation for the JCL parameter PROTECT

NOPROTECT
Disables validation for the JCL parameter PROTECT

ALLOW
> Specifies that a list of the JCL parameter PROTECT values will be provided and the value of JCL parameter PROTECT will be checked against the allowlist that follows.
>
> If the value of JCL parameter PROTECT is not found in the allowlist, then the OTHER option that is defined for JCL parameter PROTECT will determine if the JCL parameter PROTECT is allowed.
>
> See the OTHER option for the JCL parameter PROTECT for determining the action to be taken if the value of JCL parameter PROTECT is not found.

NOALLOW
> Specifying NOALLOW disables a previously defined allowlist for the JCL parameter PROTECT

allowlist
> A list of values of JCL parameter PROTECT that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW
> Specifies that a list of values of the JCL parameter PROTECT will be provided and the value of JCL parameter PROTECT will be checked against the disallowlist that follows.
>
> The value of JCL parameter PROTECT is checked to verify that it is not a value that is disallowed. If the value of JCL parameter PROTECT is not found in the disallowlist, then the OTHER option that is defined for JCL parameter PROTECT will determine if the value of JCL parameter PROTECT is allowed.
>
> See the OTHER option for JCL parameter PROTECT for determining the action to be taken if the value of JCL parameter PROTECT is not found in the disallowlist.

NODISALLOW
> Specifying NODISALLOW disables a previously defined disallowlist for the JCL parameter PROTECT

disallowlist
> A list of values of the JCL parameter PROTECT that are disallowed.

CHECK w/list

Specifies that a list of values of JCL parameter PROTECT will be provided and the value of JCL parameter PROTECT will be checked against the checklist of values that follows.

If the value of JCL parameter PROTECT matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of JCL parameter PROTECT.

If the value of JCL parameter PROTECT is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of JCL parameter PROTECT is not defined in the checklist then the OTHER option that is defined for JCL parameter PROTECT will determine if the value of JCL parameter PROTECT is allowed.

See the OTHER option for JCL parameter PROTECT for determining the action to be taken if the value of JCL parameter PROTECT is not found in the checklist.

CHECK wo/list

If no checklist is provided than the value of JCL parameter PROTECT is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of JCL parameter PROTECT is not defined to the External Security Manager.

NOCHECK

Specifying NOCHECK disables checking for either CHECK with a checklist or without for the JCL parameter PROTECT values.

checklist

A optional list of values of JCL parameter PROTECT that are resource checked against the External Security Manager.

Note: To define the resource JCL parameter PROTECT to the External Security Manager, the resource name is 'JCL.PROTECT.YES|NO' where YES|NO is the value for the JCL parameter PROTECT, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER

Specifies the action to be taken if a value of JCL parameter PROTECT is not found in an allowlist, disallowlist, or a checklist.

ALLOW

Specifies the the value of JCL parameter PROTECT is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW

Specifies the the value of JCL parameter PROTECT is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

Specifies the the value of JCL parameter PROTECT is checked against the External Security Manager to determine if the User has access to the resource 'JCL.PROTECT.YES|NO' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED

Specifies the action to be taken if a value of JCL parameter PROTECT is

not defined to the External Security Manager when the CHECK option has been specified.

ALLOW
> Specifies the the value of JCL parameter PROTECT is allowed when it is not defined to the External Security Manager.

DISALLOW
> Specifies the the value of JCL parameter PROTECT is disallowed when it is not defined to the External Security Manager.

PERFORM
Specifies validation for the JCL parameter PERFORM

NOPERFORM
Disables validation for the JCL parameter PERFORM

ALLOW
> Specifies that a list of the JCL parameter PERFORM values will be provided and the value of JCL parameter PERFORM will be checked against the allowlist that follows.
>
> If the value of JCL parameter PERFORM is not found in the allowlist, then the OTHER option that is defined for JCL parameter PERFORM will determine if the JCL parameter PERFORM is allowed.
>
> See the OTHER option for the JCL parameter PERFORM for determining the action to be taken if the value of JCL parameter PERFORM is not found.

NOALLOW
> Specifying NOALLOW disables a previously defined allowlist for the JCL parameter PERFORM

allowlist
> > A list of values of JCL parameter PERFORM that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW
> Specifies that a list of values of the JCL parameter PERFORM will be provided and the value of JCL parameter PERFORM will be checked against the disallowlist that follows.
>
> The value of JCL parameter PERFORM is checked to verify that it is not a value that is disallowed. If the value of JCL parameter PERFORM is not found in the disallowlist, then the OTHER option that is defined for JCL parameter PERFORM will determine if the value of JCL parameter PERFORM is allowed.
>
> See the OTHER option for JCL parameter PERFORM for determining the action to be taken if the value of JCL parameter PERFORM is not found in the disallowlist.

NODISALLOW
> Specifying NODISALLOW disables a previously defined disallowlist for the JCL parameter PERFORM

disallowlist
> > A list of values of the JCL parameter PERFORM that are disallowed.

CHECK w/list

Specifies that a list of values of JCL parameter PERFORM will be provided and the value of JCL parameter PERFORM will be checked against the checklist of values that follows.

If the value of JCL parameter PERFORM matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of JCL parameter PERFORM.

If the value of JCL parameter PERFORM is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of JCL parameter PERFORM is not defined in the checklist then the OTHER option that is defined for JCL parameter PERFORM will determine if the value of JCL parameter PERFORM is allowed.

See the OTHER option for JCL parameter PERFORM for determining the action to be taken if the value of JCL parameter PERFORM is not found in the checklist.

CHECK wo/list

If no checklist is provided than the value of JCL parameter PERFORM is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of JCL parameter PERFORM is not defined to the External Security Manager.

NOCHECK

Specifying NOCHECK disables checking for either CHECK with a checklist or without for the JCL parameter PERFORM values.

checklist

A optional list of values of JCL parameter PERFORM that are resource checked against the External Security Manager.

Note: To define the resource JCL parameter PERFORM to the External Security Manager, the resource name is 'JCL.PERFORM.group' where group is the value for the JCL parameter PERFORM, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER

Specifies the action to be taken if a value of JCL parameter PERFORM is not found in an allowlist, disallowlist, or a checklist.

ALLOW

Specifies the the value of JCL parameter PERFORM is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW

Specifies the the value of JCL parameter PERFORM is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

Specifies the the value of JCL parameter PERFORM is checked against the External Security Manager to determine if the User has access to the resource 'JCL.PERFORM.group' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED

Specifies the action to be taken if a value of JCL parameter PERFORM is

not defined to the External Security Manager when the CHECK option has been specified.

ALLOW

    Specifies the the value of JCL parameter PERFORM is allowed when it is not defined to the External Security Manager.

DISALLOW

    Specifies the the value of JCL parameter PERFORM is disallowed when it is not defined to the External Security Manager.

PRTY

Specifies validation for the JCL parameter PRTY

NOPRTY

Disables validation for the JCL parameter PRTY

ALLOW

    Specifies that a list of the JCL parameter PRTY values will be provided and the value of JCL parameter PRTY will be checked against the allowlist that follows.

    If the value of JCL parameter PRTY is not found in the allowlist, then the OTHER option that is defined for JCL parameter PRTY will determine if the JCL parameter PRTY is allowed.

    See the OTHER option for the JCL parameter PRTY for determining the action to be taken if the value of JCL parameter PRTY is not found.

NOALLOW

    Specifying NOALLOW disables a previously defined allowlist for the JCL parameter PRTY

allowlist

    A list of values of JCL parameter PRTY that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW

    Specifies that a list of values of the JCL parameter PRTY will be provided and the value of JCL parameter PRTY will be checked against the disallowlist that follows.

    The value of JCL parameter PRTY is checked to verify that it is not a value that is disallowed. If the value of JCL parameter PRTY is not found in the disallowlist, then the OTHER option that is defined for JCL parameter PRTY will determine if the value of JCL parameter PRTY is allowed.

    See the OTHER option for JCL parameter PRTY for determining the action to be taken if the value of JCL parameter PRTY is not found in the disallowlist.

NODISALLOW

    Specifying NODISALLOW disables a previously defined disallowlist for the JCL parameter PRTY

disallowlist

    A list of values of the JCL parameter PRTY that are disallowed.

CHECK w/list

    Specifies that a list of values of JCL parameter PRTY will be provided and

the value of JCL parameter PRTY will be checked against the checklist of values that follows.

If the value of JCL parameter PRTY matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of JCL parameter PRTY.

If the value of JCL parameter PRTY is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of JCL parameter PRTY is not defined in the checklist then the OTHER option that is defined for JCL parameter PRTY will determine if the value of JCL parameter PRTY is allowed.

See the OTHER option for JCL parameter PRTY for determining the action to be taken if the value of JCL parameter PRTY is not found in the checklist.

CHECK wo/list
> If no checklist is provided than the value of JCL parameter PRTY is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of JCL parameter PRTY is not defined to the External Security Manager.

NOCHECK
> Specifying NOCHECK disables checking for either CHECK with a checklist or without for the JCL parameter PRTY values.

> **checklist**
>> A optional list of values of JCL parameter PRTY that are resource checked against the External Security Manager.

Note: To define the resource JCL parameter PRTY to the External Security Manager, the resource name is 'JCL.PRTY.prty' where prty is the value for the JCL parameter PRTY, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER
> Specifies the action to be taken if a value of JCL parameter PRTY is not found in an allowlist, disallowlist, or a checklist.

> **ALLOW**
>> Specifies the the value of JCL parameter PRTY is allowed when it is not found in an allowlist, disallowlist, or a checklist.

> **DISALLOW**
>> Specifies the the value of JCL parameter PRTY is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

> **CHECK**
>> Specifies the the value of JCL parameter PRTY is checked against the External Security Manager to determine if the User has access to the resource 'JCL.PRTY.prty' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED
> Specifies the action to be taken if a value of JCL parameter PRTY is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW

> Specifies the the value of JCL parameter PRTY is allowed when it is not defined to the External Security Manager.

DISALLOW

> Specifies the the value of JCL parameter PRTY is disallowed when it is not defined to the External Security Manager.

STORCLASS

Specifies validation for the DFSMS JCL parameter STORCLASS

NOSTORCLASS

Disables validation for the DFSMS JCL parameter STORCLASS

ALLOW

> Specifies that a list of the DFSMS JCL parameter STORCLASS values will be provided and the value of DFSMS JCL parameter STORCLASS will be checked against the allowlist that follows.
>
> If the value of DFSMS JCL parameter STORCLASS is not found in the allowlist, then the OTHER option that is defined for DFSMS JCL parameter STORCLASS will determine if the DFSMS JCL parameter STORCLASS is allowed.
>
> See the OTHER option for the DFSMS JCL parameter STORCLASS for determining the action to be taken if the value of DFSMS JCL parameter STORCLASS is not found.

NOALLOW

> Specifying NOALLOW disables a previously defined allowlist for the DFSMS JCL parameter STORCLASS

allowlist

> A list of values of DFSMS JCL parameter STORCLASS that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW

> Specifies that a list of values of the DFSMS JCL parameter STORCLASS will be provided and the value of DFSMS JCL parameter STORCLASS will be checked against the disallowlist that follows.
>
> The value of DFSMS JCL parameter STORCLASS is checked to verify that it is not a value that is disallowed. If the value of DFSMS JCL parameter STORCLASS is not found in the disallowlist, then the OTHER option that is defined for DFSMS JCL parameter STORCLASS will determine if the value of DFSMS JCL parameter STORCLASS is allowed.
>
> See the OTHER option for DFSMS JCL parameter STORCLASS for determining the action to be taken if the value of DFSMS JCL parameter STORCLASS is not found in the disallowlist.

NODISALLOW

> Specifying NODISALLOW disables a previously defined disallowlist for the DFSMS JCL parameter STORCLASS

disallowlist

> A list of values of the DFSMS JCL parameter STORCLASS that are disallowed.

CHECK w/list

Specifies that a list of values of DFSMS JCL parameter STORCLASS will be provided and the value of DFSMS JCL parameter STORCLASS will be checked against the checklist of values that follows.

If the value of DFSMS JCL parameter STORCLASS matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of DFSMS JCL parameter STORCLASS.

If the value of DFSMS JCL parameter STORCLASS is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of DFSMS JCL parameter STORCLASS is not defined in the checklist then the OTHER option that is defined for DFSMS JCL parameter STORCLASS will determine if the value of DFSMS JCL parameter STORCLASS is allowed.

See the OTHER option for DFSMS JCL parameter STORCLASS for determining the action to be taken if the value of DFSMS JCL parameter STORCLASS is not found in the checklist.

CHECK wo/list

If no checklist is provided than the value of DFSMS JCL parameter STORCLASS is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of DFSMS JCL parameter STORCLASS is not defined to the External Security Manager.

NOCHECK

Specifying NOCHECK disables checking for either CHECK with a checklist or without for the DFSMS JCL parameter STORCLASS values.

checklist

A optional list of values of DFSMS JCL parameter STORCLASS that are resource checked against the External Security Manager.

Note: To define the resource DFSMS JCL parameter STORCLASS to the External Security Manager, the resource name is 'JCL.STORCLASS.storclass' where storclass is the value for the DFSMS JCL parameter STORCLASS, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER

Specifies the action to be taken if a value of DFSMS JCL parameter STORCLASS is not found in an allowlist, disallowlist, or a checklist.

ALLOW

Specifies the the value of DFSMS JCL parameter STORCLASS is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW

Specifies the the value of DFSMS JCL parameter STORCLASS is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

Specifies the the value of DFSMS JCL parameter STORCLASS is checked against the External Security Manager to determine if the User has access to the resource 'JCL.STORCLASS.storclass' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED
> Specifies the action to be taken if a value of DFSMS JCL parameter STORCLASS is not defined to the External Security Manager when the CHECK option has been specified.

> **ALLOW**
>> Specifies the the value of DFSMS JCL parameter STORCLASS is allowed when it is not defined to the External Security Manager.

> **DISALLOW**
>> Specifies the the value of DFSMS JCL parameter STORCLASS is disallowed when it is not defined to the External Security Manager.

SUBSYS
> Specifies validation for the JCL parameter SUBSYS

NOSUBSYS
> Disables validation for the JCL parameter SUBSYS

> **ALLOW**
>> Specifies that a list of the JCL parameter SUBSYS values will be provided and the value of JCL parameter SUBSYS will be checked against the allowlist that follows.

>> If the value of JCL parameter SUBSYS is not found in the allowlist, then the OTHER option that is defined for JCL parameter SUBSYS will determine if the JCL parameter SUBSYS is allowed.

>> See the OTHER option for the JCL parameter SUBSYS for determining the action to be taken if the value of JCL parameter SUBSYS is not found.

> **NOALLOW**
>> Specifying NOALLOW disables a previously defined allowlist for the JCL parameter SUBSYS

> **allowlist**
>> A list of values of JCL parameter SUBSYS that are allowed

> **Note:** ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

> **DISALLOW**
>> Specifies that a list of values of the JCL parameter SUBSYS will be provided and the value of JCL parameter SUBSYS will be checked against the disallowlist that follows.

>> The value of JCL parameter SUBSYS is checked to verify that it is not a value that is disallowed. If the value of JCL parameter SUBSYS is not found in the disallowlist, then the OTHER option that is defined for JCL parameter SUBSYS will determine if the value of JCL parameter SUBSYS is allowed.

>> See the OTHER option for JCL parameter SUBSYS for determining the action to be taken if the value of JCL parameter SUBSYS is not found in the disallowlist.

> **NODISALLOW**
>> Specifying NODISALLOW disables a previously defined disallowlist for the JCL parameter SUBSYS

> **disallowlist**
>> A list of values of the JCL parameter SUBSYS that are disallowed.

CHECK w/list

Specifies that a list of values of JCL parameter SUBSYS will be provided and the value of JCL parameter SUBSYS will be checked against the checklist of values that follows.

If the value of JCL parameter SUBSYS matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of JCL parameter SUBSYS.

If the value of JCL parameter SUBSYS is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of JCL parameter SUBSYS is not defined in the checklist then the OTHER option that is defined for JCL parameter SUBSYS will determine if the value of JCL parameter SUBSYS is allowed.

See the OTHER option for JCL parameter SUBSYS for determining the action to be taken if the value of JCL parameter SUBSYS is not found in the checklist.

CHECK wo/list

If no checklist is provided than the value of JCL parameter SUBSYS is only checked against the External Security Manager, with the UNDE-FINED parameter providing the action to be taken if the value of JCL parameter SUBSYS is not defined to the External Security Manager.

NOCHECK

Specifying NOCHECK disables checking for either CHECK with a checklist or without for the JCL parameter SUBSYS values.

checklist

A optional list of values of JCL parameter SUBSYS that are resource checked against the External Security Manager.

Note: To define the resource JCL parameter SUBSYS to the External Security Manager, the resource name is 'JCL.SUBSYS.subsys' where subsys is the value for the JCL parameter SUBSYS, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER

Specifies the action to be taken if a value of JCL parameter SUBSYS is not found in an allowlist, disallowlist, or a checklist.

ALLOW

Specifies the the value of JCL parameter SUBSYS is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW

Specifies the the value of JCL parameter SUBSYS is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

Specifies the the value of JCL parameter SUBSYS is checked against the External Security Manager to determine if the User has access to the resource 'JCL.SUBSYS.subsys' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED

Specifies the action to be taken if a value of JCL parameter SUBSYS is

not defined to the External Security Manager when the CHECK option has been specified.

ALLOW
Specifies the the value of JCL parameter SUBSYS is allowed when it is not defined to the External Security Manager.

DISALLOW
Specifies the the value of JCL parameter SUBSYS is disallowed when it is not defined to the External Security Manager.

TIME
Specifies validation for the JCL parameter TIME

NOTIME
Disables validation for the JCL parameter TIME

ALLOW
Specifies that a list of the JCL parameter TIME values will be provided and the value of JCL parameter TIME will be checked against the allowlist that follows.

If the value of JCL parameter TIME is not found in the allowlist, then the OTHER option that is defined for JCL parameter TIME will determine if the JCL parameter TIME is allowed.

See the OTHER option for the JCL parameter TIME for determining the action to be taken if the value of JCL parameter TIME is not found.

NOALLOW
Specifying NOALLOW disables a previously defined allowlist for the JCL parameter TIME

allowlist
A list of values of JCL parameter TIME that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW
Specifies that a list of values of the JCL parameter TIME will be provided and the value of JCL parameter TIME will be checked against the disallowlist that follows.

The value of JCL parameter TIME is checked to verify that it is not a value that is disallowed. If the value of JCL parameter TIME is not found in the disallowlist, then the OTHER option that is defined for JCL parameter TIME will determine if the value of JCL parameter TIME is allowed.

See the OTHER option for JCL parameter TIME for determining the action to be taken if the value of JCL parameter TIME is not found in the disallowlist.

NODISALLOW
Specifying NODISALLOW disables a previously defined disallowlist for the JCL parameter TIME

disallowlist
A list of values of the JCL parameter TIME that are disallowed.

CHECK w/list
Specifies that a list of values of JCL parameter TIME will be provided and

the value of JCL parameter TIME will be checked against the checklist of values that follows.

If the value of JCL parameter TIME matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of JCL parameter TIME.

If the value of JCL parameter TIME is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of JCL parameter TIME is not defined in the checklist then the OTHER option that is defined for JCL parameter TIME will determine if the value of JCL parameter TIME is allowed.

See the OTHER option for JCL parameter TIME for determining the action to be taken if the value of JCL parameter TIME is not found in the checklist.

CHECK wo/list
If no checklist is provided than the value of JCL parameter TIME is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of JCL parameter TIME is not defined to the External Security Manager.

NOCHECK
Specifying NOCHECK disables checking for either CHECK with a checklist or without for the JCL parameter TIME values.

checklist
A optional list of values of JCL parameter TIME that are resource checked against the External Security Manager.

Note: To define the resource JCL parameter TIME to the External Security Manager, the resource name is 'JCL.TIME.MAXIMUM|1440|NOLIMIT|HIGH' where MAXIMUM|1440|NOLIMIT|HIGH is the value for the JCL parameter TIME, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER
Specifies the action to be taken if a value of JCL parameter TIME is not found in an allowlist, disallowlist, or a checklist.

ALLOW
Specifies the the value of JCL parameter TIME is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW
Specifies the the value of JCL parameter TIME is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK
Specifies the the value of JCL parameter TIME is checked against the External Security Manager to determine if the User has access to the resource 'JCL.TIME.MAXIMUM|1440|NOLIMIT|HIGH' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED
Specifies the action to be taken if a value of JCL parameter TIME is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW
> Specifies the the value of JCL parameter TIME is allowed when it is not defined to the External Security Manager.

DISALLOW
> Specifies the the value of JCL parameter TIME is disallowed when it is not defined to the External Security Manager.

UNIT
Specifies validation for the JCL parameter UNIT

NOUNIT
Disables validation for the JCL parameter UNIT

ALLOW
> Specifies that a list of the JCL parameter UNIT values will be provided and the value of JCL parameter UNIT will be checked against the allowlist that follows.
>
> If the value of JCL parameter UNIT is not found in the allowlist, then the OTHER option that is defined for JCL parameter UNIT will determine if the JCL parameter UNIT is allowed.
>
> See the OTHER option for the JCL parameter UNIT for determining the action to be taken if the value of JCL parameter UNIT is not found.

NOALLOW
> Specifying NOALLOW disables a previously defined allowlist for the JCL parameter UNIT

allowlist
> A list of values of JCL parameter UNIT that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW
> Specifies that a list of values of the JCL parameter UNIT will be provided and the value of JCL parameter UNIT will be checked against the disallowlist that follows.
>
> The value of JCL parameter UNIT is checked to verify that it is not a value that is disallowed. If the value of JCL parameter UNIT is not found in the disallowlist, then the OTHER option that is defined for JCL parameter UNIT will determine if the value of JCL parameter UNIT is allowed.
>
> See the OTHER option for JCL parameter UNIT for determining the action to be taken if the value of JCL parameter UNIT is not found in the disallowlist.

NODISALLOW
> Specifying NODISALLOW disables a previously defined disallowlist for the JCL parameter UNIT

disallowlist
> A list of values of the JCL parameter UNIT that are disallowed.

CHECK w/list
> Specifies that a list of values of JCL parameter UNIT will be provided and the value of JCL parameter UNIT will be checked against the checklist of values that follows.

If the value of JCL parameter UNIT matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of JCL parameter UNIT.

If the value of JCL parameter UNIT is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of JCL parameter UNIT is not defined in the checklist then the OTHER option that is defined for JCL parameter UNIT will determine if the value of JCL parameter UNIT is allowed.

See the OTHER option for JCL parameter UNIT for determining the action to be taken if the value of JCL parameter UNIT is not found in the checklist.

CHECK wo/list

If no checklist is provided than the value of JCL parameter UNIT is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of JCL parameter UNIT is not defined to the External Security Manager.

NOCHECK

Specifying NOCHECK disables checking for either CHECK with a checklist or without for the JCL parameter UNIT values.

checklist

A optional list of values of JCL parameter UNIT that are resource checked against the External Security Manager.

Note: To define the resource JCL parameter UNIT to the External Security Manager, the resource name is 'JCL.UNIT.unit' where unit is the value for the JCL parameter UNIT, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER

Specifies the action to be taken if a value of JCL parameter UNIT is not found in an allowlist, disallowlist, or a checklist.

ALLOW

Specifies the the value of JCL parameter UNIT is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW

Specifies the the value of JCL parameter UNIT is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

Specifies the the value of JCL parameter UNIT is checked against the External Security Manager to determine if the User has access to the resource 'JCL.UNIT.unit' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED

Specifies the action to be taken if a value of JCL parameter UNIT is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW

Specifies the the value of JCL parameter UNIT is allowed when it is not defined to the External Security Manager.

DISALLOW

> Specifies the the value of JCL parameter UNIT is disallowed when it is not defined to the External Security Manager.

SYSOUT

Specifies validation for the JCL parameter SYSOUT

NOSYSOUT

Disables validation for the JCL parameter SYSOUT

ALLOW

> Specifies that a list of the JCL parameter SYSOUT values will be provided and the value of JCL parameter SYSOUT will be checked against the allowlist that follows.
>
> If the value of JCL parameter SYSOUT is not found in the allowlist, then the OTHER option that is defined for JCL parameter SYSOUT will determine if the JCL parameter SYSOUT is allowed.
>
> See the OTHER option for the JCL parameter SYSOUT for determining the action to be taken if the value of JCL parameter SYSOUT is not found.

NOALLOW

> Specifying NOALLOW disables a previously defined allowlist for the JCL parameter SYSOUT

> **allowlist**
>> A list of values of JCL parameter SYSOUT that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW

> Specifies that a list of values of the JCL parameter SYSOUT will be provided and the value of JCL parameter SYSOUT will be checked against the disallowlist that follows.
>
> The value of JCL parameter SYSOUT is checked to verify that it is not a value that is disallowed. If the value of JCL parameter SYSOUT is not found in the disallowlist, then the OTHER option that is defined for JCL parameter SYSOUT will determine if the value of JCL parameter SYSOUT is allowed.
>
> See the OTHER option for JCL parameter SYSOUT for determining the action to be taken if the value of JCL parameter SYSOUT is not found in the disallowlist.

NODISALLOW

> Specifying NODISALLOW disables a previously defined disallowlist for the JCL parameter SYSOUT

> **disallowlist**
>> A list of values of the JCL parameter SYSOUT that are disallowed.

CHECK w/list

> Specifies that a list of values of JCL parameter SYSOUT will be provided and the value of JCL parameter SYSOUT will be checked against the checklist of values that follows.
>
> If the value of JCL parameter SYSOUT matches a value in the checklist, then it is also checked against the External Security Manager (RACF,

CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of JCL parameter SYSOUT.

If the value of JCL parameter SYSOUT is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of JCL parameter SYSOUT is not defined in the checklist then the OTHER option that is defined for JCL parameter SYSOUT will determine if the value of JCL parameter SYSOUT is allowed.

See the OTHER option for JCL parameter SYSOUT for determining the action to be taken if the value of JCL parameter SYSOUT is not found in the checklist.

CHECK wo/list
If no checklist is provided than the value of JCL parameter SYSOUT is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of JCL parameter SYSOUT is not defined to the External Security Manager.

NOCHECK
Specifying NOCHECK disables checking for either CHECK with a checklist or without for the JCL parameter SYSOUT values.

checklist
A optional list of values of JCL parameter SYSOUT that are resource checked against the External Security Manager.

Note: To define the resource JCL parameter SYSOUT to the External Security Manager, the resource name is 'JCL.SYSOUT.class' where class is the value for the JCL parameter SYSOUT, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER
Specifies the action to be taken if a value of JCL parameter SYSOUT is not found in an allowlist, disallowlist, or a checklist.

ALLOW
Specifies the the value of JCL parameter SYSOUT is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW
Specifies the the value of JCL parameter SYSOUT is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK
Specifies the the value of JCL parameter SYSOUT is checked against the External Security Manager to determine if the User has access to the resource 'JCL.SYSOUT.class' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED
Specifies the action to be taken if a value of JCL parameter SYSOUT is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW
Specifies the the value of JCL parameter SYSOUT is allowed when it is not defined to the External Security Manager.

DISALLOW

Specifies the the value of JCL parameter SYSOUT is disallowed when it is not defined to the External Security Manager.

BURST

Specifies validation for the SYSOUT JCL sub parameter BURST

NOBURST

Disables validation for the SYSOUT JCL sub parameter BURST

ALLOW

Specifies that a list of the SYSOUT JCL sub parameter BURST values will be provided and the value of SYSOUT JCL sub parameter BURST will be checked against the allowlist that follows.

If the value of SYSOUT JCL sub parameter BURST is not found in the allowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter BURST will determine if the SYSOUT JCL sub parameter BURST is allowed.

See the OTHER option for the SYSOUT JCL sub parameter BURST for determining the action to be taken if the value of SYSOUT JCL sub parameter BURST is not found.

NOALLOW

Specifying NOALLOW disables a previously defined allowlist for the SYSOUT JCL sub parameter BURST

allowlist

A list of values of SYSOUT JCL sub parameter BURST that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW

Specifies that a list of values of the SYSOUT JCL sub parameter BURST will be provided and the value of SYSOUT JCL sub parameter BURST will be checked against the disallowlist that follows.

The value of SYSOUT JCL sub parameter BURST is checked to verify that it is not a value that is disallowed. If the value of SYSOUT JCL sub parameter BURST is not found in the disallowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter BURST will determine if the value of SYSOUT JCL sub parameter BURST is allowed.

See the OTHER option for SYSOUT JCL sub parameter BURST for determining the action to be taken if the value of SYSOUT JCL sub parameter BURST is not found in the disallowlist.

NODISALLOW

Specifying NODISALLOW disables a previously defined disallowlist for the SYSOUT JCL sub parameter BURST

disallowlist

A list of values of the SYSOUT JCL sub parameter BURST that are disallowed.

CHECK w/list

Specifies that a list of values of SYSOUT JCL sub parameter BURST will be provided and the value of SYSOUT JCL sub parameter BURST will be checked against the checklist of values that follows.

If the value of SYSOUT JCL sub parameter BURST matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of SYSOUT JCL sub parameter BURST.

If the value of SYSOUT JCL sub parameter BURST is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of SYSOUT JCL sub parameter BURST is not defined in the checklist then the OTHER option that is defined for SYSOUT JCL sub parameter BURST will determine if the value of SYSOUT JCL sub parameter BURST is allowed.

See the OTHER option for SYSOUT JCL sub parameter BURST for determining the action to be taken if the value of SYSOUT JCL sub parameter BURST is not found in the checklist.

CHECK wo/list

If no checklist is provided than the value of SYSOUT JCL sub parameter BURST is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of SYSOUT JCL sub parameter BURST is not defined to the External Security Manager.

NOCHECK

Specifying NOCHECK disables checking for either CHECK with a checklist or without for the SYSOUT JCL sub parameter BURST values.

checklist

A optional list of values of SYSOUT JCL sub parameter BURST that are resource checked against the External Security Manager.

Note: To define the resource SYSOUT JCL sub parameter BURST to the External Security Manager, the resource name is 'JCL.BURST.YES|NO' where YES|NO is the value for the SYSOUT JCL sub parameter BURST, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER

Specifies the action to be taken if a value of SYSOUT JCL sub parameter BURST is not found in an allowlist, disallowlist, or a checklist.

ALLOW

Specifies the the value of SYSOUT JCL sub parameter BURST is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW

Specifies the the value of SYSOUT JCL sub parameter BURST is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

Specifies the the value of SYSOUT JCL sub parameter BURST is checked against the External Security Manager to determine if the User has access to the resource 'JCL.BURST.YES|NO' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED

Specifies the action to be taken if a value of SYSOUT JCL sub parameter BURST is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW

    Specifies the the value of SYSOUT JCL sub parameter BURST is allowed when it is not defined to the External Security Manager.

DISALLOW

    Specifies the the value of SYSOUT JCL sub parameter BURST is disallowed when it is not defined to the External Security Manager.

CHARS

Specifies validation for the SYSOUT JCL sub parameter CHARS

NOCHARS

Disables validation for the SYSOUT JCL sub parameter CHARS

ALLOW

    Specifies that a list of the SYSOUT JCL sub parameter CHARS values will be provided and the value of SYSOUT JCL sub parameter CHARS will be checked against the allowlist that follows.

    If the value of SYSOUT JCL sub parameter CHARS is not found in the allowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter CHARS will determine if the SYSOUT JCL sub parameter CHARS is allowed.

    See the OTHER option for the SYSOUT JCL sub parameter CHARS for determining the action to be taken if the value of SYSOUT JCL sub parameter CHARS is not found.

NOALLOW

    Specifying NOALLOW disables a previously defined allowlist for the SYSOUT JCL sub parameter CHARS

    allowlist

        A list of values of SYSOUT JCL sub parameter CHARS that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW

    Specifies that a list of values of the SYSOUT JCL sub parameter CHARS will be provided and the value of SYSOUT JCL sub parameter CHARS will be checked against the disallowlist that follows.

    The value of SYSOUT JCL sub parameter CHARS is checked to verify that it is not a value that is disallowed. If the value of SYSOUT JCL sub parameter CHARS is not found in the disallowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter CHARS will determine if the value of SYSOUT JCL sub parameter CHARS is allowed.

    See the OTHER option for SYSOUT JCL sub parameter CHARS for determining the action to be taken if the value of SYSOUT JCL sub parameter CHARS is not found in the disallowlist.

NODISALLOW

    Specifying NODISALLOW disables a previously defined disallowlist for the SYSOUT JCL sub parameter CHARS

    disallowlist

        A list of values of the SYSOUT JCL sub parameter CHARS that are disallowed.

CHECK w/list

Specifies that a list of values of SYSOUT JCL sub parameter CHARS will be provided and the value of SYSOUT JCL sub parameter CHARS will be checked against the checklist of values that follows.

If the value of SYSOUT JCL sub parameter CHARS matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of SYSOUT JCL sub parameter CHARS.

If the value of SYSOUT JCL sub parameter CHARS is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of SYSOUT JCL sub parameter CHARS is not defined in the checklist then the OTHER option that is defined for SYSOUT JCL sub parameter CHARS will determine if the value of SYSOUT JCL sub parameter CHARS is allowed.

See the OTHER option for SYSOUT JCL sub parameter CHARS for determining the action to be taken if the value of SYSOUT JCL sub parameter CHARS is not found in the checklist.

CHECK wo/list

If no checklist is provided than the value of SYSOUT JCL sub parameter CHARS is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of SYSOUT JCL sub parameter CHARS is not defined to the External Security Manager.

NOCHECK

Specifying NOCHECK disables checking for either CHECK with a checklist or without for the SYSOUT JCL sub parameter CHARS values.

checklist

A optional list of values of SYSOUT JCL sub parameter CHARS that are resource checked against the External Security Manager.

Note: To define the resource SYSOUT JCL sub parameter CHARS to the External Security Manager, the resource name is 'JCL.CHARS.chars' where chars is the value for the SYSOUT JCL sub parameter CHARS, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER

Specifies the action to be taken if a value of SYSOUT JCL sub parameter CHARS is not found in an allowlist, disallowlist, or a checklist.

ALLOW

Specifies the the value of SYSOUT JCL sub parameter CHARS is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW

Specifies the the value of SYSOUT JCL sub parameter CHARS is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

Specifies the the value of SYSOUT JCL sub parameter CHARS is checked against the External Security Manager to determine if the User has access to the resource 'JCL.CHARS.chars' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED
> Specifies the action to be taken if a value of SYSOUT JCL sub parameter CHARS is not defined to the External Security Manager when the CHECK option has been specified.

> **ALLOW**
>> Specifies the the value of SYSOUT JCL sub parameter CHARS is allowed when it is not defined to the External Security Manager.

> **DISALLOW**
>> Specifies the the value of SYSOUT JCL sub parameter CHARS is disallowed when it is not defined to the External Security Manager.

COPIES
Specifies validation for the SYSOUT JCL sub parameter COPIES

NOCOPIES
Disables validation for the SYSOUT JCL sub parameter COPIES

> **ALLOW**
>> Specifies that a list of the SYSOUT JCL sub parameter COPIES values will be provided and the value of SYSOUT JCL sub parameter COPIES will be checked against the allowlist that follows.

>> If the value of SYSOUT JCL sub parameter COPIES is not found in the allowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter COPIES will determine if the SYSOUT JCL sub parameter COPIES is allowed.

>> See the OTHER option for the SYSOUT JCL sub parameter COPIES for determining the action to be taken if the value of SYSOUT JCL sub parameter COPIES is not found.

> **NOALLOW**
>> Specifying NOALLOW disables a previously defined allowlist for the SYSOUT JCL sub parameter COPIES

> **allowlist**
>> A list of values of SYSOUT JCL sub parameter COPIES that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

> **DISALLOW**
>> Specifies that a list of values of the SYSOUT JCL sub parameter COPIES will be provided and the value of SYSOUT JCL sub parameter COPIES will be checked against the disallowlist that follows.

>> The value of SYSOUT JCL sub parameter COPIES is checked to verify that it is not a value that is disallowed. If the value of SYSOUT JCL sub parameter COPIES is not found in the disallowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter COPIES will determine if the value of SYSOUT JCL sub parameter COPIES is allowed.

>> See the OTHER option for SYSOUT JCL sub parameter COPIES for determining the action to be taken if the value of SYSOUT JCL sub parameter COPIES is not found in the disallowlist.

> **NODISALLOW**
>> Specifying NODISALLOW disables a previously defined disallowlist for the SYSOUT JCL sub parameter COPIES

disallowlist

> A list of values of the SYSOUT JCL sub parameter COPIES that are disallowed.

CHECK w/list

> Specifies that a list of values of SYSOUT JCL sub parameter COPIES will be provided and the value of SYSOUT JCL sub parameter COPIES will be checked against the checklist of values that follows.
>
> If the value of SYSOUT JCL sub parameter COPIES matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of SYSOUT JCL sub parameter COPIES.
>
> If the value of SYSOUT JCL sub parameter COPIES is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.
>
> If the value of SYSOUT JCL sub parameter COPIES is not defined in the checklist then the OTHER option that is defined for SYSOUT JCL sub parameter COPIES will determine if the value of SYSOUT JCL sub parameter COPIES is allowed.
>
> See the OTHER option for SYSOUT JCL sub parameter COPIES for determining the action to be taken if the value of SYSOUT JCL sub parameter COPIES is not found in the checklist.

CHECK wo/list

> If no checklist is provided than the value of SYSOUT JCL sub parameter COPIES is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of SYSOUT JCL sub parameter COPIES is not defined to the External Security Manager.

NOCHECK

> Specifying NOCHECK disables checking for either CHECK with a checklist or without for the SYSOUT JCL sub parameter COPIES values.
>
> **checklist**
>
> > A optional list of values of SYSOUT JCL sub parameter COPIES that are resource checked against the External Security Manager.

Note: To define the resource SYSOUT JCL sub parameter COPIES to the External Security Manager, the resource name is 'JCL.COPIES.number' where number is the value for the SYSOUT JCL sub parameter COPIES, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER

> Specifies the action to be taken if a value of SYSOUT JCL sub parameter COPIES is not found in an allowlist, disallowlist, or a checklist.
>
> **ALLOW**
>
> > Specifies the the value of SYSOUT JCL sub parameter COPIES is allowed when it is not found in an allowlist, disallowlist, or a checklist.
>
> **DISALLOW**
>
> > Specifies the the value of SYSOUT JCL sub parameter COPIES is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

> Specifies the the value of SYSOUT JCL sub parameter COPIES is checked against the External Security Manager to determine if the User has access to the resource 'JCL.COPIES.number' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED

> Specifies the action to be taken if a value of SYSOUT JCL sub parameter COPIES is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW

> Specifies the the value of SYSOUT JCL sub parameter COPIES is allowed when it is not defined to the External Security Manager.

DISALLOW

> Specifies the the value of SYSOUT JCL sub parameter COPIES is disallowed when it is not defined to the External Security Manager.

DEST

> Specifies validation for the SYSOUT JCL sub parameter DEST

NODEST

> Disables validation for the SYSOUT JCL sub parameter DEST

ALLOW

> Specifies that a list of the SYSOUT JCL sub parameter DEST values will be provided and the value of SYSOUT JCL sub parameter DEST will be checked against the allowlist that follows.
>
> If the value of SYSOUT JCL sub parameter DEST is not found in the allowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter DEST will determine if the SYSOUT JCL sub parameter DEST is allowed.
>
> See the OTHER option for the SYSOUT JCL sub parameter DEST for determining the action to be taken if the value of SYSOUT JCL sub parameter DEST is not found.

NOALLOW

> Specifying NOALLOW disables a previously defined allowlist for the SYSOUT JCL sub parameter DEST

allowlist

> A list of values of SYSOUT JCL sub parameter DEST that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW

> Specifies that a list of values of the SYSOUT JCL sub parameter DEST will be provided and the value of SYSOUT JCL sub parameter DEST will be checked against the disallowlist that follows.
>
> The value of SYSOUT JCL sub parameter DEST is checked to verify that it is not a value that is disallowed. If the value of SYSOUT JCL sub parameter DEST is not found in the disallowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter DEST will determine if the value of SYSOUT JCL sub parameter DEST is allowed.

See the OTHER option for SYSOUT JCL sub parameter DEST for deter-
mining the action to be taken if the value of SYSOUT JCL sub parameter
DEST is not found in the disallowlist.

NODISALLOW
Specifying NODISALLOW disables a previously defined disallowlist for
the SYSOUT JCL sub parameter DEST

disallowlist
A list of values of the SYSOUT JCL sub parameter DEST that are
disallowed.

CHECK w/list
Specifies that a list of values of SYSOUT JCL sub parameter DEST will
be provided and the value of SYSOUT JCL sub parameter DEST will be
checked against the checklist of values that follows.

If the value of SYSOUT JCL sub parameter DEST matches a value in the
checklist, then it is also checked against the External Security Manager
(RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting
the Job has access to the value of SYSOUT JCL sub parameter DEST.

If the value of SYSOUT JCL sub parameter DEST is undefined to the
External Security Manager than the UNDEFINED parameter provides the
action to be taken.

If the value of SYSOUT JCL sub parameter DEST is not defined in the
checklist then the OTHER option that is defined for SYSOUT JCL sub
parameter DEST will determine if the value of SYSOUT JCL sub param-
eter DEST is allowed.

See the OTHER option for SYSOUT JCL sub parameter DEST for deter-
mining the action to be taken if the value of SYSOUT JCL sub parameter
DEST is not found in the checklist.

CHECK wo/list
If no checklist is provided than the value of SYSOUT JCL sub parameter
DEST is only checked against the External Security Manager, with the
UNDEFINED parameter providing the action to be taken if the value of
SYSOUT JCL sub parameter DEST is not defined to the External Security
Manager.

NOCHECK
Specifying NOCHECK disables checking for either CHECK with a
checklist or without for the SYSOUT JCL sub parameter DEST values.

checklist
A optional list of values of SYSOUT JCL sub parameter DEST that
are resource checked against the External Security Manager.

Note: To define the resource SYSOUT JCL sub parameter DEST to the External
Security Manager, the resource name is 'JCL.DEST.dest' where dest is the value
for the SYSOUT JCL sub parameter DEST, using the FACILITY class for RACF
and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER
Specifies the action to be taken if a value of SYSOUT JCL sub parameter
DEST is not found in an allowlist, disallowlist, or a checklist.

ALLOW
Specifies the the value of SYSOUT JCL sub parameter DEST is al-
lowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW

Specifies the the value of SYSOUT JCL sub parameter DEST is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

Specifies the the value of SYSOUT JCL sub parameter DEST is checked against the External Security Manager to determine if the User has access to the resource 'JCL.DEST.dest' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED

Specifies the action to be taken if a value of SYSOUT JCL sub parameter DEST is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW

Specifies the the value of SYSOUT JCL sub parameter DEST is allowed when it is not defined to the External Security Manager.

DISALLOW

Specifies the the value of SYSOUT JCL sub parameter DEST is disallowed when it is not defined to the External Security Manager.

EXPDT

Specifies validation for the JCL parameter EXPDT

NOEXPDT

Disables validation for the JCL parameter EXPDT

ALLOW

Specifies that a list of the JCL parameter EXPDT values will be provided and the value of JCL parameter EXPDT will be checked against the allowlist that follows.

If the value of JCL parameter EXPDT is not found in the allowlist, then the OTHER option that is defined for JCL parameter EXPDT will determine if the JCL parameter EXPDT is allowed.

See the OTHER option for the JCL parameter EXPDT for determining the action to be taken if the value of JCL parameter EXPDT is not found.

NOALLOW

Specifying NOALLOW disables a previously defined allowlist for the JCL parameter EXPDT

allowlist

A list of values of JCL parameter EXPDT that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW

Specifies that a list of values of the JCL parameter EXPDT will be provided and the value of JCL parameter EXPDT will be checked against the disallowlist that follows.

The value of JCL parameter EXPDT is checked to verify that it is not a value that is disallowed. If the value of JCL parameter EXPDT is not found in the disallowlist, then the OTHER option that is defined for JCL parameter EXPDT will determine if the value of JCL parameter EXPDT is allowed.

See the OTHER option for JCL parameter EXPDT for determining the action to be taken if the value of JCL parameter EXPDT is not found in the disallowlist.

NODISALLOW
>Specifying NODISALLOW disables a previously defined disallowlist for the JCL parameter EXPDT

>**disallowlist**
>>A list of values of the JCL parameter EXPDT that are disallowed.

CHECK w/list
>Specifies that a list of values of JCL parameter EXPDT will be provided and the value of JCL parameter EXPDT will be checked against the checklist of values that follows.

>If the value of JCL parameter EXPDT matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of JCL parameter EXPDT.

>If the value of JCL parameter EXPDT is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

>If the value of JCL parameter EXPDT is not defined in the checklist then the OTHER option that is defined for JCL parameter EXPDT will determine if the value of JCL parameter EXPDT is allowed.

>See the OTHER option for JCL parameter EXPDT for determining the action to be taken if the value of JCL parameter EXPDT is not found in the checklist.

CHECK wo/list
>If no checklist is provided than the value of JCL parameter EXPDT is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of JCL parameter EXPDT is not defined to the External Security Manager.

NOCHECK
>Specifying NOCHECK disables checking for either CHECK with a checklist or without for the JCL parameter EXPDT values.

>**checklist**
>>A optional list of values of JCL parameter EXPDT that are resource checked against the External Security Manager.

Note: To define the resource JCL parameter EXPDT to the External Security Manager, the resource name is 'JCL.EXPDT.date' where date is the value for the JCL parameter EXPDT, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER
>Specifies the action to be taken if a value of JCL parameter EXPDT is not found in an allowlist, disallowlist, or a checklist.

>**ALLOW**
>>Specifies the the value of JCL parameter EXPDT is allowed when it is not found in an allowlist, disallowlist, or a checklist.

>**DISALLOW**
>>Specifies the the value of JCL parameter EXPDT is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

Specifies the the value of JCL parameter EXPDT is checked against the External Security Manager to determine if the User has access to the resource 'JCL.EXPDT.date' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED

Specifies the action to be taken if a value of JCL parameter EXPDT is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW

Specifies the the value of JCL parameter EXPDT is allowed when it is not defined to the External Security Manager.

DISALLOW

Specifies the the value of JCL parameter EXPDT is disallowed when it is not defined to the External Security Manager.

Note: The EXPDT parameter is normalized by OS/EM to YYYY/DDD.

FCB Specifies validation for the SYSOUT JCL sub parameter FCB

NOFCB

Disables validation for the SYSOUT JCL sub parameter FCB

ALLOW

Specifies that a list of the SYSOUT JCL sub parameter FCB values will be provided and the value of SYSOUT JCL sub parameter FCB will be checked against the allowlist that follows.

If the value of SYSOUT JCL sub parameter FCB is not found in the allowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter FCB will determine if the SYSOUT JCL sub parameter FCB is allowed.

See the OTHER option for the SYSOUT JCL sub parameter FCB for determining the action to be taken if the value of SYSOUT JCL sub parameter FCB is not found.

NOALLOW

Specifying NOALLOW disables a previously defined allowlist for the SYSOUT JCL sub parameter FCB

allowlist

A list of values of SYSOUT JCL sub parameter FCB that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW

Specifies that a list of values of the SYSOUT JCL sub parameter FCB will be provided and the value of SYSOUT JCL sub parameter FCB will be checked against the disallowlist that follows.

The value of SYSOUT JCL sub parameter FCB is checked to verify that it is not a value that is disallowed. If the value of SYSOUT JCL sub parameter FCB is not found in the disallowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter FCB will determine if the value of SYSOUT JCL sub parameter FCB is allowed.

See the OTHER option for SYSOUT JCL sub parameter FCB for determining the action to be taken if the value of SYSOUT JCL sub parameter FCB is not found in the disallowlist.

NODISALLOW
>Specifying NODISALLOW disables a previously defined disallowlist for the SYSOUT JCL sub parameter FCB

>**disallowlist**
>>A list of values of the SYSOUT JCL sub parameter FCB that are disallowed.

CHECK w/list
>Specifies that a list of values of SYSOUT JCL sub parameter FCB will be provided and the value of SYSOUT JCL sub parameter FCB will be checked against the checklist of values that follows.

>If the value of SYSOUT JCL sub parameter FCB matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of SYSOUT JCL sub parameter FCB.

>If the value of SYSOUT JCL sub parameter FCB is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

>If the value of SYSOUT JCL sub parameter FCB is not defined in the checklist then the OTHER option that is defined for SYSOUT JCL sub parameter FCB will determine if the value of SYSOUT JCL sub parameter FCB is allowed.

>See the OTHER option for SYSOUT JCL sub parameter FCB for determining the action to be taken if the value of SYSOUT JCL sub parameter FCB is not found in the checklist.

CHECK wo/list
>If no checklist is provided than the value of SYSOUT JCL sub parameter FCB is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of SYSOUT JCL sub parameter FCB is not defined to the External Security Manager.

NOCHECK
>Specifying NOCHECK disables checking for either CHECK with a checklist or without for the SYSOUT JCL sub parameter FCB values.

>**checklist**
>>A optional list of values of SYSOUT JCL sub parameter FCB that are resource checked against the External Security Manager.

Note: To define the resource SYSOUT JCL sub parameter FCB to the External Security Manager, the resource name is 'JCL.FCB.fcb' where fcb is the value for the SYSOUT JCL sub parameter FCB, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER
>Specifies the action to be taken if a value of SYSOUT JCL sub parameter FCB is not found in an allowlist, disallowlist, or a checklist.

>**ALLOW**
>>Specifies the the value of SYSOUT JCL sub parameter FCB is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW

> Specifies the the value of SYSOUT JCL sub parameter FCB is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

> Specifies the the value of SYSOUT JCL sub parameter FCB is checked against the External Security Manager to determine if the User has access to the resource 'JCL.FCB.fcb' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED

Specifies the action to be taken if a value of SYSOUT JCL sub parameter FCB is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW

> Specifies the the value of SYSOUT JCL sub parameter FCB is allowed when it is not defined to the External Security Manager.

DISALLOW

> Specifies the the value of SYSOUT JCL sub parameter FCB is disallowed when it is not defined to the External Security Manager.

FLASH

Specifies validation for the SYSOUT JCL sub parameter FLASH

NOFLASH

Disables validation for the SYSOUT JCL sub parameter FLASH

ALLOW

> Specifies that a list of the SYSOUT JCL sub parameter FLASH values will be provided and the value of SYSOUT JCL sub parameter FLASH will be checked against the allowlist that follows.

> If the value of SYSOUT JCL sub parameter FLASH is not found in the allowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter FLASH will determine if the SYSOUT JCL sub parameter FLASH is allowed.

> See the OTHER option for the SYSOUT JCL sub parameter FLASH for determining the action to be taken if the value of SYSOUT JCL sub parameter FLASH is not found.

NOALLOW

> Specifying NOALLOW disables a previously defined allowlist for the SYSOUT JCL sub parameter FLASH

allowlist

> A list of values of SYSOUT JCL sub parameter FLASH that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW

> Specifies that a list of values of the SYSOUT JCL sub parameter FLASH will be provided and the value of SYSOUT JCL sub parameter FLASH will be checked against the disallowlist that follows.

> The value of SYSOUT JCL sub parameter FLASH is checked to verify that it is not a value that is disallowed. If the value of SYSOUT JCL sub pa-

rameter FLASH is not found in the disallowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter FLASH will determine if the value of SYSOUT JCL sub parameter FLASH is allowed.

See the OTHER option for SYSOUT JCL sub parameter FLASH for determining the action to be taken if the value of SYSOUT JCL sub parameter FLASH is not found in the disallowlist.

NODISALLOW

Specifying NODISALLOW disables a previously defined disallowlist for the SYSOUT JCL sub parameter FLASH

disallowlist

A list of values of the SYSOUT JCL sub parameter FLASH that are disallowed.

CHECK w/list

Specifies that a list of values of SYSOUT JCL sub parameter FLASH will be provided and the value of SYSOUT JCL sub parameter FLASH will be checked against the checklist of values that follows.

If the value of SYSOUT JCL sub parameter FLASH matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of SYSOUT JCL sub parameter FLASH.

If the value of SYSOUT JCL sub parameter FLASH is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of SYSOUT JCL sub parameter FLASH is not defined in the checklist then the OTHER option that is defined for SYSOUT JCL sub parameter FLASH will determine if the value of SYSOUT JCL sub parameter FLASH is allowed.

See the OTHER option for SYSOUT JCL sub parameter FLASH for determining the action to be taken if the value of SYSOUT JCL sub parameter FLASH is not found in the checklist.

CHECK wo/list

If no checklist is provided than the value of SYSOUT JCL sub parameter FLASH is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of SYSOUT JCL sub parameter FLASH is not defined to the External Security Manager.

NOCHECK

Specifying NOCHECK disables checking for either CHECK with a checklist or without for the SYSOUT JCL sub parameter FLASH values.

checklist

A optional list of values of SYSOUT JCL sub parameter FLASH that are resource checked against the External Security Manager.

Note: To define the resource SYSOUT JCL sub parameter FLASH to the External Security Manager, the resource name is 'JCL.FLASH.flash' where flash is the value for the SYSOUT JCL sub parameter FLASH, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER

Specifies the action to be taken if a value of SYSOUT JCL sub parameter FLASH is not found in an allowlist, disallowlist, or a checklist.

ALLOW

Specifies the the value of SYSOUT JCL sub parameter FLASH is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW

Specifies the the value of SYSOUT JCL sub parameter FLASH is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

Specifies the the value of SYSOUT JCL sub parameter FLASH is checked against the External Security Manager to determine if the User has access to the resource 'JCL.FLASH.flash' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED

Specifies the action to be taken if a value of SYSOUT JCL sub parameter FLASH is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW

Specifies the the value of SYSOUT JCL sub parameter FLASH is allowed when it is not defined to the External Security Manager.

DISALLOW

Specifies the the value of SYSOUT JCL sub parameter FLASH is disallowed when it is not defined to the External Security Manager.

FORM

Specifies validation for the SYSOUT JCL sub parameter FORM

NOFORM

Disables validation for the SYSOUT JCL sub parameter FORM

ALLOW

Specifies that a list of the SYSOUT JCL sub parameter FORM values will be provided and the value of SYSOUT JCL sub parameter FORM will be checked against the allowlist that follows.

If the value of SYSOUT JCL sub parameter FORM is not found in the allowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter FORM will determine if the SYSOUT JCL sub parameter FORM is allowed.

See the OTHER option for the SYSOUT JCL sub parameter FORM for determining the action to be taken if the value of SYSOUT JCL sub parameter FORM is not found.

NOALLOW

Specifying NOALLOW disables a previously defined allowlist for the SYSOUT JCL sub parameter FORM

allowlist

A list of values of SYSOUT JCL sub parameter FORM that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW

Specifies that a list of values of the SYSOUT JCL sub parameter FORM

will be provided and the value of SYSOUT JCL sub parameter FORM will be checked against the disallowlist that follows.

The value of SYSOUT JCL sub parameter FORM is checked to verify that it is not a value that is disallowed. If the value of SYSOUT JCL sub parameter FORM is not found in the disallowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter FORM will determine if the value of SYSOUT JCL sub parameter FORM is allowed.

See the OTHER option for SYSOUT JCL sub parameter FORM for determining the action to be taken if the value of SYSOUT JCL sub parameter FORM is not found in the disallowlist.

NODISALLOW
Specifying NODISALLOW disables a previously defined disallowlist for the SYSOUT JCL sub parameter FORM

disallowlist
A list of values of the SYSOUT JCL sub parameter FORM that are disallowed.

CHECK w/list
Specifies that a list of values of SYSOUT JCL sub parameter FORM will be provided and the value of SYSOUT JCL sub parameter FORM will be checked against the checklist of values that follows.

If the value of SYSOUT JCL sub parameter FORM matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of SYSOUT JCL sub parameter FORM.

If the value of SYSOUT JCL sub parameter FORM is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of SYSOUT JCL sub parameter FORM is not defined in the checklist then the OTHER option that is defined for SYSOUT JCL sub parameter FORM will determine if the value of SYSOUT JCL sub parameter FORM is allowed.

See the OTHER option for SYSOUT JCL sub parameter FORM for determining the action to be taken if the value of SYSOUT JCL sub parameter FORM is not found in the checklist.

CHECK wo/list
If no checklist is provided than the value of SYSOUT JCL sub parameter FORM is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of SYSOUT JCL sub parameter FORM is not defined to the External Security Manager.

NOCHECK
Specifying NOCHECK disables checking for either CHECK with a checklist or without for the SYSOUT JCL sub parameter FORM values.

checklist
A optional list of values of SYSOUT JCL sub parameter FORM that are resource checked against the External Security Manager.

Note: To define the resource SYSOUT JCL sub parameter FORM to the External Security Manager, the resource name is 'JCL.FORM.form' where form is the

value for the SYSOUT JCL sub parameter FORM, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER

Specifies the action to be taken if a value of SYSOUT JCL sub parameter FORM is not found in an allowlist, disallowlist, or a checklist.

ALLOW

Specifies the the value of SYSOUT JCL sub parameter FORM is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW

Specifies the the value of SYSOUT JCL sub parameter FORM is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

Specifies the the value of SYSOUT JCL sub parameter FORM is checked against the External Security Manager to determine if the User has access to the resource 'JCL.FORM.form' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED

Specifies the action to be taken if a value of SYSOUT JCL sub parameter FORM is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW

Specifies the the value of SYSOUT JCL sub parameter FORM is allowed when it is not defined to the External Security Manager.

DISALLOW

Specifies the the value of SYSOUT JCL sub parameter FORM is disallowed when it is not defined to the External Security Manager.

FORMDEF

Specifies validation for the SYSOUT JCL sub parameter FORMDEF

NOFORMDEF

Disables validation for the SYSOUT JCL sub parameter FORMDEF

ALLOW

Specifies that a list of the SYSOUT JCL sub parameter FORMDEF values will be provided and the value of SYSOUT JCL sub parameter FORMDEF will be checked against the allowlist that follows.

If the value of SYSOUT JCL sub parameter FORMDEF is not found in the allowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter FORMDEF will determine if the SYSOUT JCL sub parameter FORMDEF is allowed.

See the OTHER option for the SYSOUT JCL sub parameter FORMDEF for determining the action to be taken if the value of SYSOUT JCL sub parameter FORMDEF is not found.

NOALLOW

Specifying NOALLOW disables a previously defined allowlist for the SYSOUT JCL sub parameter FORMDEF

allowlist
> A list of values of SYSOUT JCL sub parameter FORMDEF that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW
> Specifies that a list of values of the SYSOUT JCL sub parameter FORMDEF will be provided and the value of SYSOUT JCL sub parameter FORMDEF will be checked against the disallowlist that follows.
>
> The value of SYSOUT JCL sub parameter FORMDEF is checked to verify that it is not a value that is disallowed. If the value of SYSOUT JCL sub parameter FORMDEF is not found in the disallowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter FORMDEF will determine if the value of SYSOUT JCL sub parameter FORMDEF is allowed.
>
> See the OTHER option for SYSOUT JCL sub parameter FORMDEF for determining the action to be taken if the value of SYSOUT JCL sub parameter FORMDEF is not found in the disallowlist.

NODISALLOW
> Specifying NODISALLOW disables a previously defined disallowlist for the SYSOUT JCL sub parameter FORMDEF

disallowlist
> A list of values of the SYSOUT JCL sub parameter FORMDEF that are disallowed.

CHECK w/list
> Specifies that a list of values of SYSOUT JCL sub parameter FORMDEF will be provided and the value of SYSOUT JCL sub parameter FORMDEF will be checked against the checklist of values that follows.
>
> If the value of SYSOUT JCL sub parameter FORMDEF matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of SYSOUT JCL sub parameter FORMDEF.
>
> If the value of SYSOUT JCL sub parameter FORMDEF is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.
>
> If the value of SYSOUT JCL sub parameter FORMDEF is not defined in the checklist then the OTHER option that is defined for SYSOUT JCL sub parameter FORMDEF will determine if the value of SYSOUT JCL sub parameter FORMDEF is allowed.
>
> See the OTHER option for SYSOUT JCL sub parameter FORMDEF for determining the action to be taken if the value of SYSOUT JCL sub parameter FORMDEF is not found in the checklist.

CHECK wo/list
> If no checklist is provided than the value of SYSOUT JCL sub parameter FORMDEF is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of SYSOUT JCL sub parameter FORMDEF is not defined to the External Security Manager.

NOCHECK

    Specifying NOCHECK disables checking for either CHECK with a checklist or without for the SYSOUT JCL sub parameter FORMDEF values.

    checklist

        A optional list of values of SYSOUT JCL sub parameter FORMDEF that are resource checked against the External Security Manager.

Note: To define the resource SYSOUT JCL sub parameter FORMDEF to the External Security Manager, the resource name is 'JCL.FORMDEF.formdef' where formdef is the value for the SYSOUT JCL sub parameter FORMDEF, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER

    Specifies the action to be taken if a value of SYSOUT JCL sub parameter FORMDEF is not found in an allowlist, disallowlist, or a checklist.

    ALLOW

        Specifies the the value of SYSOUT JCL sub parameter FORMDEF is allowed when it is not found in an allowlist, disallowlist, or a checklist.

    DISALLOW

        Specifies the the value of SYSOUT JCL sub parameter FORMDEF is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

    CHECK

        Specifies the the value of SYSOUT JCL sub parameter FORMDEF is checked against the External Security Manager to determine if the User has access to the resource 'JCL.FORMDEF.formdef' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED

    Specifies the action to be taken if a value of SYSOUT JCL sub parameter FORMDEF is not defined to the External Security Manager when the CHECK option has been specified.

    ALLOW

        Specifies the the value of SYSOUT JCL sub parameter FORMDEF is allowed when it is not defined to the External Security Manager.

    DISALLOW

        Specifies the the value of SYSOUT JCL sub parameter FORMDEF is disallowed when it is not defined to the External Security Manager.

MODIFY

    Specifies validation for the SYSOUT JCL sub parameter MODIFY

NOMODIFY

    Disables validation for the SYSOUT JCL sub parameter MODIFY

    ALLOW

        Specifies that a list of the SYSOUT JCL sub parameter MODIFY values will be provided and the value of SYSOUT JCL sub parameter MODIFY will be checked against the allowlist that follows.

        If the value of SYSOUT JCL sub parameter MODIFY is not found in the allowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter MODIFY will determine if the SYSOUT JCL sub parameter MODIFY is allowed.

See the OTHER option for the SYSOUT JCL sub parameter MODIFY for determining the action to be taken if the value of SYSOUT JCL sub parameter MODIFY is not found.

NOALLOW

Specifying NOALLOW disables a previously defined allowlist for the SYSOUT JCL sub parameter MODIFY

allowlist

A list of values of SYSOUT JCL sub parameter MODIFY that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW

Specifies that a list of values of the SYSOUT JCL sub parameter MODIFY will be provided and the value of SYSOUT JCL sub parameter MODIFY will be checked against the disallowlist that follows.

The value of SYSOUT JCL sub parameter MODIFY is checked to verify that it is not a value that is disallowed. If the value of SYSOUT JCL sub parameter MODIFY is not found in the disallowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter MODIFY will determine if the value of SYSOUT JCL sub parameter MODIFY is allowed.

See the OTHER option for SYSOUT JCL sub parameter MODIFY for determining the action to be taken if the value of SYSOUT JCL sub parameter MODIFY is not found in the disallowlist.

NODISALLOW

Specifying NODISALLOW disables a previously defined disallowlist for the SYSOUT JCL sub parameter MODIFY

disallowlist

A list of values of the SYSOUT JCL sub parameter MODIFY that are disallowed.

CHECK w/list

Specifies that a list of values of SYSOUT JCL sub parameter MODIFY will be provided and the value of SYSOUT JCL sub parameter MODIFY will be checked against the checklist of values that follows.

If the value of SYSOUT JCL sub parameter MODIFY matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of SYSOUT JCL sub parameter MODIFY.

If the value of SYSOUT JCL sub parameter MODIFY is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of SYSOUT JCL sub parameter MODIFY is not defined in the checklist then the OTHER option that is defined for SYSOUT JCL sub parameter MODIFY will determine if the value of SYSOUT JCL sub parameter MODIFY is allowed.

See the OTHER option for SYSOUT JCL sub parameter MODIFY for determining the action to be taken if the value of SYSOUT JCL sub parameter MODIFY is not found in the checklist.

CHECK wo/list

If no checklist is provided than the value of SYSOUT JCL sub parameter MODIFY is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of SYSOUT JCL sub parameter MODIFY is not defined to the External Security Manager.

NOCHECK

Specifying NOCHECK disables checking for either CHECK with a checklist or without for the SYSOUT JCL sub parameter MODIFY values.

checklist

A optional list of values of SYSOUT JCL sub parameter MODIFY that are resource checked against the External Security Manager.

Note: To define the resource SYSOUT JCL sub parameter MODIFY to the External Security Manager, the resource name is 'JCL.MODIFY.modify' where modify is the value for the SYSOUT JCL sub parameter MODIFY, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER

Specifies the action to be taken if a value of SYSOUT JCL sub parameter MODIFY is not found in an allowlist, disallowlist, or a checklist.

ALLOW

Specifies the the value of SYSOUT JCL sub parameter MODIFY is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW

Specifies the the value of SYSOUT JCL sub parameter MODIFY is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

Specifies the the value of SYSOUT JCL sub parameter MODIFY is checked against the External Security Manager to determine if the User has access to the resource 'JCL.MODIFY.modify' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED

Specifies the action to be taken if a value of SYSOUT JCL sub parameter MODIFY is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW

Specifies the the value of SYSOUT JCL sub parameter MODIFY is allowed when it is not defined to the External Security Manager.

DISALLOW

Specifies the the value of SYSOUT JCL sub parameter MODIFY is disallowed when it is not defined to the External Security Manager.

OUTPRTY

Specifies validation for the SYSOUT JCL sub parameter OUTPRTY

NOOUTPRTY

Disables validation for the SYSOUT JCL sub parameter OUTPRTY

ALLOW

Specifies that a list of the SYSOUT JCL sub parameter OUTPRTY values

will be provided and the value of SYSOUT JCL sub parameter OUTPRTY will be checked against the allowlist that follows.

If the value of SYSOUT JCL sub parameter OUTPRTY is not found in the allowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter OUTPRTY will determine if the SYSOUT JCL sub parameter OUTPRTY is allowed.

See the OTHER option for the SYSOUT JCL sub parameter OUTPRTY for determining the action to be taken if the value of SYSOUT JCL sub parameter OUTPRTY is not found.

NOALLOW
Specifying NOALLOW disables a previously defined allowlist for the SYSOUT JCL sub parameter OUTPRTY

allowlist
A list of values of SYSOUT JCL sub parameter OUTPRTY that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW
Specifies that a list of values of the SYSOUT JCL sub parameter OUTPRTY will be provided and the value of SYSOUT JCL sub parameter OUTPRTY will be checked against the disallowlist that follows.

The value of SYSOUT JCL sub parameter OUTPRTY is checked to verify that it is not a value that is disallowed. If the value of SYSOUT JCL sub parameter OUTPRTY is not found in the disallowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter OUTPRTY will determine if the value of SYSOUT JCL sub parameter OUTPRTY is allowed.

See the OTHER option for SYSOUT JCL sub parameter OUTPRTY for determining the action to be taken if the value of SYSOUT JCL sub parameter OUTPRTY is not found in the disallowlist.

NODISALLOW
Specifying NODISALLOW disables a previously defined disallowlist for the SYSOUT JCL sub parameter OUTPRTY

disallowlist
A list of values of the SYSOUT JCL sub parameter OUTPRTY that are disallowed.

CHECK w/list
Specifies that a list of values of SYSOUT JCL sub parameter OUTPRTY will be provided and the value of SYSOUT JCL sub parameter OUTPRTY will be checked against the checklist of values that follows.

If the value of SYSOUT JCL sub parameter OUTPRTY matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of SYSOUT JCL sub parameter OUTPRTY.

If the value of SYSOUT JCL sub parameter OUTPRTY is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of SYSOUT JCL sub parameter OUTPRTY is not defined in the checklist then the OTHER option that is defined for SYSOUT JCL sub parameter OUTPRTY will determine if the value of SYSOUT JCL sub parameter OUTPRTY is allowed.

See the OTHER option for SYSOUT JCL sub parameter OUTPRTY for determining the action to be taken if the value of SYSOUT JCL sub parameter OUTPRTY is not found in the checklist.

CHECK wo/list

If no checklist is provided than the value of SYSOUT JCL sub parameter OUTPRTY is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of SYSOUT JCL sub parameter OUTPRTY is not defined to the External Security Manager.

NOCHECK

Specifying NOCHECK disables checking for either CHECK with a checklist or without for the SYSOUT JCL sub parameter OUTPRTY values.

checklist

A optional list of values of SYSOUT JCL sub parameter OUTPRTY that are resource checked against the External Security Manager.

Note: To define the resource SYSOUT JCL sub parameter OUTPRTY to the External Security Manager, the resource name is 'JCL.OUTPRTY.outprty' where outprty is the value for the SYSOUT JCL sub parameter OUTPRTY, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER

Specifies the action to be taken if a value of SYSOUT JCL sub parameter OUTPRTY is not found in an allowlist, disallowlist, or a checklist.

ALLOW

Specifies the the value of SYSOUT JCL sub parameter OUTPRTY is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW

Specifies the the value of SYSOUT JCL sub parameter OUTPRTY is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

Specifies the the value of SYSOUT JCL sub parameter OUTPRTY is checked against the External Security Manager to determine if the User has access to the resource 'JCL.OUTPRTY.outprty' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED

Specifies the action to be taken if a value of SYSOUT JCL sub parameter OUTPRTY is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW

Specifies the the value of SYSOUT JCL sub parameter OUTPRTY is allowed when it is not defined to the External Security Manager.

DISALLOW

Specifies the the value of SYSOUT JCL sub parameter OUTPRTY is disallowed when it is not defined to the External Security Manager.

PAGEDEF
Specifies validation for the SYSOUT JCL sub parameter PAGEDEF

NOPAGEDEF
Disables validation for the SYSOUT JCL sub parameter PAGEDEF

ALLOW

Specifies that a list of the SYSOUT JCL sub parameter PAGEDEF values will be provided and the value of SYSOUT JCL sub parameter PAGEDEF will be checked against the allowlist that follows.

If the value of SYSOUT JCL sub parameter PAGEDEF is not found in the allowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter PAGEDEF will determine if the SYSOUT JCL sub parameter PAGEDEF is allowed.

See the OTHER option for the SYSOUT JCL sub parameter PAGEDEF for determining the action to be taken if the value of SYSOUT JCL sub parameter PAGEDEF is not found.

NOALLOW

Specifying NOALLOW disables a previously defined allowlist for the SYSOUT JCL sub parameter PAGEDEF

allowlist

A list of values of SYSOUT JCL sub parameter PAGEDEF that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW

Specifies that a list of values of the SYSOUT JCL sub parameter PAGEDEF will be provided and the value of SYSOUT JCL sub parameter PAGEDEF will be checked against the disallowlist that follows.

The value of SYSOUT JCL sub parameter PAGEDEF is checked to verify that it is not a value that is disallowed. If the value of SYSOUT JCL sub parameter PAGEDEF is not found in the disallowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter PAGEDEF will determine if the value of SYSOUT JCL sub parameter PAGEDEF is allowed.

See the OTHER option for SYSOUT JCL sub parameter PAGEDEF for determining the action to be taken if the value of SYSOUT JCL sub parameter PAGEDEF is not found in the disallowlist.

NODISALLOW

Specifying NODISALLOW disables a previously defined disallowlist for the SYSOUT JCL sub parameter PAGEDEF

disallowlist

A list of values of the SYSOUT JCL sub parameter PAGEDEF that are disallowed.

CHECK w/list

Specifies that a list of values of SYSOUT JCL sub parameter PAGEDEF will be provided and the value of SYSOUT JCL sub parameter PAGEDEF will be checked against the checklist of values that follows.

If the value of SYSOUT JCL sub parameter PAGEDEF matches a value in the checklist, then it is also checked against the External Security Man-

ager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of SYSOUT JCL sub parameter PAGEDEF.

If the value of SYSOUT JCL sub parameter PAGEDEF is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of SYSOUT JCL sub parameter PAGEDEF is not defined in the checklist then the OTHER option that is defined for SYSOUT JCL sub parameter PAGEDEF will determine if the value of SYSOUT JCL sub parameter PAGEDEF is allowed.

See the OTHER option for SYSOUT JCL sub parameter PAGEDEF for determining the action to be taken if the value of SYSOUT JCL sub parameter PAGEDEF is not found in the checklist.

CHECK wo/list
If no checklist is provided than the value of SYSOUT JCL sub parameter PAGEDEF is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of SYSOUT JCL sub parameter PAGEDEF is not defined to the External Security Manager.

NOCHECK
Specifying NOCHECK disables checking for either CHECK with a checklist or without for the SYSOUT JCL sub parameter PAGEDEF values.

checklist
A optional list of values of SYSOUT JCL sub parameter PAGEDEF that are resource checked against the External Security Manager.

Note: To define the resource SYSOUT JCL sub parameter PAGEDEF to the External Security Manager, the resource name is 'JCL.PAGEDEF.pagedef' where pagedef is the value for the SYSOUT JCL sub parameter PAGEDEF, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER
Specifies the action to be taken if a value of SYSOUT JCL sub parameter PAGEDEF is not found in an allowlist, disallowlist, or a checklist.

ALLOW
Specifies the the value of SYSOUT JCL sub parameter PAGEDEF is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW
Specifies the the value of SYSOUT JCL sub parameter PAGEDEF is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK
Specifies the the value of SYSOUT JCL sub parameter PAGEDEF is checked against the External Security Manager to determine if the User has access to the resource 'JCL.PAGEDEF.pagedef' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED
Specifies the action to be taken if a value of SYSOUT JCL sub parameter PAGEDEF is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW

Specifies the the value of SYSOUT JCL sub parameter PAGEDEF is allowed when it is not defined to the External Security Manager.

DISALLOW

Specifies the the value of SYSOUT JCL sub parameter PAGEDEF is disallowed when it is not defined to the External Security Manager.

PRMODE

Specifies validation for the SYSOUT JCL sub parameter PRMODE

NOPRMODE

Disables validation for the SYSOUT JCL sub parameter PRMODE

ALLOW

Specifies that a list of the SYSOUT JCL sub parameter PRMODE values will be provided and the value of SYSOUT JCL sub parameter PRMODE will be checked against the allowlist that follows.

If the value of SYSOUT JCL sub parameter PRMODE is not found in the allowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter PRMODE will determine if the SYSOUT JCL sub parameter PRMODE is allowed.

See the OTHER option for the SYSOUT JCL sub parameter PRMODE for determining the action to be taken if the value of SYSOUT JCL sub parameter PRMODE is not found.

NOALLOW

Specifying NOALLOW disables a previously defined allowlist for the SYSOUT JCL sub parameter PRMODE

allowlist

A list of values of SYSOUT JCL sub parameter PRMODE that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW

Specifies that a list of values of the SYSOUT JCL sub parameter PRMODE will be provided and the value of SYSOUT JCL sub parameter PRMODE will be checked against the disallowlist that follows.

The value of SYSOUT JCL sub parameter PRMODE is checked to verify that it is not a value that is disallowed. If the value of SYSOUT JCL sub parameter PRMODE is not found in the disallowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter PRMODE will determine if the value of SYSOUT JCL sub parameter PRMODE is allowed.

See the OTHER option for SYSOUT JCL sub parameter PRMODE for determining the action to be taken if the value of SYSOUT JCL sub parameter PRMODE is not found in the disallowlist.

NODISALLOW

Specifying NODISALLOW disables a previously defined disallowlist for the SYSOUT JCL sub parameter PRMODE

disallowlist

A list of values of the SYSOUT JCL sub parameter PRMODE that are disallowed.

CHECK w/list
> Specifies that a list of values of SYSOUT JCL sub parameter PRMODE will be provided and the value of SYSOUT JCL sub parameter PRMODE will be checked against the checklist of values that follows.

> If the value of SYSOUT JCL sub parameter PRMODE matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of SYSOUT JCL sub parameter PRMODE.

> If the value of SYSOUT JCL sub parameter PRMODE is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

> If the value of SYSOUT JCL sub parameter PRMODE is not defined in the checklist then the OTHER option that is defined for SYSOUT JCL sub parameter PRMODE will determine if the value of SYSOUT JCL sub parameter PRMODE is allowed.

> See the OTHER option for SYSOUT JCL sub parameter PRMODE for determining the action to be taken if the value of SYSOUT JCL sub parameter PRMODE is not found in the checklist.

CHECK wo/list
> If no checklist is provided than the value of SYSOUT JCL sub parameter PRMODE is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of SYSOUT JCL sub parameter PRMODE is not defined to the External Security Manager.

NOCHECK
> Specifying NOCHECK disables checking for either CHECK with a checklist or without for the SYSOUT JCL sub parameter PRMODE values.

> **checklist**
> > A optional list of values of SYSOUT JCL sub parameter PRMODE that are resource checked against the External Security Manager.

Note: To define the resource SYSOUT JCL sub parameter PRMODE to the External Security Manager, the resource name is 'JCL.PRMODE.prmode' where prmode is the value for the SYSOUT JCL sub parameter PRMODE, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER
> Specifies the action to be taken if a value of SYSOUT JCL sub parameter PRMODE is not found in an allowlist, disallowlist, or a checklist.

> **ALLOW**
> > Specifies the the value of SYSOUT JCL sub parameter PRMODE is allowed when it is not found in an allowlist, disallowlist, or a checklist.

> **DISALLOW**
> > Specifies the the value of SYSOUT JCL sub parameter PRMODE is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

> **CHECK**
> > Specifies the the value of SYSOUT JCL sub parameter PRMODE is checked against the External Security Manager to determine if the User has access to the resource 'JCL.PRMODE.prmode' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED
> Specifies the action to be taken if a value of SYSOUT JCL sub parameter PRMODE is not defined to the External Security Manager when the CHECK option has been specified.

> **ALLOW**
>> Specifies the the value of SYSOUT JCL sub parameter PRMODE is allowed when it is not defined to the External Security Manager.

> **DISALLOW**
>> Specifies the the value of SYSOUT JCL sub parameter PRMODE is disallowed when it is not defined to the External Security Manager.

RETPD
> Specifies validation for the JCL parameter RETPD

NORETPD
> Disables validation for the JCL parameter RETPD

> **ALLOW**
>> Specifies that a list of the JCL parameter RETPD values will be provided and the value of JCL parameter RETPD will be checked against the allowlist that follows.

>> If the value of JCL parameter RETPD is not found in the allowlist, then the OTHER option that is defined for JCL parameter RETPD will determine if the JCL parameter RETPD is allowed.

>> See the OTHER option for the JCL parameter RETPD for determining the action to be taken if the value of JCL parameter RETPD is not found.

> **NOALLOW**
>> Specifying NOALLOW disables a previously defined allowlist for the JCL parameter RETPD

>> **allowlist**
>>> A list of values of JCL parameter RETPD that are allowed

> **Note:** ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

> **DISALLOW**
>> Specifies that a list of values of the JCL parameter RETPD will be provided and the value of JCL parameter RETPD will be checked against the disallowlist that follows.

>> The value of JCL parameter RETPD is checked to verify that it is not a value that is disallowed. If the value of JCL parameter RETPD is not found in the disallowlist, then the OTHER option that is defined for JCL parameter RETPD will determine if the value of JCL parameter RETPD is allowed.

>> See the OTHER option for JCL parameter RETPD for determining the action to be taken if the value of JCL parameter RETPD is not found in the disallowlist.

> **NODISALLOW**
>> Specifying NODISALLOW disables a previously defined disallowlist for the JCL parameter RETPD

>> **disallowlist**
>>> A list of values of the JCL parameter RETPD that are disallowed.

CHECK w/list

>Specifies that a list of values of JCL parameter RETPD will be provided and the value of JCL parameter RETPD will be checked against the checklist of values that follows.
>
>If the value of JCL parameter RETPD matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of JCL parameter RETPD.
>
>If the value of JCL parameter RETPD is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.
>
>If the value of JCL parameter RETPD is not defined in the checklist then the OTHER option that is defined for JCL parameter RETPD will determine if the value of JCL parameter RETPD is allowed.
>
>See the OTHER option for JCL parameter RETPD for determining the action to be taken if the value of JCL parameter RETPD is not found in the checklist.

CHECK wo/list

>If no checklist is provided than the value of JCL parameter RETPD is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of JCL parameter RETPD is not defined to the External Security Manager.

NOCHECK

>Specifying NOCHECK disables checking for either CHECK with a checklist or without for the JCL parameter RETPD values.

>**checklist**
>
>>A optional list of values of JCL parameter RETPD that are resource checked against the External Security Manager.

Note: To define the resource JCL parameter RETPD to the External Security Manager, the resource name is 'JCL.RETPD.retpd' where retpd is the value for the JCL parameter RETPD, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER

>Specifies the action to be taken if a value of JCL parameter RETPD is not found in an allowlist, disallowlist, or a checklist.

>**ALLOW**
>
>>Specifies the the value of JCL parameter RETPD is allowed when it is not found in an allowlist, disallowlist, or a checklist.

>**DISALLOW**
>
>>Specifies the the value of JCL parameter RETPD is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

>**CHECK**
>
>>Specifies the the value of JCL parameter RETPD is checked against the External Security Manager to determine if the User has access to the resource 'JCL.RETPD.retpd' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED

>Specifies the action to be taken if a value of JCL parameter RETPD is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW

> Specifies the the value of JCL parameter RETPD is allowed when it is not defined to the External Security Manager.

DISALLOW

> Specifies the the value of JCL parameter RETPD is disallowed when it is not defined to the External Security Manager.

USERLIB

Specifies validation for the SYSOUT JCL sub parameter USERLIB

NOUSERLIB

Disables validation for the SYSOUT JCL sub parameter USERLIB

ALLOW

> Specifies that a list of the SYSOUT JCL sub parameter USERLIB values will be provided and the value of SYSOUT JCL sub parameter USERLIB will be checked against the allowlist that follows.
>
> If the value of SYSOUT JCL sub parameter USERLIB is not found in the allowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter USERLIB will determine if the SYSOUT JCL sub parameter USERLIB is allowed.
>
> See the OTHER option for the SYSOUT JCL sub parameter USERLIB for determining the action to be taken if the value of SYSOUT JCL sub parameter USERLIB is not found.

NOALLOW

> Specifying NOALLOW disables a previously defined allowlist for the SYSOUT JCL sub parameter USERLIB

allowlist

> A list of values of SYSOUT JCL sub parameter USERLIB that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW

> Specifies that a list of values of the SYSOUT JCL sub parameter USERLIB will be provided and the value of SYSOUT JCL sub parameter USERLIB will be checked against the disallowlist that follows.
>
> The value of SYSOUT JCL sub parameter USERLIB is checked to verify that it is not a value that is disallowed. If the value of SYSOUT JCL sub parameter USERLIB is not found in the disallowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter USERLIB will determine if the value of SYSOUT JCL sub parameter USERLIB is allowed.
>
> See the OTHER option for SYSOUT JCL sub parameter USERLIB for determining the action to be taken if the value of SYSOUT JCL sub parameter USERLIB is not found in the disallowlist.

NODISALLOW

> Specifying NODISALLOW disables a previously defined disallowlist for the SYSOUT JCL sub parameter USERLIB

disallowlist

> A list of values of the SYSOUT JCL sub parameter USERLIB that are disallowed.

CHECK w/list

Specifies that a list of values of SYSOUT JCL sub parameter USERLIB will be provided and the value of SYSOUT JCL sub parameter USERLIB will be checked against the checklist of values that follows.

If the value of SYSOUT JCL sub parameter USERLIB matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of SYSOUT JCL sub parameter USERLIB.

If the value of SYSOUT JCL sub parameter USERLIB is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of SYSOUT JCL sub parameter USERLIB is not defined in the checklist then the OTHER option that is defined for SYSOUT JCL sub parameter USERLIB will determine if the value of SYSOUT JCL sub parameter USERLIB is allowed.

See the OTHER option for SYSOUT JCL sub parameter USERLIB for determining the action to be taken if the value of SYSOUT JCL sub parameter USERLIB is not found in the checklist.

CHECK wo/list

If no checklist is provided than the value of SYSOUT JCL sub parameter USERLIB is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of SYSOUT JCL sub parameter USERLIB is not defined to the External Security Manager.

NOCHECK

Specifying NOCHECK disables checking for either CHECK with a checklist or without for the SYSOUT JCL sub parameter USERLIB values.

checklist

A optional list of values of SYSOUT JCL sub parameter USERLIB that are resource checked against the External Security Manager.

Note: To define the resource SYSOUT JCL sub parameter USERLIB to the External Security Manager, the resource name is 'JCL.USERLIB.dsname' where dsname is the value for the SYSOUT JCL sub parameter USERLIB, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER

Specifies the action to be taken if a value of SYSOUT JCL sub parameter USERLIB is not found in an allowlist, disallowlist, or a checklist.

ALLOW

Specifies the the value of SYSOUT JCL sub parameter USERLIB is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW

Specifies the the value of SYSOUT JCL sub parameter USERLIB is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

Specifies the the value of SYSOUT JCL sub parameter USERLIB is checked against the External Security Manager to determine if the User has access to the resource 'JCL.USERLIB.dsname' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED
Specifies the action to be taken if a value of SYSOUT JCL sub parameter USERLIB is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW
Specifies the the value of SYSOUT JCL sub parameter USERLIB is allowed when it is not defined to the External Security Manager.

DISALLOW
Specifies the the value of SYSOUT JCL sub parameter USERLIB is disallowed when it is not defined to the External Security Manager.

UCS Specifies validation for the SYSOUT JCL sub parameter UCS

NOUCS
Disables validation for the SYSOUT JCL sub parameter UCS

ALLOW
Specifies that a list of the SYSOUT JCL sub parameter UCS values will be provided and the value of SYSOUT JCL sub parameter UCS will be checked against the allowlist that follows.

If the value of SYSOUT JCL sub parameter UCS is not found in the allowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter UCS will determine if the SYSOUT JCL sub parameter UCS is allowed.

See the OTHER option for the SYSOUT JCL sub parameter UCS for determining the action to be taken if the value of SYSOUT JCL sub parameter UCS is not found.

NOALLOW
Specifying NOALLOW disables a previously defined allowlist for the SYSOUT JCL sub parameter UCS

allowlist
A list of values of SYSOUT JCL sub parameter UCS that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW
Specifies that a list of values of the SYSOUT JCL sub parameter UCS will be provided and the value of SYSOUT JCL sub parameter UCS will be checked against the disallowlist that follows.

The value of SYSOUT JCL sub parameter UCS is checked to verify that it is not a value that is disallowed. If the value of SYSOUT JCL sub parameter UCS is not found in the disallowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter UCS will determine if the value of SYSOUT JCL sub parameter UCS is allowed.

See the OTHER option for SYSOUT JCL sub parameter UCS for determining the action to be taken if the value of SYSOUT JCL sub parameter UCS is not found in the disallowlist.

NODISALLOW
Specifying NODISALLOW disables a previously defined disallowlist for the SYSOUT JCL sub parameter UCS

disallowlist

A list of values of the SYSOUT JCL sub parameter UCS that are disallowed.

CHECK w/list

Specifies that a list of values of SYSOUT JCL sub parameter UCS will be provided and the value of SYSOUT JCL sub parameter UCS will be checked against the checklist of values that follows.

If the value of SYSOUT JCL sub parameter UCS matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of SYSOUT JCL sub parameter UCS.

If the value of SYSOUT JCL sub parameter UCS is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.

If the value of SYSOUT JCL sub parameter UCS is not defined in the checklist then the OTHER option that is defined for SYSOUT JCL sub parameter UCS will determine if the value of SYSOUT JCL sub parameter UCS is allowed.

See the OTHER option for SYSOUT JCL sub parameter UCS for determining the action to be taken if the value of SYSOUT JCL sub parameter UCS is not found in the checklist.

CHECK wo/list

If no checklist is provided than the value of SYSOUT JCL sub parameter UCS is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of SYSOUT JCL sub parameter UCS is not defined to the External Security Manager.

NOCHECK

Specifying NOCHECK disables checking for either CHECK with a checklist or without for the SYSOUT JCL sub parameter UCS values.

checklist

A optional list of values of SYSOUT JCL sub parameter UCS that are resource checked against the External Security Manager.

Note: To define the resource SYSOUT JCL sub parameter UCS to the External Security Manager, the resource name is 'JCL.UCS.ucs' where ucs is the value for the SYSOUT JCL sub parameter UCS, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER

Specifies the action to be taken if a value of SYSOUT JCL sub parameter UCS is not found in an allowlist, disallowlist, or a checklist.

ALLOW

Specifies the the value of SYSOUT JCL sub parameter UCS is allowed when it is not found in an allowlist, disallowlist, or a checklist.

DISALLOW

Specifies the the value of SYSOUT JCL sub parameter UCS is disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

Specifies the the value of SYSOUT JCL sub parameter UCS is

checked against the External Security Manager to determine if the User has access to the resource 'JCL.UCS.ucs' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED

Specifies the action to be taken if a value of SYSOUT JCL sub parameter UCS is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW

Specifies the the value of SYSOUT JCL sub parameter UCS is allowed when it is not defined to the External Security Manager.

DISALLOW

Specifies the the value of SYSOUT JCL sub parameter UCS is disallowed when it is not defined to the External Security Manager.

WRITER

Specifies validation for the SYSOUT JCL sub parameter WRITER

NOWRITER

Disables validation for the SYSOUT JCL sub parameter WRITER

ALLOW

Specifies that a list of the SYSOUT JCL sub parameter WRITER values will be provided and the value of SYSOUT JCL sub parameter WRITER will be checked against the allowlist that follows.

If the value of SYSOUT JCL sub parameter WRITER is not found in the allowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter WRITER will determine if the SYSOUT JCL sub parameter WRITER is allowed.

See the OTHER option for the SYSOUT JCL sub parameter WRITER for determining the action to be taken if the value of SYSOUT JCL sub parameter WRITER is not found.

NOALLOW

Specifying NOALLOW disables a previously defined allowlist for the SYSOUT JCL sub parameter WRITER

allowlist

A list of values of SYSOUT JCL sub parameter WRITER that are allowed

Note: ALLOW|NOALLOW, DISALLOW|NODISALLOW, and CHECK|NOCHECK are mutually exclusive parameters.

DISALLOW

Specifies that a list of values of the SYSOUT JCL sub parameter WRITER will be provided and the value of SYSOUT JCL sub parameter WRITER will be checked against the disallowlist that follows.

The value of SYSOUT JCL sub parameter WRITER is checked to verify that it is not a value that is disallowed. If the value of SYSOUT JCL sub parameter WRITER is not found in the disallowlist, then the OTHER option that is defined for SYSOUT JCL sub parameter WRITER will determine if the value of SYSOUT JCL sub parameter WRITER is allowed.

See the OTHER option for SYSOUT JCL sub parameter WRITER for determining the action to be taken if the value of SYSOUT JCL sub parameter WRITER is not found in the disallowlist.

NODISALLOW
>
> Specifying NODISALLOW disables a previously defined disallowlist for the SYSOUT JCL sub parameter WRITER

> **disallowlist**
>
>> A list of values of the SYSOUT JCL sub parameter WRITER that are disallowed.

CHECK w/list
>
> Specifies that a list of values of SYSOUT JCL sub parameter WRITER will be provided and the value of SYSOUT JCL sub parameter WRITER will be checked against the checklist of values that follows.
>
> If the value of SYSOUT JCL sub parameter WRITER matches a value in the checklist, then it is also checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET) to determine if the User submitting the Job has access to the value of SYSOUT JCL sub parameter WRITER.
>
> If the value of SYSOUT JCL sub parameter WRITER is undefined to the External Security Manager than the UNDEFINED parameter provides the action to be taken.
>
> If the value of SYSOUT JCL sub parameter WRITER is not defined in the checklist then the OTHER option that is defined for SYSOUT JCL sub parameter WRITER will determine if the value of SYSOUT JCL sub parameter WRITER is allowed.
>
> See the OTHER option for SYSOUT JCL sub parameter WRITER for determining the action to be taken if the value of SYSOUT JCL sub parameter WRITER is not found in the checklist.

CHECK wo/list
>
> If no checklist is provided than the value of SYSOUT JCL sub parameter WRITER is only checked against the External Security Manager, with the UNDEFINED parameter providing the action to be taken if the value of SYSOUT JCL sub parameter WRITER is not defined to the External Security Manager.

NOCHECK
>
> Specifying NOCHECK disables checking for either CHECK with a checklist or without for the SYSOUT JCL sub parameter WRITER values.

> **checklist**
>
>> A optional list of values of SYSOUT JCL sub parameter WRITER that are resource checked against the External Security Manager.

Note: To define the resource SYSOUT JCL sub parameter WRITER to the External Security Manager, the resource name is 'JCL.WRITER.writer' where writer is the value for the SYSOUT JCL sub parameter WRITER, using the FACILITY class for RACF and CA-ACF2 or IBMFAC for CA-TOPSECRET.

OTHER
>
> Specifies the action to be taken if a value of SYSOUT JCL sub parameter WRITER is not found in an allowlist, disallowlist, or a checklist.

> **ALLOW**
>
>> Specifies the the value of SYSOUT JCL sub parameter WRITER is allowed when it is not found in an allowlist, disallowlist, or a checklist.

> **DISALLOW**
>
>> Specifies the the value of SYSOUT JCL sub parameter WRITER is

disallowed when it is not found in an allowlist, disallowlist, or a checklist.

CHECK

Specifies the the value of SYSOUT JCL sub parameter WRITER is checked against the External Security Manager to determine if the User has access to the resource 'JCL.WRITER.writer' which is not found in an allowlist, disallowlist, or a checklist.

UNDEFINED

Specifies the action to be taken if a value of SYSOUT JCL sub parameter WRITER is not defined to the External Security Manager when the CHECK option has been specified.

ALLOW

Specifies the the value of SYSOUT JCL sub parameter WRITER is allowed when it is not defined to the External Security Manager.

DISALLOW

Specifies the the value of SYSOUT JCL sub parameter WRITER is disallowed when it is not defined to the External Security Manager.

DDNAME Example

The following command will activate the OS/EM optional processing for checking DDNAMES. The DDNAMES are checked against the External Security Manager (RACF, CA-ACF2, CA-TOPSECRET). The resource names 'JCL.DDNAMES.STEPCAT' and 'JCL.DDNAMES.JOBCAT' are defined to the External Security Manager with no access allowed, so that these JCL parameters cannot be used, with Undefined DDNAMES allowed.

```
OS$CNTL JES2(EXITS(EXIT6(OPTIONS(JCL  -
   DDNAMES(CHECK UNDEFINED(ALLOW))))))
```

EXIT9

The optional **SYSOUT EXTENSION** function of EXIT9 enables the user to allow sysout extensions based on jobname, program, sysout (message) class or jobclass. Entries have been provided to give extensions based on number of lines, pages or bytes.

A Default entry may be provided to cover all but specific jobs, or you may define a RACF resource to control jobs not specifically selected.

Note: Activating this option may result in jobs ending with an S722 ABEND even if your JESPARMS are set to allow jobs to continue as EXIT9 will override the ABEND/CONTINUE setting.

```
OS$CNTL JES2                                                    -
        {JESName(XXXX {YYYYY})}                                 -
        {NOABendnotify|ABendnotify(                             -
           0|*|id1 {0|*|id2 {0|*|id3}} ) }                      -
        {LIBrary(library.dsn)}                                  -
        {NOAUtoinstall|AUtoinstall}                             -
         NOEXIT9|EXIT9(                                         -
           {ENable|DISABLE}                                     -
           {NOAUtoinstall|AUinstall}                            -
           {NUmber( num1 num2 num3 )}                           -
           {NOExits|Exits(                                      -
               lmod:exit1|*|0                                     -
              {lmod:exit2|*|0                                     -
              {lmod:exit3|*|0}})}                                 -
           {NOBAckups|BAckups(                                  -
               lmod:exit1|*|0                                     -
              {lmod:exit2|*|0                                     -
              {lmod:exit3|*|0}})}                                 -
           {NOABendnotify|ABendnotify(                          -
              (id1a|*|0 {id1b|*|0 {id1c|*|0}})                    -
              (id2a|*|0 {id2b|*|0 {id2c|*|0}})                    -
              (id3a|*|0 {id3b|*|0 {id3c|*|0}})})                  -
           {NOLIMits|LIMits(                                    -
               (jobmask1,...)|*|0                                 -
              {(jobmask2,...)|*|0                                 -
              {(jobmask3,...)|*|0}})}                             -
           {NOVAlidrc|VAlidrc(rc,...)}                          -
           {NOGOodrc|GOodrc(rc,...)}                            -
           {NODISablerc|DISABLERc(rc)}                          -
           {DEFaultrc(rc)}                                      -
           {Key(0|1)}}                                          -
           {JOBnameloc(jobnamelocspec)}                         -
            {NOOPTions|OPTions(                                 -
                   {FIrst|LAst}                                 -
                   {NOABendnotify|ABendnotify(                  -
                      *|0|id1 {*|0|id2 {*|0|id3}} ) }            -
                   {NOWEight|WEight(                             -
                      {SYsout(n)}                                -
                      {PRogram(n)}                               -
                      {JOBNAme(n)}                               -
                      {JOBCLass(n)} )}                           -
                   {NOEXTension|EXTension(                       -
                      {LInes(lines)}                             -
                      {PAges(pages)}                             -
                      {BYtes(bytes)}                             -
                      {NOWTO|WTO}                                -
```

```
                            {NOWTOR│WTOR(nn)}   )}                         –
    Extensions 1 thru 32
                    {NOEXtension__│EXtension__(                            –
                        {LInes(lines)}                                     –
                        {PAges(pages)}                                     –
                        {BYtes(bytes)}                                     –
                        {NOWTO│WTO}                                        –
                        {NOWTOR│WTOR(nn)}                                  –
                        {NOSYsout│SYsout(                                  –
                            INClude(class,...)│EXClude(class,...))}        –
                        {NOJOBCLass│JOBCLass(                              –
                            INClude(jobcls,...)│EXClude(jobcls,...))}-
                        {NOJOBNAme│JOBNAme(                                –
                            INClude(jobnme,...)│EXClude(jobnme,...))}-
                        {NOPRogram│PRogram(                                –
                            INClude(pgmnme,...)│EXClude(pgmnme,...))}-
    RACF Entry
                    {NORAcf│RAcf(                                          –
                        {lines}                                           –
                        {NOWTO│WTO}                                       –
                        {NOWTOR│WTOR(nn)}                                  –
                        RESource(resource) ) }
```

JESNAME(XXXX YYYYY)
> Optional keyword which indicates that you are supplying the name of the JES2 sub-
> system the command applies to. JES2 is the default.

XXXX   The four character identifier for this JES2 subsystem.

YYYYY   The optional JES2 version. This is used to tell OS/EM what level of code to use before
               the subsystem actually starts. If there is a mismatch when the subsystem starts, only
               the OS/EM code is reloaded. Acceptable values are:

- OS270

- OS280

- OS210

- ZS102

- ZS104

- ZS105

LIBRARY   Specifies the loading of an User exit module from a private Authorized library named
               library.dsn. If this parameter is omitted then the normal MVS search criteria is used
               for loading User exit modules.

> **library.dsn**
> > Specifies the name of a private Authorized library named. The library name
> > should be enclosed in single quotes (').

ABENDNOTIFY
> Specifies that a TSO message will be sent if any JES2 exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for JES2 exit ABENDs.

> > **id1, id2, id3**   You may specify up to three TSO IDs or notification group names
> >   to be notified in the case of an ABEND. (See "NFYGROUPS" on
> >   page SYS-1.)

AUTOINSTALL

This option tells OS/EM to add any user exits specified in JESPARMS to OS/EM's internal control blocks as if the exits had been specifically defined by **OS$CNTL JES2** commands.

Note: AUTOINSTALL is the default, and it must be active at this level to allow use of the AUTOINSTALL option at the individual exit point level.

NOAUTOINSTALL

If NOAUTOINSTALL is specified, user exits in JESPARMS will not be controlled by OS/EM and the use of AUTOINSTALL at the exit point level is disabled.

EXIT00 ...

EXIT255   Specifies which of the JES2 exits - exits 0 through 255 - are to be activated.

NOEXIT00 ...

NOEXIT255   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   ENABLE causes an exitpoint to be enabled after a failure of the OS/EM exit controller caused the exit to be disabled. Due to the exit environment JES2 establishes, merely reloading the exit controller will not automatically activate the associated user exits as is the case with the other, non-JES2, points. Use of this keyword will activate an exit after the controller has been reloaded.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously, are retained and will not have to be re-specified if the exit is enabled again.

Note: If you have any questions as to the state of a particular JES2 exit, a QUERY command may be issued for the exit. If the exit is marked as DISABLED, issue a JES2 command for the exit with the ENABLE keyword.

An example of the QUERY command for JES2 EXIT2 would be:

```
OS$CNTL QUERY JES2(EXIT2)
```

AUTOINSTALL

If specified, any user exits found in JESPARMS for this exit point will automaticaly be controlled by OS/EM without the need to specify them via **OS$CNTL JES2** commands.

Note: AUTOINSTALL must be specified (or defaulted) at the top level for this JES to allow use at the exit point level.

NOAUTOINSTALL

If specified, user exits for this exit point found in JESPARMS will be ignored by OS/EM.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e.

NUMBER(7) OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS Specifies that any active JES2 EXIT9 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of JES2 EXIT9 user exits are to be activated. This can be specified at initialization, or later to load and activate JES2 EXIT9 user exits that were not activated at initialization. The exits will be called in the order listed.

lmod:exit1

lmod:exit2

lmod:exit3
The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.

This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

* An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

0 A zero (0) can be used to inactivate and delete a previously specified JES2 exit.

Note: JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

NOBACKUP Specifies that any active backup user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup user exits are to be activated. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. The backup User exit modules will be called in the order listed.

lmod:exit1

lmod:exit2

lmod:exit3
The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.

Note: This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

* An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

0 A zero (0) can be used to inactivate and delete a previously specified JES2 exit.

> **Note:** JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

ABENDNOTIFY

Specifies that when a JES2 EXIT6 Optional exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a JES2 EXIT6 Optional exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of JES2 EXIT6 Optional exit module ABENDs.

> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

> **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*
An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT
Specifies that Job name limits are requested, to limit user exit modules for JES2 EXIT9 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT
The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*
An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC
Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes

for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. Use this option with extreme caution.

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

       rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by JES2 user exit modules. A good return code allows subsequent JES2 user exit modules to be called. OS/EM provides a default list. For example, if a JES2 user exit for JES2 EXIT9 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

       rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules, that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
       NODISABLERC turns off disable return code checking for the exit point.

       rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. Use this option with extreme caution.

       rc   Default return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

KEY   Specifies the storage key for this JES2 exit, this is provided for user exit modules that are reentrant in the JES2 sense. Also see IBM JES2 User Modifications and Macros for further detail.

       Note: OS/EM recommends all JES2 exits be MVS reentrant and avoid using the KEY option.

       0   Specifies the JES2 User exit user be loaded data into key 0 storage.

       1   Specifies the JES2 User exit user will be loaded into key 1 storage.

JOBNAMELOC

       jobnamelocspec
       Specifies the location of the Jobname specified using TSO TEST addressing specification parameters. This parameter should be used with extreme caution as any miscalculation may not be pointing to the Jobname.

EXIT9 Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for JES2 EXIT9

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for JES2 EXIT9.

               Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

ABENDNOTIFY

               Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY

               The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

               Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

               id1 id2 id3

                    The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

               '*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

               0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

FIRST

LAST   Specifies whether the optional OS/EM JCL Standards functions for JES2 EXIT9 will be applied before or after the user exits are invoked.

               Note: OS/EM control functions are invoked FIRST by default.

TRACE   Write GTF Trace records for critical control blocks, used in Problem Determination for OS/EM Optional functions in conjunction with OS/EM support.

NOTRACE   Disables GTF trace records (This is the default)

WEIGHT   Specifies which type of include/exclude list will be given the most weight when determining which extension list group to use.

               SYSOUT(n)
                    Specify the weight to be added to a SYSOUT class include/exclude list. Enter a number from 1 to 4.

               PROGRAM(n)
                    Specify the weight to be added to a PROGRAM name include/exclude list. Enter a number from 1 to 4.

               JOBNAME(n)
                    Specify the weight to be added to a JOBNAME include/exclude list. Enter a number from 1 to 4.

               JOBCLASS(n)
                    Specify the weight to be added to a JOBCLASS include/exclude list. Enter a number from 1 to 4.

EXTENSION   Specify the default options to use if no extension list group matches the current job. Avoid S722 abends.

NOEXTENSION

Nullifies the default options.

LINES

lines Enter the number of lines by which a job's sysout will be allowed to extend.

PAGES

pages

Enter the number of pages by which a job's sysout will be allowed to extend.

BYTES

bytes

Enter the number of bytes by which a job's sysout will be allowed to extend.

WTO

Specifies that a WTO be written for each sysout extension that is performed. See message OS$USO149.

NOWTO

Specifying NOWTO disables the WTO for each sysout extension thas is performed.

WTOR(nn)

Specifies that a WTO and a reply to either continue the job or cancel it will be requested from the operator after nn sysout extensions are performed. See message OS$USO152.

NOWTOR

Specifying NOWTOR disables the WTOR option.

EXTENSION1-32

NOEXTENSION1-32

Allows the creation of up to 32 control definitions (selection groups) based on a list of sysout classes, program names, jobnames or job classes.

Specifying NOEXTENSION1-NOEXTENSION32 nullifies the named option.

LINES

lines Enter the number of lines by which a jobs sysout will be allowed to extend.

PAGES

pages

Enter the number of pages by which a jobs sysout will be allowed to extend.

BYTES

> **bytes**
>> Enter the number of bytes by which a jobs sysout will be allowed to extend.

WTO
> Specifies that a WTO be written for each sysout extension that is performed. See message OS$USO149.

NOWTO
> Specifying NOWTO disables the WTO for each sysout extension thas is performed.

WTOR(nn)
> Specifies that a WTO and a reply to either continue the job or cancel it will be requested from the operator after nn sysout extensions are performed. See message OS$USO152.

NOWTOR
> Specifying NOWTOR disables the WTOR option.

SYSOUT
> Specifies which SYSOUT classes will have their sysout limit extended. You may specify either an include or exclude list of sysout classes.

NOSYSOUT
> Specifying NOSYSOUT nullifies this option.

> **INC**

> **EXC**
>> Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection criteria. An exclude list states that all items not in the list will be used.

>> **class** Specify the sysout classes for this list. You may specify the classes as a range by separating the first and last class with a ':' (colon). i.e. D:F will cause classes D, E and F to be included in the list.

JOBCLASS
> Specifies which Jobclasses will have their sysout limit extended. You may specify either an include or exclude list of jobclasses.

NOJOBCLASS
> Specifying NOJOBCLASS nullifies this option.

> **INC**

> **EXC**
>> Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection criteria. An exclude list states that all items not in the list will be used.

>> **jobclass**
>>> Specifies which Jobclasses will have their sysout limit extended. Jobclasses may be entered in a range, i.e. D:F would have classes D, E and F added to the list.

JOBNAME
> Specifies by Jobname, which jobs will have their sysout limit extended. You may specify either an include or exclude list of jobnames.

NOJOBNAME
>> Specifying NOJOBNAME nullifies this option.

>> **INC**

>> **EXC**
>>> Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection criteria. An exclude list states that all items not in the list will be used.

>>> **jobname**
>>>> Specifies which jobs will have their sysout limit extended. Jobnames may be entered as a mask.

PROGRAM
>> Specifies by Program name, which jobs will have their sysout limit extended. You may specify either an include or exclude list of program names.

NOPROGRAM
>> Specifying NOPROGRAM nullifies this option.

>> **INC**

>> **EXC**
>>> Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection criteria. An exclude list states that all items not in the list will be used.

>>> **pgmname**
>>>> Specifies which programs will have their sysout limit extended. Program names may be entered as a mask.

RACF   A RACF resource may be specified which controls sysout extensions. This resource is only checked if no other matching entries are found.

NORACF   Entering NORACF nullifies this option.

>> **lines** Enter the number of lines by which a jobs sysout will be allowed to extend.

>> **WTO**
>>> Specifies that a WTO be written for each sysout extension that is performed. See message OS$USO149.

>> **NOWTO**
>>> Specifying NOWTO disables the WTO for each sysout extension thas is performed.

>> **WTOR(nn)**
>>> Specifies that a WTO and a reply to either continue the job or cancel it will be requested from the operator after nn sysout extensions are performed. See message OS$USO152.

>> **NOWTOR**
>>> Specifying NOWTOR disables the WTOR option.

>> **RESOURCE**
>>> Specify the name of the RACF FACILITY class resource being used to control Sysout Extensions.

EXIT10

OS/EM provides basic exit support for EXIT10, however OS/EM has its own exit here to support other extended functions.

```
OS$CNTL JES2                                                        -
        {JESName(XXXX {YYYYY})}                                     -
        {NOABendnotify|ABendnotify(                                 -
           0|*|id1 {0|*|id2 {0|*|id3}} ) }                         -
        {LIBrary(library.dsn)}                                      -
        {NOAUtoinstall|AUtoinstall}                                 -
         NOEXIT10|EXIT10(                                           -
           {ENable|DISABLE}                                         -
           {NOAUtoinstall|AUinstall}                                -
           {NUmber( num1 num2 num3 )}                               -
           {NOExits|Exits(                                          -
               lmod:exit1|*|0                                          -
              {lmod:exit2|*|0                                          -
              {lmod:exit3|*|0}})}                                      -
           {NOBAckups|BAckups(                                      -
               lmod:exit1|*|0                                          -
              {lmod:exit2|*|0                                          -
              {lmod:exit3|*|0}})}                                      -
           {NOABendnotify|ABendnotify(                              -
              (id1a|*|0 {id1b|*|0 {id1c|*|0}})                         -
              (id2a|*|0 {id2b|*|0 {id2c|*|0}})                         -
              (id3a|*|0 {id3b|*|0 {id3c|*|0}})})                       -
           {NOLIMits|LIMits(                                        -
               (jobmask1,...)|*|0                                      -
              {(jobmask2,...)|*|0                                      -
              {(jobmask3,...)|*|0}})}                                  -
           {NOVAlidrc|VAlidrc(rc,...)}                              -
           {NOGOodrc|GOodrc(rc,...)}                                -
           {NODISablerc|DISABLERc(rc)}                              -
           {DEFaultrc(rc)}                                          -
           {Key(0|1)}}                                              -
           {JOBnameloc(jobnamelocspec)}                             -
           {OPTions|NOOptions(                                      -
              {FIrst|LAst}                                          -
              {NOABendnotify|ABendnotify(                           -
                 *|0|id1 {*|0|id2 {*|0|id3}} ) }  ) }
```

JESNAME(XXXX YYYYY)

> Optional keyword which indicates that you are supplying the name of the JES2 subsystem the command applies to. JES2 is the default.

XXXX   The four character identifier for this JES2 subsystem.

YYYYY   The optional JES2 version. This is used to tell OS/EM what level of code to use before the subsystem actually starts. If there is a mismatch when the subsystem starts, only the OS/EM code is reloaded. Acceptable values are:

- OS270

- OS280

- OS210

- ZS102

- ZS104

- ZS105

LIBRARY   Specifies the loading of an User exit module from a private Authorized library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for loading User exit modules.

    library.dsn

        Specifies the name of a private Authorized library named. The library name should be enclosed in single quotes (').

ABENDNOTIFY

    Specifies that a TSO message will be sent if any JES2 exit ABENDs.

NOABENDNOTIFY

    Specifies that no messages will be sent for JES2 exit ABENDs.

    id1, id2, id3   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

AUTOINSTALL

    This option tells OS/EM to add any user exits specified in JESPARMS to OS/EM's internal control blocks as if the exits had been specifically defined by **OS$CNTL JES2** commands.

    Note: AUTOINSTALL is the default, and it must be active at this level to allow use of the AUTOINSTALL option at the individual exit point level.

NOAUTOINSTALL

    If NOAUTOINSTALL is specified, user exits in JESPARMS will not be controlled by OS/EM and the use of AUTOINSTALL at the exit point level is disabled.

EXIT00 ...

EXIT255   Specifies which of the JES2 exits - exits 0 through 255 - are to be activated.

NOEXIT00 ...

NOEXIT255   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   ENABLE causes an exitpoint to be enabled after a failure of the OS/EM exit controller caused the exit to be disabled. Due to the exit environment JES2 establishes, merely reloading the exit controller will not automatically activate the associated user exits as is the case with the other, non-JES2, points. Use of this keyword will activate an exit after the controller has been reloaded.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously, are retained and will not have to be re-specified if the exit is enabled again.

    Note: If you have any questions as to the state of a particular JES2 exit, a QUERY command may be issued for the exit. If the exit is marked as DISABLED, issue a JES2 command for the exit with the ENABLE keyword.

    An example of the QUERY command for JES2 EXIT2 would be:

```
OS$CNTL QUERY JES2(EXIT2)
```

AUTOINSTALL

    If specified, any user exits found in JESPARMS for this exit point will automaticaly

be controlled by OS/EM without the need to specify them via **OS$CNTL JES2** commands.

> **Note:** AUTOINSTALL must be specified (or defaulted) at the top level for this JES to allow use at the exit point level.

NOAUTOINSTALL

If specified, user exits for this exit point found in JESPARMS will be ignored by OS/EM.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

> **num1, num2, num3**
>
> > Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
> >
> > If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active JES2 EXIT10 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of JES2 EXIT10 user exits are to be activated. This can be specified at initialization, or later to load and activate JES2 EXIT10 user exits that were not activated at initialization. The exits will be called in the order listed.

> **lmod:exit1**
>
> **lmod:exit2**
>
> **lmod:exit3**
> > The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.
> >
> > This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.
>
> **0**   A zero (0) can be used to inactivate and delete a previously specified JES2 exit.
>
> > **Note:** JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

NOBACKUP   Specifies that any active backup user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup user exits are to be activated. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. The backup User exit modules will be called in the order listed.

lmod:exit1

lmod:exit2

lmod:exit3
   The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.

   Note: This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

0   A zero (0) can be used to inactivate and delete a previously specified JES2 exit.

   Note: JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

ABENDNOTIFY
   Specifies that when a OS/EM Optional EXIT9 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a OS/EM Optional EXIT9 exit module has ABENDed.

NOABENDNOTIFY
   The NO option can be used to nullify the option to notify a TSO user of OS/EM Optional EXIT9 exit module ABENDs.

   Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

   (id1a,id1b,id1c)
      The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

   (id2a,id2b,id2c)
      The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

   (id3a,id3b,id3c)
      The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

      Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for JES2 EXIT10 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
>   The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

> **0**   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. Use this option with extreme caution.

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

> **rc**   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by JES2 user exit modules. A good return code allows subsequent JES2 user exit modules to be called. OS/EM provides a default list. For example, if a JES2 user exit for JES2 EXIT10 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

> **rc**   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules, that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
>   NODISABLERC turns off disable return code checking for the exit point.

> **rc**   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. Use this option with extreme caution.

> **rc**   Default return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

KEY   Specifies the storage key for this JES2 exit, this is provided for user exit modules that are reentrant in the JES2 sense. Also see IBM JES2 User Modifications and Macros for further detail.

Note: OS/EM recommends all JES2 exits be MVS reentrant and avoid using the KEY option.

0   Specifies the JES2 User exit user be loaded data into key 0 storage.

1   Specifies the JES2 User exit user will be loaded into key 1 storage.

JOBNAMELOC

jobnamelocspec
Specifies the location of the Jobname specified using TSO TEST addressing specification parameters. This parameter should be used with extreme caution as any miscalculation may not be pointing to the Jobname.

EXIT10 Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for JES2 EXIT10

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for JES2 EXIT10.

Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

FIRST

LAST   Specifies whether the optional OS/EM JCL Standards functions for JES2 EXIT10 will be applied before or after the user exits are invoked.

Note: OS/EM control functions are invoked FIRST by default.

ABENDNOTIFY
Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3
The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

EXIT14

OS/EM provides several optional functions via EXIT14:

- Job Limits by User

- Program Limits

- HSM Early Batch Recall

The optional **LIMIT** function of EXIT14 enables a customer to control the number of jobs that each job owner may have executing at a time. The job owner is determined from the job card parameter 'USER'. This parameter may be hard coded on the job card or created by the system when the parameter is omitted. This control will determine the number of jobs currently running by checking the LOCAL system, each system in a Multiple Access Spool environment (MAS), or selected system IDs. Additionally, the control can be limited to specific job classes, selected job names, certain user ID's and limited by time of day by day of week.

The optional **PGMLIMIT** function of EXIT14 enables a customer to control the number of jobs executing a specified program locally and/or within a MAS.

The optional **HSMRECALL** function will check all existing datasets used within a job at conversion time and immediately issue HSM RECALL commands for datasets which have been migrated. It will also prevent the job from executing until the datasets have been recalled.

```
OS$CNTL JES2                                                         -
        {JESName(XXXX {YYYYY})}                                      -
        {NOABendnotify|ABendnotify(                                  -
           0|*|id1 {0|*|id2 {0|*|id3}} ) }                          -
        {LIBrary(library.dsn)}                                       -
        {NOAUtoinstall|AUtoinstall}                                  -
         NOEXIT14|EXIT14(                                            -
           {ENable|DISABLE}                                          -
           {NOAUtoinstall|AUinstall}                                 -
           {NUmber( num1 num2 num3 )}                                -
           {NOExits|Exits(                                           -
               lmod:exit1|*|0                                       -
              {lmod:exit2|*|0                                       -
              {lmod:exit3|*|0}})}                                   -
           {NOBAckups|BAckups(                                       -
               lmod:exit1|*|0                                       -
              {lmod:exit2|*|0                                       -
              {lmod:exit3|*|0}})}                                   -
           {NOABendnotify|ABendnotify(                               -
              (id1a|*|0 {id1b|*|0 {id1c|*|0}})                      -
              (id2a|*|0 {id2b|*|0 {id2c|*|0}})                      -
              (id3a|*|0 {id3b|*|0 {id3c|*|0}})})                    -
           {NOLIMits|LIMits(                                         -
               (jobmask1,...)|*|0                                   -
              {(jobmask2,...)|*|0                                   -
              {(jobmask3,...)|*|0}})}                               -
           {NOVAlidrc|VAlidrc(rc,...)}                               -
           {NOGOodrc|GOodrc(rc,...)}                                 -
           {NODISablerc|DISABLERc(rc)}                               -
           {DEFaultrc(rc)}                                           -
           {Key(0|1)}}                                               -
           {JOBnameloc(jobnamelocspec)}                              -
           {OPTions|NOOptions(                                       -
               {FIrst|LAst}                                          -
```

```
                {NOABendnotify|ABendnotify(                             —
                   *|0|id1 {*|0|id2 {*|0|id3}} ) }                      —
                {NOLImit|LImit(                                         —
                   {SCheme(                                             —
                      BEst(                                             —
                        {DAyesN)}                                       —
                        {JOBClass(N)}                                   —
                        {USerid(N)}                                     —
                        {JOBName(N)} )                                  —
                       | LIberal | COnservative )}                     —
                   {NOLImit__|LImit__(                                  —
                     {NNN {NNN}}                                        —
                     {NOJOBClass|JOBClass(                              —
                        INC(X,X,...) | EXC(X,X,...) )}                  —
                     {NOJOBName|JOBName(                                —
                        INC(XXX,XXX,...) | EXC(XXX,XXX,...) )}          —
                     {NOUSerid|USerid(                                  —
                        INC(XXX,XXX,...) | EXC(XXX,XXX,...) )}          —
                     {NODAys|DAys(                                      —
                        0|*|NNNN:NNNN,...  )}                           —
                     {SCope(MAS|LOCAL|SIDS(XXX,XXX,...)                 —
                          {NOJOBClasses | JOBClasses(X,X,...)} )}       —
                   {NORAcflimit|RAcflimit(                              —
                     {LOG|NOLOG}                                        —
                     {REsource(XXXXXXXX)} )}  )}                        —
                {NOPGmlimit|PGmlimit(                                   —
                   {NOLIMchgmsg|LIMchgmsg}                              —
                   {pgmname(                        < PROGRAM NAME >    —
                      NOLImit|lll|*                 < LOCAL LIMIT  >    —
                      NOLImit|mmm|*                 < MAS   LIMIT  >    —
                           ) } ) }                                      —
                {NOHSmrecall|HSmrecall(                                 —
                   {NOOWnermsg|OWnermsg}                                —
                   {NOHRECALLWto|HRECALLWto}                            —
                   {NOHRECALLLogmsg|HRECALLLogmsg}                      —
                   {NORECHeckall|RECHeckall}                            —
                   {NOIGnorerecallfail|IGnorerecallfail}               —
                   {NOLOcalrecall|LOcalrecall}                         —
                   {NOWAit|WAit(                                        —
                      {NOONLYTape|ONLYTape}                             —
                      {NOONLYFirst|ONLYFirst}                           —
                      {NOCOndonly|COndonly} )}                          —
                   {NOONlyrecallfirst|ONlyrecallfirst}                 —
                   {NOCOndonly|COndonly}                                —
                   {GDginterval(nnn)}                                   —
                   {DSninterval(nnn)} )}                                —
                        ) }
```

JESNAME(XXXX YYYYY)

Optional keyword which indicates that you are supplying the name of the JES2 sub-system the command applies to. JES2 is the default.

XXXX　　　　The four character identifier for this JES2 subsystem.

YYYYY　　　　The optional JES2 version. This is used to tell OS/EM what level of code to use before the subsystem actually starts. If there is a mismatch when the subsystem starts, only the OS/EM code is reloaded. Acceptable values are:

- OS270

- OS280

- OS210

- ZS102

- ZS104

- ZS105

LIBRARY   Specifies the loading of an User exit module from a private Authorized library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for loading User exit modules.

> **library.dsn**
>> Specifies the name of a private Authorized library named. The library name should be enclosed in single quotes (').

ABENDNOTIFY
> Specifies that a TSO message will be sent if any JES2 exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for JES2 exit ABENDs.

>> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

AUTOINSTALL
> This option tells OS/EM to add any user exits specified in JESPARMS to OS/EM's internal control blocks as if the exits had been specifically defined by **OS$CNTL JES2** commands.

> **Note:** AUTOINSTALL is the default, and it must be active at this level to allow use of the AUTOINSTALL option at the individual exit point level.

NOAUTOINSTALL
> If NOAUTOINSTALL is specified, user exits in JESPARMS will not be controlled by OS/EM and the use of AUTOINSTALL at the exit point level is disabled.

EXIT00 ...

EXIT255   Specifies which of the JES2 exits - exits 0 through 255 - are to be activated.

NOEXIT00 ...

NOEXIT255   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   ENABLE causes an exitpoint to be enabled after a failure of the OS/EM exit controller caused the exit to be disabled. Due to the exit environment JES2 establishes, merely reloading the exit controller will not automatically activate the associated user exits as is the case with the other, non-JES2, points. Use of this keyword will activate an exit after the controller has been reloaded.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously, are retained and will not have to be re-specified if the exit is enabled again.

> **Note:** If you have any questions as to the state of a particular JES2 exit, a QUERY command may be issued for the exit. If the exit is marked as DISABLED, issue a JES2 command for the exit with the ENABLE keyword.

> An example of the QUERY command for JES2 EXIT2 would be:

```
OS$CNTL QUERY JES2(EXIT2)
```

AUTOINSTALL

If specified, any user exits found in JESPARMS for this exit point will automaticaly be controlled by OS/EM without the need to specify them via **OS$CNTL JES2** commands.

Note: AUTOINSTALL must be specified (or defaulted) at the top level for this JES to allow use at the exit point level.

NOAUTOINSTALL

If specified, user exits for this exit point found in JESPARMS will be ignored by OS/EM.

NUMBER You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS Specifies that any active JES2 EXIT14 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of JES2 EXIT14 user exits are to be activated. This can be specified at initialization, or later to load and activate JES2 EXIT14 user exits that were not activated at initialization. The exits will be called in the order listed.

lmod:exit1

lmod:exit2

lmod:exit3

The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.

This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

* An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

0 A zero (0) can be used to inactivate and delete a previously specified JES2 exit.

Note: JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

NOBACKUP Specifies that any active backup user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup user exits are to be activated. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. The backup User exit modules will be called in the order listed.

> **lmod:exit1**

> **lmod:exit2**

> **lmod:exit3**
> The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.

> **Note:** This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

> **0** A zero (0) can be used to inactivate and delete a previously specified JES2 exit.

> **Note:** JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

ABENDNOTIFY
> Specifies that when a JES2 EXIT10 Optional exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a JES2 EXIT10 Optional exit module has ABENDed.

NOABENDNOTIFY
> The NO option can be used to nullify the option to notify a TSO user of JES2 EXIT10 Optional exit module ABENDs.

> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.

> **(id1a,id1b,id1c)**
> The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

> **(id2a,id2b,id2c)**
> The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

> **(id3a,id3b,id3c)**
> The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

> **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.

> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

> **0** A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT Specifies that Job name limits are requested, to limit user exit modules for JES2 EXIT14 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

        jobmask1

        jobmask2

        jobmask3
> The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

        *
> An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0
> A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. Use this option with extreme caution.

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

        rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by JES2 user exit modules. A good return code allows subsequent JES2 user exit modules to be called. OS/EM provides a default list. For example, if a JES2 user exit for JES2 EXIT14 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

        rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules, that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
> NODISABLERC turns off disable return code checking for the exit point.

        rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. Use this option with extreme caution.

        rc   Default return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

KEY   Specifies the storage key for this JES2 exit, this is provided for user exit modules that are reentrant in the JES2 sense. Also see IBM JES2 User Modifications and Macros for further detail.

Note: OS/EM recommends all JES2 exits be MVS reentrant and avoid using the KEY option.

0   Specifies the JES2 User exit user be loaded data into key 0 storage.

1   Specifies the JES2 User exit user will be loaded into key 1 storage.

JOBNAMELOC

jobnamelocspec
Specifies the location of the Jobname specified using TSO TEST addressing specification parameters. This parameter should be used with extreme caution as any miscalculation may not be pointing to the Jobname.

EXIT14 Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for JES2 EXIT14

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for JES2 EXIT14.

Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

FIRST

LAST   Specifies whether the optional OS/EM JCL Standards functions for JES2 EXIT14 will be applied before or after the user exits are invoked.

Note: OS/EM control functions are invoked FIRST by default.

ABENDNOTIFY
Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3
The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Activates the optional OS/EM job LIMIT function.

NOLIMIT   Specify the NO option to disable the job LIMIT function after it has been activated.

SCHEME

Determines which selection criteria will be given the most weight when a job matches more than one set of selection criteria.

.* limit/scheme/*

BEST

Allows the user to specify the order preference is given to the different types of criteria. OS/EM will use the LIMITnn entry with the highest 'SCORE'.

.* limit/scheme/best/*

DAYS(n)

Specify a number from 1 to 4 for the DAYS criteria. The higher the number, the more weight is added.

JOBCLASS(n)

Specify a number from 1 to 4 for the JOBCLASS criteria. The higher the number, the more weight is added.

USERID(n)

Specify a number from 1 to 4 for the USERID criteria. The higher the number, the more weight is added.

JOBNAME(n)

Specify a number from 1 to 4 for the JOBNAME criteria. The higher the number, the more weight is added.

.* limit/scheme/best/*

LIBERAL

The LIBERAL SCHEME will select the matching criteria which allows the most jobs to execute at one time.

CONSERVATIVE

The CONSERVATIVE SCHEME will select the matching criteria which allows the least number of jobs to execute at one time.

.* limit/scheme/*

NOLIMITnn

Specifying NOLIMITnn turns off a limit group previously activated.

LIMITnn

Allows the user up to 32 different combinations of selection criteria.

nnn {nnn}

Signifies the number of jobs which will be allowed to execute at the same time per job owner (USER= parameter from the JOB card). The first number is the number of jobs which may execute if other work is awaiting execution by the initiator selecting work depending on the SCOPE specification. The second number is the number of jobs which may execute if the initiator attempting to select a job would become idle.

JOBCLASS

Specify the JOBCLASSES which may be included or excluded.

INC(x,x,...)

Specify the jobclasses which will be included. Any job submitted in one of the specified jobclasses will match this LIMITnn criteria. Any jobclasses not listed will be ignored for LIMIT checking.

Note: The jobclasses may be specified in a range. i.e. A:D will turn on classes A, B, C and D.

EXC(x,x,...)
Specify the jobclasses which will be excluded from limit checking for this LIMITnn criteria. Any classes **not** specified here will become part of the selection criteria.

Note: The jobclasses may be specified in a range. i.e. A:D will turn on classes A, B, C and D.

Note: This parameter specifies the jobclass to be controlled. When determining the number of jobs currently executing, all jobclasses are counted unless overridden by the SCOPE parameter explained below.

NOJOBCLASS
Adding a NO to JOBCLASS will turn off the previously activated jobclasses for this selection group.

JOBNAME
Specify the JOBNAMES which may be included or excluded. Refer to "Volume/Jobname Masks" on page C-1 for masking information.

INC(xxx,xxx,...)
Specify jobnames or jobname masks which will be included in this selection criteria group. Any jobs submitted which match a jobname or mask in this group will be subject to LIMIT checking. Jobs submitted which do not match will be ignored.

EXC(xxx,xxx,...)
Specify jobnames or masks which will be excluded from limit checking for this LIMITnn criteria group. Any jobs **not** specified here will be subject to LIMIT checking. Refer to "Volume/Jobname Masks" on page C-1 for masking information.

NOJOBNAME
Adding a NO to JOBNAME will turn off the previously activated jobnames for this selection group.

USERID
Specify the USER IDs of the user specified on the jobcard.

INC(xxx,xxx,...)
Specify user IDs or masks which will be included in this selection criteria group. Any jobs submitted with these USER IDs in the jobcard USER parameter will be subject to LIMIT checking. Refer to "Volume/Jobname Masks" on page C-1 for masking information.

EXC(xxx,xxx,...)
Specify user IDs or masks which will be excluded from this selection criteria group. Any jobs submitted with USER IDs **not** specified here will be subject to LIMIT checking.

NOUSERID
Adding a NO to USERID will turn off the previously activated userids for this selection group.

DAYS
Specify the days and times LIMIT checking will be active.

0|*|nnnn:nnnn,....
The DAYS option allows you to specify the time of day by day of

week that the job LIMIT checking will be in effect. All 7 days, in the order Monday through Sunday, must be specified each time the DAYS option is entered. If you enter a 0 for a day, that day is de-activated. An '*' will leave that day unchanged. Specify the time in 24hr notation as beginning time:ending time.

SCOPE
The SCOPE option determines which systems will be searched for executing jobs.

MAS
All systems in a Multiple Access Spool complex will have their executing jobs counted.

LOCAL
Only the system on which OS/EM is running will be checked.

SIDS(xxxx,xxxx,....)
Specify the system IDs of each system within a MAS complex which should be included in determining the number of executing jobs.

JOBCLASSES(x,x,...)
Select the jobclasses which will be checked for the systems specified by the SCOPE option.

Only jobs executing in the specified jobclasses will be counted to determine the number of jobs executing per user or job owner.

Note: Jobclasses may be specified in a range. i.e. A:D will activate classes A, B, C and D.

NOJOBCLASSES
Adding a NO to JOBCLASSES will turn off any previously specified jobclasses, and job LIMIT checking will be active for all classes.

RACFLIMIT
Allows the user to specify RACF logging and a RACF resource name to contain the rules.

LOG
RACF logging will be performed.

NOLOG
No RACF logging will be done.

RESOURCE(xxxxxxxx)
The name of the RACF resource to allow a job owner to run an unlimited number of jobs. Read access to this resource bypasses LIMIT processing. Create this resource name in the RACF or ACF-2 general resource FA-CILITY class or for CA-Topsecret use the IBMFAC class.

PGMLIMIT Limits the number of concurrently executing programs.

NOPGMLIMIT Disables program limit checking.

LIMCHGMSG OS/EM will issue a WTO for message OS$2LM264 notifying the operator that the MAS limit for the stated program has been updated by the listed system within the MAS.

NOLIMCHGMSG OS/EM will not issue message OS$2LM264.

pgmname The name of the program to be limited.

<dl>

lll   Number of concurrent executions of the program on the local system.

NOLIMIT Any number of executions of this program are permitted on the local system.

'*'   Place holder, leaves the exitsing controls in place for the local system.

mmm   Number of concurrent executions of the program within the MAS.

NOLIMIT Any number of executions of this program are permitted in the MAS.

'*'   Place holder, leaves the existing controls in place for the MAS.

</dl>

Note: To enable counting programs within a MAS, program limits must be enabled on each system within the MAS.

HSMRECALL Specifies that OS/EM will issue a DFSMSHSM RECALL command for any required datasets which have been migrated and will prevent execution until the datasets are recalled.

NOHSMRECALL
OS/EM will not recall migrated datasets.

OWNERMSG
A message will be sent to the owner of a job which is being held because of pending RECALL requests.

NOOWNERMSG
Messages will not be sent to the jobs owner.

HRECALLWTO
A message will be sent to the console for datasets being recalled by OS/EM.

NOHRECALLWTO
No console messages will be issued.

HRECALLLOGMSG
A message will be sent to the joblog for datasets being recalled by OS/EM.

NOHRECALLLOGMSG
Messages will not be sent to the joblog.

RECHECKALL
When an initiator becomes available and nothing else is preventing execution of the job, OS/EM will recheck all migrated datasets to determine if they have been recalled before allowing the job to begin execution.

NORECHECKALL
OS/EM will not check to see that all required datasets have been recalled.

IGNORERECALLFAIL
OS/EM will allow the job to be selected for execution even if an OS/EM initiated recall request has failed.

NOIGNORERECALLFAIL
OS/EM will prevent the job from being selected for execution of any recall requests fail.

LOCALRECALL

OS/EM will issue the recall request on the local system.

NOLOCALRECALL

OS/EM will not issue the recall request on the local system.

WAIT   OS/EM will by default prevent execution of the job until all recalls have completed unless overriden by the following options.

NOWAIT

Any previously entered WAIT options will be nullified.

> **ONLYTAPE**
>
> OS/EM will only prevent the job from executing until datasets migrated to tape have been recalled.
>
> **NOONLYTAPE**
>
> Nullifies the ONLYTAPE setting.
>
> **ONLYFIRST**
>
> OS/EM will only prevent the job from executing until datasets needed in the first step have been recalled.
>
> **NOONLYFIRST**
>
> Nullifies the ONLYFIRST setting.
>
> **CONDONLY**
>
> OS/EM will prevent the job from executing until datasets needed in steps marked COND=ONLY have been recalled.
>
> **NOCONDONLY**
>
> Nullifies the CONDONLY setting.

ONLYRECALLFIRST

OS/EM will only issue recall commands for datasets needed in the first step of the job.

NOONLYRECALLFIRST

OS/EM will recall all datasets needed by the job.

CONDONLY

OS/EM will issue recall commands for datasets needed in steps marked as COND=ONLY.

NOCONDONLY

OS/EM will ignore migrated datasets used in steps marked as COND=ONLY.

GDGINTERVAL(nnn)

Specifies the number of seconds OS/EM will wait before checking to see if pending recall requests for GDGs have completed.

DSNINTERVAL(nnn)

Specifies the number of seconds OS/EM will wait before checking to see if pending recall requests for normal datasets have completed.

EXIT14 Option Example

In the following examples, assume that user ID SPJQSPRD owns 1 job executing on SYSA in class A, 2 jobs executing on SYSB in class B and 1 job executing on SYSC in class C for a total of 4 jobs within this sample MAS.

The following command is processed on SYSA:

```
OS$CNTL JES2 EXIT14 ( OPTIONS ( -
   LIMIT ( LIMIT1 ( 2 3 JOBNAME ( INC ( SPJQS- ) SCOPE ( LOCAL ) ) ) ) ) )
```

If our test user now submits job SPJQS2 in class S OS/EM will allow the job to execute as this user only owns 1 executing job on this system. Note that in this case the jobclass of the executing job and the jobclass of the job submitted is ignored.

Now if the above command was changed to have MAS specifed as the SCOPE:

```
OS$CNTL JES2 EXIT14 ( OPTIONS ( -
   LIMIT ( LIMIT1 ( 2 3 JOBNAME ( INC ( SPJQS- ) SCOPE ( MAS ) ) ) ) ) )
```

OS/EM would not allow any new jobs to be selected for execution as the user already has 4 jobs executing which is above the specified limit. Again note that neither the jobclasses of the executing jobs or the newly submitted jobs is considered. However if the JOBCLASSES keyword were to be added to the SCOPE keyword processing would be different.

```
OS$CNTL JES2 EXIT14 ( OPTIONS ( -
   LIMIT ( LIMIT1 ( 2 3 JOBNAME ( INC ( SPJQS- ) -
      SCOPE ( MAS JOBCLASSES ( A ) ) ) ) ) ) )
```

With SCOPE specified to only consider jobclass A the user could submit two more jobs in class A and one would execute if the CPU was busy, and both would execute if the CPU was idle (LIMIT1 (2 3)). With the SCOPE jobclass set to A, the same user could submit and have execute any number of jobs in a different jobclass.

This example will activate the OS/EM optional processing for

The following command will activate the OS/EM optional processing for JES EXIT14. No user exits are specified; therefore, only OS/EM processing will be done.

```
   OS$CNTL JES2(NOEXITS(OPTIONS( -
    LIMIT( -
      SCHEME( -
        BEST( -
          DAYS(1) -
          JOBCLASS(4) -
          USERID(3) -
          JOBNAME(2) -
             ) -
             ) -
      LIMIT01 ( -
        1 3
        JOBCLASS( -
          INC(A:D X) -
                ) -
        JOBNAME( -
          INC(T-) -
                ) -
        USERID( -
          INC(SP-) -
                ) -
        DAYS( -
          0800:1600 0800:1600 0800:1600 -
          0800:1600 0800:1600 -
          0000:2400 0000:2400 -
             ) -
        SCOPE( -
```

```
            LOCAL -
              JOBCLASSES(A:9) -
                ) -
                  ) -
            NORACF -
              )
```

LIMIT checking is active. The SCHEME is BEST with the most weight being given to JOBCLASS and the least to DAYS. There is one selection group active LIMIT01. This group specifies that if other jobs are running, only 1 job may be executed by a user at a time. If the other initiators are idle, than 3 jobs may execute together. The group is limited to jobclasses A, B, C, D and X; all other jobclasses will be ignored. JOBNAMEs to be checked start with T. The USERID of the person owning the job will begin with SP. The check will be performed Monday through Friday from 8AM to 4PM, and on Saturday and Sunday 24 hours a day. The SCOPE of job LIMIT checking will be LOCAL for jobclasses A through 9. No RACF processing will be performed.

Again, since SCOPE is specified with jobclasses A through 9 every batch job will be counted to determine the current number of jobs executing.

EXIT20

OS/EM provides basic exit support for EXIT20, however OS/EM has its own exit here to support other extended functions.

```
OS$CNTL JES2                                                     -
        {JESName(XXXX {YYYYY})}                                  -
        {NOABendnotify|ABendnotify(                              -
           0|*|id1 {0|*|id2 {0|*|id3}} ) }                       -
        {LIBrary(library.dsn)}                                   -
        {NOAUtoinstall|AUtoinstall}                              -
         NOEXIT20|EXIT20(                                        -
           {ENable|DISABLE}                                      -
           {NOAUtoinstall|AUinstall}                             -
           {NUmber( num1 num2 num3 )}                            -
           {NOExits|Exits(                                       -
               lmod:exit1|*|0                                   -
              {lmod:exit2|*|0                                   -
              {lmod:exit3|*|0}})}                               -
           {NOBAckups|BAckups(                                   -
               lmod:exit1|*|0                                   -
              {lmod:exit2|*|0                                   -
              {lmod:exit3|*|0}})}                               -
           {NOABendnotify|ABendnotify(                           -
              (id1a|*|0 {id1b|*|0 {id1c|*|0}})                  -
              (id2a|*|0 {id2b|*|0 {id2c|*|0}})                  -
              (id3a|*|0 {id3b|*|0 {id3c|*|0}})})                -
           {NOLIMits|LIMits(                                     -
               (jobmask1,...)|*|0                               -
              {(jobmask2,...)|*|0                               -
              {(jobmask3,...)|*|0}})}                           -
           {NOVAlidrc|VAlidrc(rc,...)}                           -
           {NOGOodrc|GOodrc(rc,...)}                             -
           {NODISablerc|DISABLERc(rc)}                           -
           {DEFaultrc(rc)}                                       -
           {Key(0|1)}}                                           -
           {JOBnameloc(jobnamelocspec)}                          -
           {OPTions|NOOptions(                                   -
              {FIrst|LAst}                                       -
              {NOABendnotify|ABendnotify(                        -
                 *|0|id1 {*|0|id2 {*|0|id3}} ) }  ) }
```

JESNAME(XXXX YYYYY)

> Optional keyword which indicates that you are supplying the name of the JES2 subsystem the command applies to. JES2 is the default.

XXXX   The four character identifier for this JES2 subsystem.

YYYYY   The optional JES2 version. This is used to tell OS/EM what level of code to use before the subsystem actually starts. If there is a mismatch when the subsystem starts, only the OS/EM code is reloaded. Acceptable values are:

- OS270

- OS280

- OS210

- ZS102

- ZS104

- ZS105

LIBRARY Specifies the loading of an User exit module from a private Authorized library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for loading User exit modules.

library.dsn
Specifies the name of a private Authorized library named. The library name should be enclosed in single quotes (').

ABENDNOTIFY
Specifies that a TSO message will be sent if any JES2 exit ABENDs.

NOABENDNOTIFY
Specifies that no messages will be sent for JES2 exit ABENDs.

id1, id2, id3 You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

AUTOINSTALL
This option tells OS/EM to add any user exits specified in JESPARMS to OS/EM's internal control blocks as if the exits had been specifically defined by **OS$CNTL JES2** commands.

Note: AUTOINSTALL is the default, and it must be active at this level to allow use of the AUTOINSTALL option at the individual exit point level.

NOAUTOINSTALL
If NOAUTOINSTALL is specified, user exits in JESPARMS will not be controlled by OS/EM and the use of AUTOINSTALL at the exit point level is disabled.

EXIT00 ...

EXIT255 Specifies which of the JES2 exits - exits 0 through 255 - are to be activated.

NOEXIT00 ...

NOEXIT255 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE ENABLE causes an exitpoint to be enabled after a failure of the OS/EM exit controller caused the exit to be disabled. Due to the exit environment JES2 establishes, merely reloading the exit controller will not automatically activate the associated user exits as is the case with the other, non-JES2, points. Use of this keyword will activate an exit after the controller has been reloaded.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously, are retained and will not have to be re-specified if the exit is enabled again.

Note: If you have any questions as to the state of a particular JES2 exit, a QUERY command may be issued for the exit. If the exit is marked as DISABLED, issue a JES2 command for the exit with the ENABLE keyword.

An example of the QUERY command for JES2 EXIT2 would be:

```
OS$CNTL QUERY JES2(EXIT2)
```

AUTOINSTALL
If specified, any user exits found in JESPARMS for this exit point will automaticaly

be controlled by OS/EM without the need to specify them via **OS$CNTL JES2** commands.

Note: AUTOINSTALL must be specified (or defaulted) at the top level for this JES to allow use at the exit point level.

NOAUTOINSTALL

If specified, user exits for this exit point found in JESPARMS will be ignored by OS/EM.

NUMBER You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS Specifies that any active JES2 EXIT20 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of JES2 EXIT20 user exits are to be activated. This can be specified at initialization, or later to load and activate JES2 EXIT20 user exits that were not activated at initialization. The exits will be called in the order listed.

lmod:exit1

lmod:exit2

lmod:exit3

The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.

This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

* An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

0 A zero (0) can be used to inactivate and delete a previously specified JES2 exit.

Note: JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

NOBACKUP Specifies that any active backup user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup user exits are to be activated. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. The backup User exit modules will be called in the order listed.

lmod:exit1

lmod:exit2

lmod:exit3
> The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.
>
> **Note:** This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

0
> A zero (0) can be used to inactivate and delete a previously specified JES2 exit.
>
> **Note:** JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

ABENDNOTIFY
> Specifies that when a JES2 EXIT14 Optional exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a JES2 EXIT14 Optional exit module has ABENDed.

NOABENDNOTIFY
> The NO option can be used to nullify the option to notify a TSO user of JES2 EXIT14 Optional exit module ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
> The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
> The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
> The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
> A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for JES2 EXIT20 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
>The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

* An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. Use this option with extreme caution.

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by JES2 user exit modules. A good return code allows subsequent JES2 user exit modules to be called. OS/EM provides a default list. For example, if a JES2 user exit for JES2 EXIT20 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules, that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
NODISABLERC turns off disable return code checking for the exit point.

rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. Use this option with extreme caution.

rc Default return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

KEY   Specifies the storage key for this JES2 exit, this is provided for user exit modules that are reentrant in the JES2 sense. Also see IBM JES2 User Modifications and Macros for further detail.

Note: OS/EM recommends all JES2 exits be MVS reentrant and avoid using the KEY option.

0   Specifies the JES2 User exit user be loaded data into key 0 storage.

1   Specifies the JES2 User exit user will be loaded into key 1 storage.

JOBNAMELOC

jobnamelocspec
Specifies the location of the Jobname specified using TSO TEST addressing specification parameters. This parameter should be used with extreme caution as any miscalculation may not be pointing to the Jobname.

EXIT20 Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for JES2 EXIT20

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for JES2 EXIT20.

Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

FIRST

LAST   Specifies whether the optional OS/EM JCL Standards functions for JES2 EXIT20 will be applied before or after the user exits are invoked.

Note: OS/EM control functions are invoked FIRST by default.

ABENDNOTIFY
Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3
The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

EXIT24

OS/EM only provides basic exit support for EXIT24, however OS/EM has it's own exit to provide support for other extended functions.

```
OS$CNTL JES2                                                      -
        {JESName(XXXX {YYYYY})}                                   -
        {NOABendnotify|ABendnotify(                               -
          0|*|id1 {0|*|id2 {0|*|id3}} ) }                         -
        {LIBrary(library.dsn)}                                    -
        {NOAUtoinstall|AUtoinstall}                               -
         NOEXIT24|EXIT24(                                         -
           {ENable|DISABLE}                                       -
           {NOAUtoinstall|AUinstall}                              -
           {NUmber( num1 num2 num3 )}                             -
           {NOExits|Exits(                                        -
                lmod:exit1|*|0                                   -
               {lmod:exit2|*|0                                   -
               {lmod:exit3|*|0}})}                               -
           {NOBAckups|BAckups(                                    -
                lmod:exit1|*|0                                   -
               {lmod:exit2|*|0                                   -
               {lmod:exit3|*|0}})}                               -
           {NOABendnotify|ABendnotify(                            -
               (id1a|*|0 {id1b|*|0 {id1c|*|0}})                  -
               (id2a|*|0 {id2b|*|0 {id2c|*|0}})                  -
               (id3a|*|0 {id3b|*|0 {id3c|*|0}})})                -
           {NOLIMits|LIMits(                                      -
               (jobmask1,...)|*|0                               -
               {(jobmask2,...)|*|0                              -
               {(jobmask3,...)|*|0}})}                          -
           {NOVAlidrc|VAlidrc(rc,...)}                            -
           {NOGOodrc|GOodrc(rc,...)}                              -
           {NODISablerc|DISABLERc(rc)}                            -
           {DEFaultrc(rc)}                                        -
           {Key(0|1)}}                                            -
        {JOBnameloc(jobnamelocspec)}                              -
        {OPTions|NOOptions(                                       -
           {FIrst|LAst}                                           -
           {NOABendnotify|ABendnotify(                            -
              *|0|id1 {*|0|id2 {*|0|id3}} ) }
```

JESNAME(XXXX YYYYY)

Optional keyword which indicates that you are supplying the name of the JES2 subsystem the command applies to. JES2 is the default.

XXXX   The four character identifier for this JES2 subsystem.

YYYYY   The optional JES2 version. This is used to tell OS/EM what level of code to use before the subsystem actually starts. If there is a mismatch when the subsystem starts, only the OS/EM code is reloaded. Acceptable values are:

- OS270

- OS280

- OS210

- ZS102

- ZS104

- ZS105

LIBRARY   Specifies the loading of an User exit module from a private Authorized library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for loading User exit modules.

> **library.dsn**
>> Specifies the name of a private Authorized library named. The library name should be enclosed in single quotes (').

ABENDNOTIFY
Specifies that a TSO message will be sent if any JES2 exit ABENDs.

NOABENDNOTIFY
Specifies that no messages will be sent for JES2 exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

AUTOINSTALL
This option tells OS/EM to add any user exits specified in JESPARMS to OS/EM's internal control blocks as if the exits had been specifically defined by **OS$CNTL JES2** commands.

Note: AUTOINSTALL is the default, and it must be active at this level to allow use of the AUTOINSTALL option at the individual exit point level.

NOAUTOINSTALL
If NOAUTOINSTALL is specified, user exits in JESPARMS will not be controlled by OS/EM and the use of AUTOINSTALL at the exit point level is disabled.

EXIT00 ...

EXIT255   Specifies which of the JES2 exits - exits 0 through 255 - are to be activated.

NOEXIT00 ...

NOEXIT255   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   ENABLE causes an exitpoint to be enabled after a failure of the OS/EM exit controller caused the exit to be disabled. Due to the exit environment JES2 establishes, merely reloading the exit controller will not automatically activate the associated user exits as is the case with the other, non-JES2, points. Use of this keyword will activate an exit after the controller has been reloaded.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously, are retained and will not have to be re-specified if the exit is enabled again.

Note: If you have any questions as to the state of a particular JES2 exit, a QUERY command may be issued for the exit. If the exit is marked as DISABLED, issue a JES2 command for the exit with the ENABLE keyword.

An example of the QUERY command for JES2 EXIT2 would be:

```
OS$CNTL QUERY JES2(EXIT2)
```

AUTOINSTALL
If specified, any user exits found in JESPARMS for this exit point will automaticaly be controlled by OS/EM without the need to specify them via **OS$CNTL JES2** commands.

Note: AUTOINSTALL must be specified (or defaulted) at the top level for this JES to allow use at the exit point level.

NOAUTOINSTALL

If specified, user exits for this exit point found in JESPARMS will be ignored by OS/EM.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active JES2 EXIT24 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of JES2 EXIT24 user exits are to be activated. This can be specified at initialization, or later to load and activate JES2 EXIT24 user exits that were not activated at initialization. The exits will be called in the order listed.

lmod:exit1

lmod:exit2

lmod:exit3

The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.

This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

0   A zero (0) can be used to inactivate and delete a previously specified JES2 exit.

Note: JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

NOBACKUP   Specifies that any active backup user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup user exits are to be activated. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. The backup User exit modules will be called in the order listed.

lmod:exit1

lmod:exit2

lmod:exit3

> The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.
>
> **Note:** This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

* An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

0 A zero (0) can be used to inactivate and delete a previously specified JES2 exit.

> **Note:** JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

ABENDNOTIFY

> Specifies that when a JES2 EXIT20 Optional exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a JES2 EXIT20 Optional exit module has ABENDed.

NOABENDNOTIFY

> The NO option can be used to nullify the option to notify a TSO user of JES2 EXIT20 Optional exit module ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

> The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

> The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

> The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT Specifies that Job name limits are requested, to limit user exit modules for JES2 EXIT24 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT The NO option can be used to nullify the option for Job name limits.

> **jobmask1**

jobmask2

jobmask3
> The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
> A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. Use this option with extreme caution.

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

> **rc** Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by JES2 user exit modules. A good return code allows subsequent JES2 user exit modules to be called. OS/EM provides a default list. For example, if a JES2 user exit for JES2 EXIT24 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

> **rc** Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules, that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
> NODISABLERC turns off disable return code checking for the exit point.

> **rc** Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. Use this option with extreme caution.

> **rc** Default return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

KEY Specifies the storage key for this JES2 exit, this is provided for user exit modules that are reentrant in the JES2 sense. Also see IBM JES2 User Modifications and Macros for further detail.

Note: OS/EM recommends all JES2 exits be MVS reentrant and avoid using the KEY option.

0   Specifies the JES2 User exit user be loaded data into key 0 storage.

1   Specifies the JES2 User exit user will be loaded into key 1 storage.

JOBNAMELOC

jobnamelocspec
Specifies the location of the Jobname specified using TSO TEST addressing specification parameters. This parameter should be used with extreme caution as any miscalculation may not be pointing to the Jobname.

EXIT24 Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for JES2 EXIT24

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for JES2 EXIT24.

Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

FIRST

LAST   Specifies whether the optional OS/EM JCL Standards functions for JES2 EXIT24 will be applied before or after the user exits are invoked.

Note: OS/EM control functions are invoked FIRST by default.

ABENDNOTIFY
Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3
The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

EXIT28

OS/EM provides basic exit support for EXIT28, however OS/EM has its own exit here to support other extended functions.

```
OS$CNTL JES2                                                         -
        {JESName(XXXX {YYYYY})}                                      -
        {NOABendnotify|ABendnotify(                                  -
           0|*|id1 {0|*|id2 {0|*|id3}} ) }                          -
        {LIBrary(library.dsn)}                                       -
        {NOAUtoinstall|AUtoinstall}                                  -
         NOEXIT28|EXIT28(                                            -
           {ENable|DISABLE}                                          -
           {NOAUtoinstall|AUinstall}                                 -
           {NUmber( num1 num2 num3 )}                                -
           {NOExits|Exits(                                           -
                lmod:exit1|*|0                                           -
               {lmod:exit2|*|0                                           -
               {lmod:exit3|*|0}})}                                       -
           {NOBAckups|BAckups(                                       -
                lmod:exit1|*|0                                           -
               {lmod:exit2|*|0                                           -
               {lmod:exit3|*|0}})}                                       -
           {NOABendnotify|ABendnotify(                               -
               (id1a|*|0 {id1b|*|0 {id1c|*|0}})                      -
               (id2a|*|0 {id2b|*|0 {id2c|*|0}})                      -
               (id3a|*|0 {id3b|*|0 {id3c|*|0}})})                    -
           {NOLIMits|LIMits(                                         -
                (jobmask1,...)|*|0                                       -
               {(jobmask2,...)|*|0                                       -
               {(jobmask3,...)|*|0}})}                                   -
           {NOVAlidrc|VAlidrc(rc,...)}                               -
           {NOGOodrc|GOodrc(rc,...)}                                 -
           {NODISablerc|DISABLERc(rc)}                               -
           {DEFaultrc(rc)}                                           -
           {Key(0|1)}}                                               -
           {JOBnameloc(jobnamelocspec)}                              -
           {OPTions|NOOptions(                                       -
               {FIrst|LAst}                                          -
               {NOABendnotify|ABendnotify(                           -
                   *|0|id1 {*|0|id2 {*|0|id3}} ) }  ) }
```

JESNAME(XXXX YYYYY)

        Optional keyword which indicates that you are supplying the name of the JES2 subsystem the command applies to. JES2 is the default.

XXXX   The four character identifier for this JES2 subsystem.

YYYYY   The optional JES2 version. This is used to tell OS/EM what level of code to use before the subsystem actually starts. If there is a mismatch when the subsystem starts, only the OS/EM code is reloaded. Acceptable values are:

- OS270

- OS280

- OS210

- ZS102

- ZS104

- ZS105

LIBRARY Specifies the loading of an User exit module from a private Authorized library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for loading User exit modules.

    library.dsn
        Specifies the name of a private Authorized library named. The library name should be enclosed in single quotes (').

ABENDNOTIFY
    Specifies that a TSO message will be sent if any JES2 exit ABENDs.

NOABENDNOTIFY
    Specifies that no messages will be sent for JES2 exit ABENDs.

    id1, id2, id3   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

AUTOINSTALL
    This option tells OS/EM to add any user exits specified in JESPARMS to OS/EM's internal control blocks as if the exits had been specifically defined by **OS$CNTL JES2** commands.

    Note: AUTOINSTALL is the default, and it must be active at this level to allow use of the AUTOINSTALL option at the individual exit point level.

NOAUTOINSTALL
    If NOAUTOINSTALL is specified, user exits in JESPARMS will not be controlled by OS/EM and the use of AUTOINSTALL at the exit point level is disabled.

EXIT00 ...

EXIT255 Specifies which of the JES2 exits - exits 0 through 255 - are to be activated.

NOEXIT00 ...

NOEXIT255 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE ENABLE causes an exitpoint to be enabled after a failure of the OS/EM exit controller caused the exit to be disabled. Due to the exit environment JES2 establishes, merely reloading the exit controller will not automatically activate the associated user exits as is the case with the other, non-JES2, points. Use of this keyword will activate an exit after the controller has been reloaded.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously, are retained and will not have to be re-specified if the exit is enabled again.

    Note: If you have any questions as to the state of a particular JES2 exit, a QUERY command may be issued for the exit. If the exit is marked as DISABLED, issue a JES2 command for the exit with the ENABLE keyword.

    An example of the QUERY command for JES2 EXIT2 would be:

```
OS$CNTL QUERY JES2(EXIT2)
```

AUTOINSTALL
    If specified, any user exits found in JESPARMS for this exit point will automaticaly

be controlled by OS/EM without the need to specify them via **OS$CNTL JES2** commands.

Note: AUTOINSTALL must be specified (or defaulted) at the top level for this JES to allow use at the exit point level.

NOAUTOINSTALL
If specified, user exits for this exit point found in JESPARMS will be ignored by OS/EM.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3
Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active JES2 EXIT28 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of JES2 EXIT28 user exits are to be activated. This can be specified at initialization, or later to load and activate JES2 EXIT28 user exits that were not activated at initialization. The exits will be called in the order listed.

lmod:exit1

lmod:exit2

lmod:exit3
The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.

This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

0   A zero (0) can be used to inactivate and delete a previously specified JES2 exit.

Note: JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

NOBACKUP   Specifies that any active backup user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup user exits are to be activated. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. The backup User exit modules will be called in the order listed.

lmod:exit1

lmod:exit2

lmod:exit3
> The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.
>
> **Note:** This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

0
> A zero (0) can be used to inactivate and delete a previously specified JES2 exit.
>
> **Note:** JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

ABENDNOTIFY
> Specifies that when a JES2 EXIT24 Optional exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a JES2 EXIT24 Optional exit module has ABENDed.

NOABENDNOTIFY
> The NO option can be used to nullify the option to notify a TSO user of JES2 EXIT24 Optional exit module ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.

> **(id1a,id1b,id1c)**
> > The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

> **(id2a,id2b,id2c)**
> > The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

> **(id3a,id3b,id3c)**
> > The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.
> >
> > **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.

> *****
> > An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

> **0**
> > A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT
Specifies that Job name limits are requested, to limit user exit modules for JES2 EXIT28 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT
The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
>The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

>*****   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

>**0**   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. Use this option with extreme caution.

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

>**rc**   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by JES2 user exit modules. A good return code allows subsequent JES2 user exit modules to be called. OS/EM provides a default list. For example, if a JES2 user exit for JES2 EXIT28 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

>**rc**   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules, that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
>NODISABLERC turns off disable return code checking for the exit point.

>**rc**   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. Use this option with extreme caution.

>**rc**   Default return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

| KEY | Specifies the storage key for this JES2 exit, this is provided for user exit modules that are reentrant in the JES2 sense. Also see IBM JES2 User Modifications and Macros for further detail. |

Note: OS/EM recommends all JES2 exits be MVS reentrant and avoid using the KEY option.

| **0** | Specifies the JES2 User exit user be loaded data into key 0 storage. |

| **1** | Specifies the JES2 User exit user will be loaded into key 1 storage. |

JOBNAMELOC

jobnamelocspec
Specifies the location of the Jobname specified using TSO TEST addressing specification parameters. This parameter should be used with extreme caution as any miscalculation may not be pointing to the Jobname.

EXIT28 Options

| **OPTIONS** | Specifies that an optional OS/EM control function is to be enabled for JES2 EXIT28 |

| **NOOPTIONS** | The NOOPTIONS parameter will totally disable the optional OS/EM control function for JES2 EXIT28. |

Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

FIRST

| **LAST** | Specifies whether the optional OS/EM JCL Standards functions for JES2 EXIT28 will be applied before or after the user exits are invoked. |

Note: OS/EM control functions are invoked FIRST by default.

ABENDNOTIFY
Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3
The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

| **'*'** | An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied. |

| **0** | A zero (0) can be used to negate a previous entry of the notify TSO user list. |

EXIT29

OS/EM provides basic exit support for EXIT29, however OS/EM has its own exit here to support other extended functions.

```
OS$CNTL JES2                                                    -
        {JESName(XXXX {YYYYY})}                                 -
        {NOABendnotify|ABendnotify(                             -
           0|*|id1 {0|*|id2 {0|*|id3}} ) }                      -
        {LIBrary(library.dsn)}                                  -
        {NOAUtoinstall|AUtoinstall}                             -
         NOEXIT29|EXIT29(                                       -
           {ENable|DISABLE}                                     -
           {NOAUtoinstall|AUinstall}                            -
           {NUmber( num1 num2 num3 )}                           -
           {NOExits|Exits(                                      -
               lmod:exit1|*|0                                     -
              {lmod:exit2|*|0                                      -
              {lmod:exit3|*|0}})}                                  -
           {NOBAckups|BAckups(                                  -
               lmod:exit1|*|0                                     -
              {lmod:exit2|*|0                                      -
              {lmod:exit3|*|0}})}                                  -
           {NOABendnotify|ABendnotify(                          -
              (id1a|*|0 {id1b|*|0 {id1c|*|0}})                    -
              (id2a|*|0 {id2b|*|0 {id2c|*|0}})                    -
              (id3a|*|0 {id3b|*|0 {id3c|*|0}})})})                -
           {NOLIMits|LIMits(                                    -
               (jobmask1,...)|*|0                                 -
              {(jobmask2,...)|*|0                                  -
              {(jobmask3,...)|*|0}})}                              -
           {NOVAlidrc|VAlidrc(rc,...)}                          -
           {NOGOodrc|GOodrc(rc,...)}                            -
           {NODISablerc|DISABLERc(rc)}                          -
           {DEFaultrc(rc)}                                      -
           {Key(0|1)}}                                          -
           {JOBnameloc(jobnamelocspec)}                         -
           {OPTions|NOOptions(                                  -
              {FIrst|LAst}                                      -
              {NOABendnotify|ABendnotify(                       -
                 *|0|id1 {*|0|id2 {*|0|id3}} ) }  ) }
```

JESNAME(XXXX YYYYY)

Optional keyword which indicates that you are supplying the name of the JES2 subsystem the command applies to. JES2 is the default.

XXXX   The four character identifier for this JES2 subsystem.

YYYYY   The optional JES2 version. This is used to tell OS/EM what level of code to use before the subsystem actually starts. If there is a mismatch when the subsystem starts, only the OS/EM code is reloaded. Acceptable values are:

- OS270

- OS280

- OS210

- ZS102

- ZS104

- ZS105

LIBRARY Specifies the loading of an User exit module from a private Authorized library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for loading User exit modules.

> **library.dsn**
>> Specifies the name of a private Authorized library named. The library name should be enclosed in single quotes (').

ABENDNOTIFY
> Specifies that a TSO message will be sent if any JES2 exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for JES2 exit ABENDs.

>> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

AUTOINSTALL
> This option tells OS/EM to add any user exits specified in JESPARMS to OS/EM's internal control blocks as if the exits had been specifically defined by **OS$CNTL JES2** commands.

> **Note:** AUTOINSTALL is the default, and it must be active at this level to allow use of the AUTOINSTALL option at the individual exit point level.

NOAUTOINSTALL
> If NOAUTOINSTALL is specified, user exits in JESPARMS will not be controlled by OS/EM and the use of AUTOINSTALL at the exit point level is disabled.

EXIT00 ...

EXIT255 Specifies which of the JES2 exits - exits 0 through 255 - are to be activated.

NOEXIT00 ...

NOEXIT255 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE ENABLE causes an exitpoint to be enabled after a failure of the OS/EM exit controller caused the exit to be disabled. Due to the exit environment JES2 establishes, merely reloading the exit controller will not automatically activate the associated user exits as is the case with the other, non-JES2, points. Use of this keyword will activate an exit after the controller has been reloaded.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously, are retained and will not have to be re-specified if the exit is enabled again.

> **Note:** If you have any questions as to the state of a particular JES2 exit, a QUERY command may be issued for the exit. If the exit is marked as DISABLED, issue a JES2 command for the exit with the ENABLE keyword.

> An example of the QUERY command for JES2 EXIT2 would be:

>   OS$CNTL QUERY JES2(EXIT2)

AUTOINSTALL
> If specified, any user exits found in JESPARMS for this exit point will automaticaly

be controlled by OS/EM without the need to specify them via **OS$CNTL JES2** commands.

Note: AUTOINSTALL must be specified (or defaulted) at the top level for this JES to allow use at the exit point level.

NOAUTOINSTALL

If specified, user exits for this exit point found in JESPARMS will be ignored by OS/EM.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active JES2 EXIT29 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of JES2 EXIT29 user exits are to be activated. This can be specified at initialization, or later to load and activate JES2 EXIT29 user exits that were not activated at initialization. The exits will be called in the order listed.

lmod:exit1

lmod:exit2

lmod:exit3

The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.

This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

0   A zero (0) can be used to inactivate and delete a previously specified JES2 exit.

Note: JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

NOBACKUP   Specifies that any active backup user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup user exits are to be activated. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. The backup User exit modules will be called in the order listed.

lmod:exit1

lmod:exit2

lmod:exit3

    The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.

    Note: This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

** ***   An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

** 0**   A zero (0) can be used to inactivate and delete a previously specified JES2 exit.

    Note: JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

ABENDNOTIFY

    Specifies that when a JES2 EXIT28 Optional exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a JES2 EXIT28 Optional exit module has ABENDed.

NOABENDNOTIFY

    The NO option can be used to nullify the option to notify a TSO user of JES2 EXIT28 Optional exit module ABENDs.

    Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

    The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

    The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

    The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

    Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

** ***   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

** 0**   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for JES2 EXIT29 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
> The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
> A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. Use this option with extreme caution.

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

> **rc** Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by JES2 user exit modules. A good return code allows subsequent JES2 user exit modules to be called. OS/EM provides a default list. For example, if a JES2 user exit for JES2 EXIT29 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

> **rc** Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules, that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
NODISABLERC turns off disable return code checking for the exit point.

> **rc** Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. Use this option with extreme caution.

> **rc** Default return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

KEY   Specifies the storage key for this JES2 exit, this is provided for user exit modules that are reentrant in the JES2 sense. Also see IBM JES2 User Modifications and Macros for further detail.

Note: OS/EM recommends all JES2 exits be MVS reentrant and avoid using the KEY option.

0   Specifies the JES2 User exit user be loaded data into key 0 storage.

1   Specifies the JES2 User exit user will be loaded into key 1 storage.

JOBNAMELOC

jobnamelocspec
Specifies the location of the Jobname specified using TSO TEST addressing specification parameters. This parameter should be used with extreme caution as any miscalculation may not be pointing to the Jobname.

EXIT29 Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for JES2 EXIT29

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for JES2 EXIT29.

Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

FIRST

LAST   Specifies whether the optional OS/EM JCL Standards functions for JES2 EXIT29 will be applied before or after the user exits are invoked.

Note: OS/EM control functions are invoked FIRST by default.

ABENDNOTIFY
Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3
The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

EXIT32

OS/EM provides two optional functions in EXIT32.

The optional **JOBSTARTMSG** function of JES2 EXIT32 uses the TSO SEND command to issue a message to the user on the NOTIFY statement of the jobcard that the job has started execution.

The optional **DSNENQ** function of JES2 EXIT32 will block a job from executing until all datasets used or created by the job are available.

```
OS$CNTL JES2                                                     -
        {JESName(XXXX {YYYYY})}                                  -
        {NOABendnotify|ABendnotify(                              -
           0|*|id1 {0|*|id2 {0|*|id3}} ) }                       -
        {LIBrary(library.dsn)}                                   -
        {NOAUtoinstall|AUtoinstall}                              -
         NOEXIT32|EXIT32(                                        -
           {ENable|DISABLE}                                      -
           {NOAUtoinstall|AUinstall}                             -
           {NUmber( num1 num2 num3 )}                            -
           {NOExits|Exits(                                       -
               lmod:exit1|*|0                                    -
              {lmod:exit2|*|0                                    -
              {lmod:exit3|*|0}})}                                -
           {NOBAckups|BAckups(                                   -
               lmod:exit1|*|0                                    -
              {lmod:exit2|*|0                                    -
              {lmod:exit3|*|0}})}                                -
           {NOABendnotify|ABendnotify(                           -
              (id1a|*|0 {id1b|*|0 {id1c|*|0}})                   -
              (id2a|*|0 {id2b|*|0 {id2c|*|0}})                   -
              (id3a|*|0 {id3b|*|0 {id3c|*|0}})})}                -
           {NOLIMits|LIMits(                                     -
               (jobmask1,...)|*|0                                -
              {(jobmask2,...)|*|0                                -
              {(jobmask3,...)|*|0}})}                            -
           {NOVAlidrc|VAlidrc(rc,...)}                           -
           {NOGOodrc|GOodrc(rc,...)}                             -
           {NODISablerc|DISABLERc(rc)}                           -
           {DEFaultrc(rc)}                                       -
           {Key(0|1)}}                                           -
           {JOBnameloc(jobnamelocspec)}                          -
           {NOOPTions|OPTions(                                   -
              {FIrst|LAst}                                       -
              {NOABendnotify|ABendnotify(                        -
                 *|0|id1 {*|0|id2 {*|0|id3}} ) }                 -
              {NOJObstartmsg|JObstartmsg}                        -
              {NODSnenq|DSnenq(                                  -
                 {NOJOBWaitwto|JOBWaitwto}                       -
                 {NOJOBOwnermsg|JOBOwnermsg}                     -
                 {NOREsownermsg|REsownermsg}  )} )}
```

JESNAME(XXXX YYYYY)

> Optional keyword which indicates that you are supplying the name of the JES2 subsystem the command applies to. JES2 is the default.

XXXX   The four character identifier for this JES2 subsystem.

| YYYYY | The optional JES2 version. This is used to tell OS/EM what level of code to use before the subsystem actually starts. If there is a mismatch when the subsystem starts, only the OS/EM code is reloaded. Acceptable values are: |

- OS270

- OS280

- OS210

- ZS102

- ZS104

- ZS105

LIBRARY   Specifies the loading of an User exit module from a private Authorized library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for loading User exit modules.

library.dsn
Specifies the name of a private Authorized library named. The library name should be enclosed in single quotes (').

ABENDNOTIFY
Specifies that a TSO message will be sent if any JES2 exit ABENDs.

NOABENDNOTIFY
Specifies that no messages will be sent for JES2 exit ABENDs.

id1, id2, id3   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

AUTOINSTALL
This option tells OS/EM to add any user exits specified in JESPARMS to OS/EM's internal control blocks as if the exits had been specifically defined by **OS$CNTL JES2** commands.

Note: AUTOINSTALL is the default, and it must be active at this level to allow use of the AUTOINSTALL option at the individual exit point level.

NOAUTOINSTALL
If NOAUTOINSTALL is specified, user exits in JESPARMS will not be controlled by OS/EM and the use of AUTOINSTALL at the exit point level is disabled.

EXIT00 ...

EXIT255   Specifies which of the JES2 exits - exits 0 through 255 - are to be activated.

NOEXIT00 ...

NOEXIT255   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   ENABLE causes an exitpoint to be enabled after a failure of the OS/EM exit controller caused the exit to be disabled. Due to the exit environment JES2 establishes, merely reloading the exit controller will not automatically activate the associated user exits as is the case with the other, non-JES2, points. Use of this keyword will activate an exit after the controller has been reloaded.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously, are retained and will not have to be re-specified if the exit is enabled again.

Note: If you have any questions as to the state of a particular JES2 exit, a QUERY command may be issued for the exit. If the exit is marked as DISABLED, issue a JES2 command for the exit with the ENABLE keyword.

An example of the QUERY command for JES2 EXIT2 would be:

```
OS$CNTL QUERY JES2(EXIT2)
```

AUTOINSTALL

If specified, any user exits found in JESPARMS for this exit point will automaticaly be controlled by OS/EM without the need to specify them via **OS$CNTL JES2** commands.

Note: AUTOINSTALL must be specified (or defaulted) at the top level for this JES to allow use at the exit point level.

NOAUTOINSTALL

If specified, user exits for this exit point found in JESPARMS will be ignored by OS/EM.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active JES2 EXIT32 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of JES2 EXIT32 user exits are to be activated. This can be specified at initialization, or later to load and activate JES2 EXIT32 user exits that were not activated at initialization. The exits will be called in the order listed.

lmod:exit1

lmod:exit2

lmod:exit3

The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.

This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

0   A zero (0) can be used to inactivate and delete a previously specified JES2 exit.

Note: JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

NOBACKUP Specifies that any active backup user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup user exits are to be activated. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. The backup User exit modules will be called in the order listed.

lmod:exit1

lmod:exit2

lmod:exit3
The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.

Note: This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

* An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

0 A zero (0) can be used to inactivate and delete a previously specified JES2 exit.

Note: JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

ABENDNOTIFY
Specifies that when a JES2 EXIT29 Optional exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a JES2 EXIT29 Optional exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of JES2 EXIT29 Optional exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*	An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
0	A zero (0) can be used to negate a previous entry of the notify TSO user list.
LIMIT	Specifies that Job name limits are requested, to limit user exit modules for JES2 EXIT32 to a specific Jobname(s) or a Jobname mask(s).
NOLIMIT	The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
> The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EX-ITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*	An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
0	A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.
VALIDRC	Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. Use this option with extreme caution.
NOVALIDRC	NOVALIDRC turns off return code checking for user exit modules
rc	Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY
GOODRC	Check for good return codes (register 15) being issued by JES2 user exit modules. A good return code allows subsequent JES2 user exit modules to be called. OS/EM provides a default list. For example, if a JES2 user exit for JES2 EXIT32 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.
NOGOODRC	NOGOODRC turns off good code checking for user exit modules
rc	Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY
DISABLERC	Check for a return code (register 15) being issued by user exit modules, that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
> NODISABLERC turns off disable return code checking for the exit point.

rc	Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. Use this option with extreme caution.

    rc Default return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

KEY Specifies the storage key for this JES2 exit, this is provided for user exit modules that are reentrant in the JES2 sense. Also see IBM JES2 User Modifications and Macros for further detail.

    Note: OS/EM recommends all JES2 exits be MVS reentrant and avoid using the KEY option.

    0 Specifies the JES2 User exit user be loaded data into key 0 storage.

    1 Specifies the JES2 User exit user will be loaded into key 1 storage.

JOBNAMELOC

    jobnamelocspec
    Specifies the location of the Jobname specified using TSO TEST addressing specification parameters. This parameter should be used with extreme caution as any miscalculation may not be pointing to the Jobname.

EXIT32 Options

OPTIONS Specifies that an optional OS/EM control function is to be enabled for JES2 EXIT32

NOOPTIONS The NOOPTIONS parameter will totally disable the optional OS/EM control function for JES2 EXIT32.

    Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

FIRST

LAST Specifies whether the optional OS/EM JCL Standards functions for JES2 EXIT32 will be applied before or after the user exits are invoked.

    Note: OS/EM control functions are invoked FIRST by default.

ABENDNOTIFY
    Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY
    The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

    Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

    id1 id2 id3
        The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

    '*' An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

JOBSTARTMSG

Activates the optional OS/EM job start message function.

Note: The jobcard parameter NOTIFY must be present for this option to function.

NOJOBSTARTMSG

Specify the NO option to disable the job start message.

DSNENQ   Specifies that OS/EM will block jobs from executing until all datasets needed by the job are available.

NODSNENQ   OS/EM will not verify that needed datasets are available.

JOBWAITWTO

This option tells OS/EM to send a message to the console listing the datasets which are unavailable.

NOJOBWAITWTO

OS/EM does not send messages to the console.

JOBOWNERMSG

OS/EM will send a message to the jobs owner notifying them that a dataset needed by their job is unavailable.

NOJOBOWNERMSG

OS/EM will not send messages about unavailable datasets.

RESOWNERMSG

OS/EM will send a message to the person who has control of the needed dataset.

NORESOWNERMSG

OS/EM will not send messages about unavailable datasets.

EXIT44

OS/EM provides basic exit support for EXIT44, however OS/EM has its own exit here to support other extended functions.

```
OS$CNTL JES2                                                         -
        {JESName(XXXX {YYYYY})}                                      -
        {NOABendnotify|ABendnotify(                                  -
            0|*|id1 {0|*|id2 {0|*|id3}} ) }                          -
        {LIBrary(library.dsn)}                                       -
        {NOAUtoinstall|AUtoinstall}                                  -
         NOEXIT44|EXIT44(                                          -
           {ENable|DISABLE}                                          -
           {NOAUtoinstall|AUinstall}                                 -
           {NUmber( num1 num2 num3 )}                                -
           {NOExits|Exits(                                           -
               lmod:exit1|*|0                                      -
              {lmod:exit2|*|0                                      -
              {lmod:exit3|*|0}})}                                  -
           {NOBAckups|BAckups(                                       -
               lmod:exit1|*|0                                      -
              {lmod:exit2|*|0                                      -
              {lmod:exit3|*|0}})}                                  -
           {NOABendnotify|ABendnotify(                               -
              (id1a|*|0 {id1b|*|0 {id1c|*|0}})                       -
              (id2a|*|0 {id2b|*|0 {id2c|*|0}})                       -
              (id3a|*|0 {id3b|*|0 {id3c|*|0}})})                     -
           {NOLIMits|LIMits(                                         -
               (jobmask1,...)|*|0                                    -
              {(jobmask2,...)|*|0                                    -
              {(jobmask3,...)|*|0}})}                                -
           {NOVAlidrc|VAlidrc(rc,...)}                               -
           {NOGOodrc|GOodrc(rc,...)}                                 -
           {NODISablerc|DISABLERc(rc)}                               -
           {DEFaultrc(rc)}                                           -
           {Key(0|1)}}                                               -
           {JOBnameloc(jobnamelocspec)}                              -
           {OPTions|NOOptions(                                       -
              {FIrst|LAst}                                           -
              {NOABendnotify|ABendnotify(                            -
                 *|0|id1 {*|0|id2 {*|0|id3}} ) }  ) }
```

JESNAME(XXXX YYYYY)

Optional keyword which indicates that you are supplying the name of the JES2 subsystem the command applies to. JES2 is the default.

XXXX The four character identifier for this JES2 subsystem.

YYYYY The optional JES2 version. This is used to tell OS/EM what level of code to use before the subsystem actually starts. If there is a mismatch when the subsystem starts, only the OS/EM code is reloaded. Acceptable values are:

- OS270

- OS280

- OS210

- ZS102

- ZS104

- ZS105

LIBRARY Specifies the loading of an User exit module from a private Authorized library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for loading User exit modules.

    library.dsn
        Specifies the name of a private Authorized library named. The library name should be enclosed in single quotes (').

ABENDNOTIFY
    Specifies that a TSO message will be sent if any JES2 exit ABENDs.

NOABENDNOTIFY
    Specifies that no messages will be sent for JES2 exit ABENDs.

    id1, id2, id3   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

AUTOINSTALL
    This option tells OS/EM to add any user exits specified in JESPARMS to OS/EM's internal control blocks as if the exits had been specifically defined by **OS$CNTL JES2** commands.

    Note: AUTOINSTALL is the default, and it must be active at this level to allow use of the AUTOINSTALL option at the individual exit point level.

NOAUTOINSTALL
    If NOAUTOINSTALL is specified, user exits in JESPARMS will not be controlled by OS/EM and the use of AUTOINSTALL at the exit point level is disabled.

EXIT00 ...

EXIT255 Specifies which of the JES2 exits - exits 0 through 255 - are to be activated.

NOEXIT00 ...

NOEXIT255 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE ENABLE causes an exitpoint to be enabled after a failure of the OS/EM exit controller caused the exit to be disabled. Due to the exit environment JES2 establishes, merely reloading the exit controller will not automatically activate the associated user exits as is the case with the other, non-JES2, points. Use of this keyword will activate an exit after the controller has been reloaded.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously, are retained and will not have to be re-specified if the exit is enabled again.

    Note: If you have any questions as to the state of a particular JES2 exit, a QUERY command may be issued for the exit. If the exit is marked as DISABLED, issue a JES2 command for the exit with the ENABLE keyword.

    An example of the QUERY command for JES2 EXIT2 would be:

```
OS$CNTL QUERY JES2(EXIT2)
```

AUTOINSTALL
    If specified, any user exits found in JESPARMS for this exit point will automaticaly

be controlled by OS/EM without the need to specify them via **OS$CNTL JES2** commands.

Note: AUTOINSTALL must be specified (or defaulted) at the top level for this JES to allow use at the exit point level.

NOAUTOINSTALL

If specified, user exits for this exit point found in JESPARMS will be ignored by OS/EM.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active JES2 EXIT44 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of JES2 EXIT44 user exits are to be activated. This can be specified at initialization, or later to load and activate JES2 EXIT44 user exits that were not activated at initialization. The exits will be called in the order listed.

lmod:exit1

lmod:exit2

lmod:exit3

The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.

This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

0   A zero (0) can be used to inactivate and delete a previously specified JES2 exit.

Note: JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

NOBACKUP   Specifies that any active backup user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup user exits are to be activated. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. The backup User exit modules will be called in the order listed.

lmod:exit1

lmod:exit2

lmod:exit3
The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.

Note: This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

*
An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

0
A zero (0) can be used to inactivate and delete a previously specified JES2 exit.

Note: JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

ABENDNOTIFY
Specifies that when a JES2 EXIT32 Optional exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a JES2 EXIT32 Optional exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of JES2 EXIT32 Optional exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*
An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT
Specifies that Job name limits are requested, to limit user exit modules for JES2 EXIT44 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT
The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

* An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. Use this option with extreme caution.

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by JES2 user exit modules. A good return code allows subsequent JES2 user exit modules to be called. OS/EM provides a default list. For example, if a JES2 user exit for JES2 EXIT44 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules, that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
NODISABLERC turns off disable return code checking for the exit point.

rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. Use this option with extreme caution.

rc Default return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

KEY   Specifies the storage key for this JES2 exit, this is provided for user exit modules that are reentrant in the JES2 sense. Also see IBM JES2 User Modifications and Macros for further detail.

Note: OS/EM recommends all JES2 exits be MVS reentrant and avoid using the KEY option.

0   Specifies the JES2 User exit user be loaded data into key 0 storage.

1   Specifies the JES2 User exit user will be loaded into key 1 storage.

JOBNAMELOC

jobnamelocspec
Specifies the location of the Jobname specified using TSO TEST addressing specification parameters. This parameter should be used with extreme caution as any miscalculation may not be pointing to the Jobname.

EXIT44 Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for JES2 EXIT44

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for JES2 EXIT44.

Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

FIRST

LAST   Specifies whether the optional OS/EM JCL Standards functions for JES2 EXIT44 will be applied before or after the user exits are invoked.

Note: OS/EM control functions are invoked FIRST by default.

ABENDNOTIFY
Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3
The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

EXIT49

OS/EM provides basic exit support for EXIT49, however OS/EM has its own exit here to support other extended functions.

```
OS$CNTL JES2                                                      -
        {JESName(XXXX {YYYYY})}                                   -
        {NOABendnotify|ABendnotify(                               -
           0|*|id1 {0|*|id2 {0|*|id3}} ) }                        -
        {LIBrary(library.dsn)}                                    -
        {NOAUtoinstall|AUtoinstall}                               -
         NOEXIT49|EXIT49(                                       -
           {ENable|DISABLE}                                       -
           {NOAUtoinstall|AUinstall}                              -
           {NUmber( num1 num2 num3 )}                             -
           {NOExits|Exits(                                        -
                lmod:exit1|*|0                                  -
               {lmod:exit2|*|0                                  -
               {lmod:exit3|*|0}})}                              -
           {NOBAckups|BAckups(                                     -
                lmod:exit1|*|0                                  -
               {lmod:exit2|*|0                                  -
               {lmod:exit3|*|0}})}                              -
           {NOABendnotify|ABendnotify(                            -
               (id1a|*|0 {id1b|*|0 {id1c|*|0}})                   -
               (id2a|*|0 {id2b|*|0 {id2c|*|0}})                   -
               (id3a|*|0 {id3b|*|0 {id3c|*|0}})})                 -
           {NOLIMits|LIMits(                                      -
                (jobmask1,...)|*|0                                -
               {(jobmask2,...)|*|0                                -
               {(jobmask3,...)|*|0}})}                            -
           {NOVAlidrc|VAlidrc(rc,...)}                            -
           {NOGOodrc|GOodrc(rc,...)}                              -
           {NODISablerc|DISABLERc(rc)}                            -
           {DEFaultrc(rc)}                                        -
           {Key(0|1)}}                                            -
           {JOBnameloc(jobnamelocspec)}                           -
           {OPTions|NOOptions(                                    -
               {FIrst|LAst}                                       -
               {NOABendnotify|ABendnotify(                        -
                  *|0|id1 {*|0|id2 {*|0|id3}} ) }  ) }
```

JESNAME(XXXX YYYYY)

Optional keyword which indicates that you are supplying the name of the JES2 subsystem the command applies to. JES2 is the default.

XXXX   The four character identifier for this JES2 subsystem.

YYYYY   The optional JES2 version. This is used to tell OS/EM what level of code to use before the subsystem actually starts. If there is a mismatch when the subsystem starts, only the OS/EM code is reloaded. Acceptable values are:

- OS270

- OS280

- OS210

- ZS102

- ZS104

- ZS105

LIBRARY Specifies the loading of an User exit module from a private Authorized library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for loading User exit modules.

    library.dsn
        Specifies the name of a private Authorized library named. The library name should be enclosed in single quotes (').

ABENDNOTIFY
    Specifies that a TSO message will be sent if any JES2 exit ABENDs.

NOABENDNOTIFY
    Specifies that no messages will be sent for JES2 exit ABENDs.

    id1, id2, id3   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

AUTOINSTALL
    This option tells OS/EM to add any user exits specified in JESPARMS to OS/EM's internal control blocks as if the exits had been specifically defined by **OS$CNTL JES2** commands.

    Note: AUTOINSTALL is the default, and it must be active at this level to allow use of the AUTOINSTALL option at the individual exit point level.

NOAUTOINSTALL
    If NOAUTOINSTALL is specified, user exits in JESPARMS will not be controlled by OS/EM and the use of AUTOINSTALL at the exit point level is disabled.

EXIT00 ...

EXIT255 Specifies which of the JES2 exits - exits 0 through 255 - are to be activated.

NOEXIT00 ...

NOEXIT255 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE ENABLE causes an exitpoint to be enabled after a failure of the OS/EM exit controller caused the exit to be disabled. Due to the exit environment JES2 establishes, merely reloading the exit controller will not automatically activate the associated user exits as is the case with the other, non-JES2, points. Use of this keyword will activate an exit after the controller has been reloaded.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit, but all the options that were specified previously, are retained and will not have to be re-specified if the exit is enabled again.

    Note: If you have any questions as to the state of a particular JES2 exit, a QUERY command may be issued for the exit. If the exit is marked as DISABLED, issue a JES2 command for the exit with the ENABLE keyword.

    An example of the QUERY command for JES2 EXIT2 would be:

```
OS$CNTL QUERY JES2(EXIT2)
```

AUTOINSTALL
    If specified, any user exits found in JESPARMS for this exit point will automaticaly

be controlled by OS/EM without the need to specify them via **OS$CNTL JES2** commands.

Note: AUTOINSTALL must be specified (or defaulted) at the top level for this JES to allow use at the exit point level.

NOAUTOINSTALL
>> If specified, user exits for this exit point found in JESPARMS will be ignored by OS/EM.

NUMBER
You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3
>> Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

>> If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS
Specifies that any active JES2 EXIT49 user exits are to be disabled. This is only effective after initialization.

EXITS(...)
Specifies that the list of JES2 EXIT49 user exits are to be activated. This can be specified at initialization, or later to load and activate JES2 EXIT49 user exits that were not activated at initialization. The exits will be called in the order listed.

lmod:exit1

lmod:exit2

lmod:exit3
>> The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.

>> This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

* An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

0 A zero (0) can be used to inactivate and delete a previously specified JES2 exit.

>> **Note:** JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

NOBACKUP
Specifies that any active backup user exits are to be disabled. This is only effective after initialization.

BACKUP(...)
Specifies that the list of backup user exits are to be activated. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. The backup User exit modules will be called in the order listed.

lmod:exit1

lmod:exit2

lmod:exit3
> The load module name (lmod) of the user exit that is to be associated with the specified JES2 exit. An entryname (exitn) must be entered for each module name with a colon (:) separating the two names.
>
> **Note:** This is a requirement when specifying JES2 user exits. A single load module may contain more than one user exit. Therefore, the entry point representing the user exit must be named.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value this position of the JES2 exit list is not to be changed. As a default, the asterisk may be omitted where it would normally be implied.

0
> A zero (0) can be used to inactivate and delete a previously specified JES2 exit.
>
> **Note:** JES2 requires that exit load modules and entry points be declared in its initialization member. You must ensure that these parameters are correctly specified before using OS/EM to dynamically load these JES2 exits.

ABENDNOTIFY
> Specifies that when a JES2 EXIT44 Optional exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a JES2 EXIT44 Optional exit module has ABENDed.

NOABENDNOTIFY
> The NO option can be used to nullify the option to notify a TSO user of JES2 EXIT44 Optional exit module ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.
>
> **(id1a,id1b,id1c)**
> > The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.
>
> **(id2a,id2b,id2c)**
> > The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.
>
> **(id3a,id3b,id3c)**
> > The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.
> >
> > **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.
>
> *****
> > An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0**
> > A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for JES2 EXIT49 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*
An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. Use this option with extreme caution.

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

 rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by JES2 user exit modules. A good return code allows subsequent JES2 user exit modules to be called. OS/EM provides a default list. For example, if a JES2 user exit for JES2 EXIT49 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

 rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules, that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
NODISABLERC turns off disable return code checking for the exit point.

 rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. Use this option with extreme caution.

 rc Default return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

KEY   Specifies the storage key for this JES2 exit, this is provided for user exit modules that are reentrant in the JES2 sense. Also see IBM JES2 User Modifications and Macros for further detail.

Note: OS/EM recommends all JES2 exits be MVS reentrant and avoid using the KEY option.

0   Specifies the JES2 User exit user be loaded data into key 0 storage.

1   Specifies the JES2 User exit user will be loaded into key 1 storage.

JOBNAMELOC

jobnamelocspec
Specifies the location of the Jobname specified using TSO TEST addressing specification parameters. This parameter should be used with extreme caution as any miscalculation may not be pointing to the Jobname.

EXIT49 Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for JES2 EXIT49

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for JES2 EXIT49.

Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

FIRST

LAST   Specifies whether the optional OS/EM JCL Standards functions for JES2 EXIT49 will be applied before or after the user exits are invoked.

Note: OS/EM control functions are invoked FIRST by default.

ABENDNOTIFY
Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3
The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

JES2 exit activation

The following example illustrates the activation of JESEXIT01 with two user exits.

```
OS$CNTL JES2 EXIT01(EXITS(USREXIT:ENTRY1 USREXIT:ENTRY2))
```

This example also illustrates OS/EM's support for JES2's ability to single load module with multiple entry points as a user exit.

JES3 Command

This subcommand sets which JES3 exits will be active, loads the specified user exit modules, and sets LIMIT checking for the corresponding exit module

```
OS$CNTL JES3                                                             -
        NOEXitNnn|EXitNnn(                                               -
            {ENable|DISABLE}                                            -
            {NUmber( num1 num2 num3 )}                                  -
            {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}        -
            {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}    -
            {NOABendnotify|ABendnotify(                                 -
               (0|*|id1a {0|*|id2a {0|*|id3a }})                        -
               (0|*|id1b {0|*|id2b {0|*|id3b }})                        -
               (0|*|id1c {0|*|id2c {0|*|id3c }}) })                     -
            {NOLIMit|LIMit(                                             -
              (jobmask1,...)|*|0                                        -
             {(jobmask2,...)|*|0                                        -
             {(jobmask3,...)|*|0}})})}                                  -
            {NOVAlidrc|VAlidrc(rc,...)}                                 -
            {NOGoodrc|Goodrc(rc,...)}                                   -
            {NODIsablerc|DISABLERc(rc)}                                 -
            {DEFaultrc(rc)}                                             -
        {LINkage(BALr|BAKr|ARET|ARETRc)}                               -
        {JOBNAmeloc(jobnamelocspec)}                    )}
```

ABENDNOTIFY

> Specifies that a TSO message will be sent if any JES3 exit ABENDs.

NOABENDNOTIFY

> Specifies that no messages will be sent for JES3 exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a JES3EXITnn exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for JES3EXITnn modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the JES3 JES3EXITnn user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

JES3EXITnn Specifies that the JES3EXITnn exit point is to be activated.

NOJES3EXITnn

> The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named JES3EXITnn exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

> **num1, num2, num3**
>
> > Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
> >
> > If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available.   If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active JES3EXITnn user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of JES3EXITnn user exits be activated. This can be specified at initialization, or later to load and activate JES3EXITnn user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**
>
> **exit2**
>
> **exit3**
> > The module name of the user exit that is assigned to the specified JES3EXITnn exit point.

> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

> **0**   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup JES3EXITnn user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup JES3EXITnn user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**
>
> **exit2**

exit3

> The module name of the backup user exit that is assigned to the specified JES3 exit point.

*

> An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup JES3 user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0

> A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

> Specifies that when a JES3EXITnn exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a JES3EXITnn exit module has ABENDed.

NOABENDNOTIFY

> The NO option can be used to nullify the option to notify a TSO user of JES3EXITnn exit module ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

> The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

> The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

> The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*

> An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0

> A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for JES3EXITnn to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

> The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*

> An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

    rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by JES3EXITnn user exit modules. A good return code allows subsequent JES3EXITnn user exit modules to be called. OS/EM provides a default list. For example, if a JES3 user exit for JES3EXITnn set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

    rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
    NODISABLERC turns off disable return code checking for the exit point.

    rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc   Default return codes values are any numeric value

LINKAGE

BAKR

BALR

ARET

ARETRC   Specifies the type of linkage that was specified on the ASAVE and ACALL JES3 macros for this exit point. This parameter is provided for future JES3 compatibility, as IBM JES3 exit support is only provided through JES3 EXIT65.

    Refer to JES3 User Modifications and Macros for a more detailed explanation of the BALR, ARETURN, and ARETURN with RC options.

JOBNAMELOC

    jobnamelocspec
        Specifies the location of the Jobname specified using TSO TEST addressing

specification parameters. This parameter should be used with extreme caution as any miscalculation may not be pointing to the Jobname.

Exit Activation

The following example assumes that JES3 exits IATUX02, IATUX03, and IATUX04 are to be activated at OS/EM initialization. Further, user exits are supplied for IEFUJV and IEFACTRT, and an exit to dump the SMF datasets is supplied.

```
OS$CNTL JES3 –
    EXIT02(EXITS(NOPROC)) –
    EXIT03(EXITS(SCANTEXT J3UEXT32)) –
    EXIT04(EXITS(SCANJOBC))
```

Exit Deactivation

The following example illustrates the issuance of OS$CNTL from TSO to disable JES3 exit IATUX08.

```
OS$CNTL JES3 NOEXIT08
```

Example Exit Replacement

Assume that at initialization IATUX09 was activated with user exits USREXIT1, USREXIT2, and USREXIT3:

```
OS$CNTL JES3 EXIT09(EXITS(USREXIT1 USREXIT2 USREXIT3))
```

and now USREXIT4 is to replace USREXIT2. Each of the following commands would accomplish this:

```
OS$CNTL JES3 EXIT09(EXITS(USREXIT1 USREXIT4 USREXIT3))

OS$CNTL JES3 EXIT09(EXITS(* USREXIT4 *)

OS$CNTL JES3 EXIT09(EXITS(* USREXIT4))
```

The last example shows the final asterisk as omitted since the asterisk would be assumed by default. The first asterisk has to be present so that positioning can be maintained.

MISC Command

SVC19 Subcommand of MISC

This subcommand allows OS/EM to monitor user specified DD names for specific messages. When found, the message is written to the system console to allow appropriate action by either the operator or an automated operations package.

```
OS$CNTL MISC                                                     -
    {NOSVC19|SVC19(                                              -
        {NOOPTions|OPTions(                                      -
          {NOABendnotify|ABendnotify(userid)}                    -
          {NOTRace|TRace}                                        -
          {NOWTO|WTO(                                            -
            {NOWTO1|WTO1(                                        -
              {NOOSemid|OSemid}                                  -
              {NODDname|DDname(xxx, xxx, ...)}                   -
              {NOJObname|JObname(xxx, xxx, ...)}                 -
              {NOPRogram|PRogram(xxx, xxx, ...)}                 -
              {NOMSgid|MSgid(xxx, xxx, ...)}                     -
              {NOLOcation|LOcation(nn{:nn}, *|nn{:nn}, ...)}   -
              {NOROutcde|ROutcde(nnn{:nnn}, nnn{:nnn}, ...)}   -
              {NODEsc|DEsc(nn, nn, ...)}    )}                   -
               .                                                 -
               .                                                 -
            {NOWTO32|WTO32(                                      -
              {NOOSemid|OSemid}                                  -
              {NODDname|DDname(xxx, xxx, ...)}                   -
              {NOJObname|JObname(xxx, xxx, ...)}                 -
              {NOPRogram|PRogram(xxx, xxx, ...)}                 -
              {NOMSgid|MSgid(xxx, xxx, ...)}                     -
              {NOLOcation|LOcation(nn{:nn}, *|nn{:nn}, ...)}   -
              {NOROutcde|ROutcde(nnn{:nnn}, nnn{:nnn}, ...)}   -
              {NODEsc|DEsc(nn, nn, ...)}   )}  )} )}
```

SVC19	Specifies that the SVC19 exit is to be activated.
NOSVC19	The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

SVC19 Options

OPTIONS	Specifies that an optional OS/EM control function is to be enabled for SVC19
NOOPTIONS	The NOOPTIONS parameter will totally disable the optional OS/EM control function for SVC19.

Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

ABENDNOTIFY
Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3
The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'
An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
A zero (0) can be used to negate a previous entry of the notify TSO user list.

TRACE
Write GTF Trace records for critical control blocks, used in Problem Determination for OS/EM Optional functions in conjunction with OS/EM support.

NOTRACE
Disables GTF trace records (This is the default)

WTO
Specifies that WTO Control processing will be in effect.

NOWTO
Specifies that WTO Control processing will be removed.

WTOn
Specifies that a WTO selection group will be activated. There may be up to 32 different selection groups.

NOWTOn
Specifies that the selection group specified will be deactivated.

OSEMID
Specifies that the OS/EM message ID OS$DC1195 will be appended to the front of the message written to the console.

NOOSEMID
specifies that NO OS/EM message ID will be appended.

DDNAME
Specifies the ddnames that OS/EM will monitor. A ddname must be specified to have this function active.

xxx The actual ddname to be monitored. Multiple ddnames may be specified.

NODDNAME
Deletes any previously entered ddnames. If used, you must respecify the command specifying new ddnames for the WTO control to be active.

JOBNAME
Specifies the job names which contain the ddnames to be monitored. When specified, only the job names listed will be checked.

xxx   The job name to be checked. Multiple job names may be specified.

NOJOBNAME

Deletes any previously entered job names. If no job names are specified, OS/EM will monitor all jobs.

PROGRAM

Specifies the programs that OS/EM will monitor. This must be a program specified via an EXEC JCL card. At least one program name must be specified for this function to be active.

xxx   The program to be monitored. Multiple program names may be specified.

NOPROGRAM

Deletes any previously entered programs. If used, you must reenter the command with new program names to have this function active.

MSGID

Specifies the message IDs that OS/EM will search for. A text string may also be specified enclosed in apostrophes. Multiple message IDs may be specified. At least one message id must be specified for this function to be active. The location of the message in the output line may be specified via the location parameter explained below.

xxx   The actual message ID or text string.

NOMSGID

Deletes all message IDs previously specified. If used, the command must be reentered with at least one message ID for the function to be active.

LOCATION

Specifies where in the output record the message ID is located. If used, you must specify the location in the same order as the message IDs are specified. You specify the column number, starting with 1, which is the first position after an ASA or machine control character or 3800 font selection character. A range may also be specified as xx:yy which indicates that the message must start in columns xx through and including column yy. If location is not specified, column 1 is assumed.

nn

nn:nn

Message location or location range. If used, enter each location in the same order as the message ID was specified.

NOLOCATION

This deletes all previously entered location codes. If no locations are entered, each message ID is expected to begin in column 1.

ROUTCDE

Specify any route codes to be passed to the WTO macro. Multiple route codes may be specified.

nnn

nnn:nnn

The actual route codes or a range of route codes. For a list of acceptable values, see the IBM manual MVS Routing and Descriptor Codes.

NOROUTCDE

> Deletes any previously entered route codes.

DESC

> Specify any description codes to be passed to the WTO macro. Multiple description codes may be specified.
>
> **nn** The actual description codes.

NODESC

> Deletes any previously entered description codes.

SVC42 Subcommand of MISC

This subcommand allows OS/EM to intercept calls to programs running under TSO, and prevent them from being executed. Up to 5 lines of messages may be written to explain to the TSO user why the program is not being permitted to execute.

```
OS$CNTL MISC
    {NOSVC42|SVC42(                                            -
        {NOOPTions|OPTions(                                    -
          {NOABendnotify|ABendnotify(userid)}                 -
          {NOTRace|TRace}                                      -
          {NOINTercept|INTercept(                             -
            {NOPGM1|PGM1(                                      -
              pgmname                                          -
              'text' {'text' {'text' {'text' {'text'}}}}  )}
              .
              .
              .
            {NOPGM32|PGM32(                                    -
              pgmname                                          -
              'text' {'text' {'text' {'text' {'text'}}}}  )} )} )} )}
```

SVC42 Specifies that the SVC42 exit is to be activated.

NOSVC42 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

SVC42 Options

OPTIONS Specifies that an optional OS/EM control function is to be enabled for SVC42

NOOPTIONS The NOOPTIONS parameter will totally disable the optional OS/EM control function for SVC42.

> **Note:** The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

ABENDNOTIFY

> Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3

The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'

An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0

A zero (0) can be used to negate a previous entry of the notify TSO user list.

TRACE   Write GTF Trace records for critical control blocks, used in Problem Determination for OS/EM Optional functions in conjunction with OS/EM support.

NOTRACE   Disables GTF trace records (This is the default)

INTERCEPT   Specifies that TSO Program Intercept processing will be in effect.

NOINTERCEPT

Specifies that TSO Program Intercept processing will be removed.

PGMn

Specifies that an Intercept selection group will be activated. There may be up to 32 different selection groups.

NOPGMn

Specifies that the selection group specified will be deactivated.

pgmname

The name of the program to be intercepted.

'text' 'text' 'text' 'text' 'text'

The 5 lines of text which will be displayed to the TSO user when the program is detected.

RACF Command

This subcommand sets which RACF exits will be active, loads the specified user exit modules, loads the specified backup user exit modules, specifies the TSO USERID to be notified if a corresponding user exit module abends, sets additional user exit return code and sets LIMIT checking for the corresponding exit modules.

ICHCCX00

This is a Command-Preprocessing Exit. You can do added security checks and change or restrict the RACF limitations of the passed commands.

OS/EM provides only basic exit support for this exit.

```
        OS$CNTL RACF                                                    -
         {NOABendnotify|ABendnotify(                                    -
            0|*|id1 {0|*|id2 {0|*|id3}} )}                              -
         {LIBrary(library.dsn)}                                         -
         {NOICHCCX00|ICHCCX00(                                  -
/*                                                      */      -
              {ENable|DISABLE}                                         -
              {NUmber( num1 num2 num3 )}                               -
              {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}   -
              {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})} -
              {NOABendnotify|ABendnotify(                              -
                 (0|*|id1a {0|*|id2a {0|*|id3a }})                     -
                 (0|*|id1b {0|*|id2b {0|*|id3b }})                     -
                 (0|*|id1c {0|*|id2c {0|*|id3c }}) })                  -
              {NOLIMit|LIMit(                                          -
                (jobmask1,...)|*|0                                     -
               {(jobmask2,...)|*|0                                     -
               {(jobmask3,...)|*|0}})}                                 -
              {NOVAlidrc|VAlidrc(rc,...)}                              -
              {NOGoodrc|Goodrc(rc,...)}                                -
              {NODIsablerc|DISABLERc(rc)}                              -
              {DEFaultrc(rc)}                                          -
                                                      )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any RACF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for RACF exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ICHCCX00 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ICHCCX00 modules.

      library.dsn
          Specifies the name of a private **authorized** library used to locate and load the RACF ICHCCX00 user exit. The library name should be enclosed in single quotes (').

          Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ICHCCX00   Specifies that the ICHCCX00 exit point is to be activated.

NOICHCCX00   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ICHCCX00 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

      num1, num2, num3
          Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

          If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ICHCCX00 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ICHCCX00 user exits be activated. This can be specified at initialization, or later to load and activate ICHCCX00 user exits that were not activated at initialization. The exits will be called in the order listed.

      exit1

      exit2

      exit3
          The module name of the user exit that is assigned to the specified ICHCCX00 exit point.

      *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

      0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ICHCCX00 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ICHCCX00 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**
>
> **exit2**
>
> **exit3**
> The module name of the backup user exit that is assigned to the specified RACF exit point.
>
> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup RACF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0** A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a ICHCCX00 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ICHCCX00 exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of ICHCCX00 exit module ABENDs.

> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.
>
> **(id1a,id1b,id1c)**
> The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.
>
> **(id2a,id2b,id2c)**
> The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.
>
> **(id3a,id3b,id3c)**
> The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.
>
> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0** A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for ICHCCX00 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

> **jobmask1**

jobmask2

jobmask3
> The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

> **0** A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

> **rc** Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by ICHCCX00 user exit modules. A good return code allows subsequent ICHCCX00 user exit modules to be called. OS/EM provides a default list. For example, if a RACF user exit for ICHCCX00 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

> **rc** Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
> NODISABLERC turns off disable return code checking for the exit point.

> **rc** Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

> **rc** Default return codes values are any numeric value

ICHCNX00

This exit is the Command-Preprocessing exit. It allows you to perform added security checks and to change or eliminate RACF dataset naming conventions.

OS/EM provides only basic exit support for this exit.

```
        OS$CNTL RACF                                                    -
         {NOABendnotify|ABendnotify(                                    -
            0|*|id1 {0|*|id2 {0|*|id3}} )}                              -
         {LIBrary(library.dsn)}                                         -
         {NOICHCNX00|ICHCNX00(                                     -
/*                                                          */        -
                {ENable|DISABLE}                                       -
                {NUmber( num1 num2 num3 )}                             -
                {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
                {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
                {NOABendnotify|ABendnotify(                            -
                   (0|*|id1a {0|*|id2a {0|*|id3a }})                   -
                   (0|*|id1b {0|*|id2b {0|*|id3b }})                   -
                   (0|*|id1c {0|*|id2c {0|*|id3c }}) })                -
                {NOLIMit|LIMit(                                        -
                  (jobmask1,...)|*|0                                   -
                 {(jobmask2,...)|*|0                                   -
                 {(jobmask3,...)|*|0}})}                               -
                {NOVAlidrc|VAlidrc(rc,...)}                            -
                {NOGoodrc|Goodrc(rc,...)}                              -
                {NODIsablerc|DISABLERc(rc)}                            -
                {DEFaultrc(rc)}                                        -
                                                    )}
```

ABENDNOTIFY
>   Specifies that a TSO message will be sent if any RACF exit ABENDs.

NOABENDNOTIFY
>   Specifies that no messages will be sent for RACF exit ABENDs.

>> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ICHCNX00 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ICHCNX00 modules.

>> **library.dsn**
>>> Specifies the name of a private **authorized** library used to locate and load the RACF ICHCNX00 user exit. The library name should be enclosed in single quotes (').

>>> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ICHCNX00   Specifies that the ICHCNX00 exit point is to be activated.

NOICHCNX00 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ICHCNX00 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

> **num1, num2, num3**
>> Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
>>
>> If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available.   If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ICHCNX00 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of ICHCNX00 user exits be activated. This can be specified at initialization, or later to load and activate ICHCNX00 user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the user exit that is assigned to the specified ICHCNX00 exit point.

> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

> **0**   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ICHCNX00 user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup ICHCNX00 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the backup user exit that is assigned to the specified RACF exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup RACF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a ICHCNX00 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ICHCNX00 exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of ICHCNX00 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for ICHCNX00 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

    rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by ICHCNX00 user exit modules. A good return code allows subsequent ICHCNX00 user exit modules to be called. OS/EM provides a default list. For example, if a RACF user exit for ICHCNX00 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

    rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

    NODISABLERC turns off disable return code checking for the exit point.

    rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc   Default return codes values are any numeric value

ICHDEX01

This is the password authentication exit routine.

OS/EM provides only basic support for this exit.

```
          OS$CNTL RACF                                                         –
           {NOABendnotify|ABendnotify(                                         –
              0|*|id1 {0|*|id2 {0|*|id3}} )}                                   –
           {LIBrary(library.dsn)}                                             –
           {NOICHDEX01|ICHDEX01(                                          –
/*                                                                   */       –
                  {ENable|DISABLE}                                            –
                  {NUmber( num1 num2 num3 )}                                 –
                  {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}        –
                  {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3})})}}      –
                  {NOABendnotify|ABendnotify(                                 –
                     (0|*|id1a {0|*|id2a {0|*|id3a }})                        –
                     (0|*|id1b {0|*|id2b {0|*|id3b }})                        –
                     (0|*|id1c {0|*|id2c {0|*|id3c }}) })                     –
                  {NOLIMit|LIMit(                                             –
                    (jobmask1,...)|*|0                                        –
                   {(jobmask2,...)|*|0                                        –
                   {(jobmask3,...)|*|0}})}                                    –
                  {NOVAlidrc|VAlidrc(rc,...)}                                 –
                  {NOGoodrc|Goodrc(rc,...)}                                   –
                  {NODIsablerc|DISABLERc(rc)}                                 –
                  {DEFaultrc(rc)}                                             –
                                                              )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any RACF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for RACF exit ABENDs.

> > **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ICHDEX01 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ICHDEX01 modules.

> **library.dsn**
> > Specifies the name of a private **authorized** library used to locate and load the RACF ICHDEX01 user exit. The library name should be enclosed in single quotes (').

> > **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ICHDEX01   Specifies that the ICHDEX01 exit point is to be activated.

NOICHDEX01   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ICHDEX01 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

> **num1, num2, num3**
>> Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
>>
>> If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ICHDEX01 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ICHDEX01 user exits be activated. This can be specified at initialization, or later to load and activate ICHDEX01 user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the user exit that is assigned to the specified ICHDEX01 exit point.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0**   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ICHDEX01 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ICHDEX01 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the backup user exit that is assigned to the specified RACF exit point.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup RACF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a ICHDEX01 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ICHDEX01 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of ICHDEX01 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for ICHDEX01 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

> **rc**   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by ICHDEX01 user exit modules. A good return code allows subsequent ICHDEX01 user exit modules to be called. OS/EM provides a default list. For example, if a RACF user exit for ICHDEX01 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

> **rc**   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
NODISABLERC turns off disable return code checking for the exit point.

> **rc**   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

> **rc**   Default return codes values are any numeric value

ICHPWX01

This is the new password processing exit.

OS/EM provides only basic exit support for this exit.

```
        OS$CNTL RACF                                                    -
         {NOABendnotify|ABendnotify(                                    -
            0|*|id1 {0|*|id2 {0|*|id3}} )}                              -
         {LIBrary(library.dsn)}                                         -
         {NOICHPWX01|ICHPWX01(                                  -
/*                                                      */      -
              {ENable|DISABLE}                                         -
              {NUmber( num1 num2 num3 )}                               -
              {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}   -
              {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})} -
              {NOABendnotify|ABendnotify(                              -
                (0|*|id1a {0|*|id2a {0|*|id3a }})                      -
                (0|*|id1b {0|*|id2b {0|*|id3b }})                      -
                (0|*|id1c {0|*|id2c {0|*|id3c }}) })                   -
              {NOLIMit|LIMit(                                          -
                (jobmask1,...)|*|0                                     -
               {(jobmask2,...)|*|0                                     -
               {(jobmask3,...)|*|0}})}                                 -
              {NOVAlidrc|VAlidrc(rc,...)}                              -
              {NOGoodrc|Goodrc(rc,...)}                                -
              {NODIsablerc|DISABLERc(rc)}                              -
              {DEFaultrc(rc)}                                          -
                                                   )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any RACF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for RACF exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ICHPWX01 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ICHPWX01 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the RACF ICHPWX01 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ICHPWX01   Specifies that the ICHPWX01 exit point is to be activated.

NOICHPWX01 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ICHPWX01 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

        num1, num2, num3

                Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ICHPWX01 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ICHPWX01 user exits be activated. This can be specified at initialization, or later to load and activate ICHPWX01 user exits that were not activated at initialization. The exits will be called in the order listed.

        exit1

        exit2

        exit3
                The module name of the user exit that is assigned to the specified ICHPWX01 exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ICHPWX01 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ICHPWX01 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

        exit1

        exit2

        exit3
                The module name of the backup user exit that is assigned to the specified RACF exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup RACF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0　　　　　A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a ICHPWX01 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ICHPWX01 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of ICHPWX01 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*　　　　　An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0　　　　　A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT　　　Specifies that Job name limits are requested, to limit user exit modules for ICHPWX01 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT　　The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*　　　　　An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0　　　　　A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC　　Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

         rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by ICHPWX01 user exit modules. A good return code allows subsequent ICHPWX01 user exit modules to be called. OS/EM provides a default list. For example, if a RACF user exit for ICHPWX01 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

         rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

         NODISABLERC turns off disable return code checking for the exit point.

         rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

         rc   Default return codes values are any numeric value

ICHRCX01

This is the RACROUTE REQUEST=AUTH preprocessing exit.

OS/EM provides only basic exit support for this exit.

```
        OS$CNTL RACF                                                   -
         {NOABendnotify|ABendnotify(                                   -
            0|*|id1 {0|*|id2 {0|*|id3}} )}                             -
         {LIBrary(library.dsn)}                                        -
         {NOICHRCX01|ICHRCX01(                                   -
/*                                                           */        -
              {ENable|DISABLE}                                        -
              {NUmber( num1 num2 num3 )}                              -
              {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}  -
              {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})} -
              {NOABendnotify|ABendnotify(                             -
                 (0|*|id1a {0|*|id2a {0|*|id3a }})                    -
                 (0|*|id1b {0|*|id2b {0|*|id3b }})                    -
                 (0|*|id1c {0|*|id2c {0|*|id3c }}) })                 -
              {NOLIMit|LIMit(                                         -
                (jobmask1,...)|*|0                                    -
               {(jobmask2,...)|*|0                                    -
               {(jobmask3,...)|*|0}})}                                -
              {NOVAlidrc|VAlidrc(rc,...)}                             -
              {NOGoodrc|Goodrc(rc,...)}                               -
              {NODIsablerc|DISABLERc(rc)}                             -
              {DEFaultrc(rc)}                                         -
                                                        )}
```

ABENDNOTIFY
>Specifies that a TSO message will be sent if any RACF exit ABENDs.

NOABENDNOTIFY
>Specifies that no messages will be sent for RACF exit ABENDs.

>>**id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ICHRCX01 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ICHRCX01 modules.

>**library.dsn**
>>Specifies the name of a private **authorized** library used to locate and load the RACF ICHRCX01 user exit. The library name should be enclosed in single quotes (').

>>**Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ICHRCX01   Specifies that the ICHRCX01 exit point is to be activated.

NOICHRCX01   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ICHRCX01 exit point is be passed control for exit module execution.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS Specifies that any active ICHRCX01 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of ICHRCX01 user exits be activated. This can be specified at initialization, or later to load and activate ICHRCX01 user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3
The module name of the user exit that is assigned to the specified ICHRCX01 exit point.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP Specifies that all active backup ICHRCX01 user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup ICHRCX01 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
The module name of the backup user exit that is assigned to the specified RACF exit point.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup RACF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a ICHRCX01 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ICHRCX01 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of ICHRCX01 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for ICHRCX01 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by ICHRCX01 user exit modules. A good return code allows subsequent ICHRCX01 user exit modules to be called. OS/EM provides a default list. For example, if a RACF user exit for ICHRCX01 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

      NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

ICHRCX02

This is the RACROUTE REQUEST=AUTH postprocessint exit.

OS/EM supports an optional control function for this exit: External Tape Control. You may specify normal RACF logging or no logging for this function.

```
        OS$CNTL RACF                                               -
         {NOABendnotify|ABendnotify(                               -
            0|*|id1 {0|*|id2 {0|*|id3}} )}                         -
         {LIBrary(library.dsn)}                                    -
         {NOICHRCX02|ICHRCX02(                            -
/*                                                       */        -
                {ENable|DISABLE}                                   -
                {NUmber( num1 num2 num3 )}                         -
                {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
                {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
                {NOABendnotify|ABendnotify(                        -
                   (0|*|id1a {0|*|id2a {0|*|id3a }})               -
                   (0|*|id1b {0|*|id2b {0|*|id3b }})               -
                   (0|*|id1c {0|*|id2c {0|*|id3c }}) })            -
                {NOLIMit|LIMit(                                    -
                  (jobmask1,...)|*|0                               -
                 {(jobmask2,...)|*|0                               -
                 {(jobmask3,...)|*|0}})}                           -
                {NOVAlidrc|VAlidrc(rc,...)}                        -
                {NOGoodrc|Goodrc(rc,...)}                          -
                {NODIsablerc|DISABLERc(rc)}                        -
                {DEFaultrc(rc)}                                    -
                {NOOPTIONS|OPTIONS(                       +
                  {FIRST|LAST}                            +
                  {NOABENDNOTIFY|ABENDNOTIFY(USERID)}     +
                  {LOG|NOLOG}                             +
                  {NOEXTERNALTAPE|EXTERNALTAPE}           +
                             )}
```

ABENDNOTIFY
>   Specifies that a TSO message will be sent if any RACF exit ABENDs.

NOABENDNOTIFY
>   Specifies that no messages will be sent for RACF exit ABENDs.

>>   **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ICHRCX02 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ICHRCX02 modules.

>   **library.dsn**
>>   Specifies the name of a private **authorized** library used to locate and load the RACF ICHRCX02 user exit. The library name should be enclosed in single quotes (').

>>   **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ICHRCX02   Specifies that the ICHRCX02 exit point is to be activated.

NOICHRCX02   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ICHRCX02 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

   num1, num2, num3
   Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

   If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ICHRCX02 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ICHRCX02 user exits be activated. This can be specified at initialization, or later to load and activate ICHRCX02 user exits that were not activated at initialization. The exits will be called in the order listed.

   exit1

   exit2

   exit3
   The module name of the user exit that is assigned to the specified ICHRCX02 exit point.

   *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

   0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ICHRCX02 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ICHRCX02 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

   exit1

   exit2

exit3
> The module name of the backup user exit that is assigned to the specified RACF exit point.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup RACF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
> A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
> Specifies that when a ICHRCX02 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ICHRCX02 exit module has ABENDed.

NOABENDNOTIFY
> The NO option can be used to nullify the option to notify a TSO user of ICHRCX02 exit module ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
> The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
> The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
> The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
> A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for ICHRCX02 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
> The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

    rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by ICHRCX02 user exit modules. A good return code allows subsequent ICHRCX02 user exit modules to be called. OS/EM provides a default list. For example, if a RACF user exit for ICHRCX02 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

    rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

    NODISABLERC turns off disable return code checking for the exit point.

    rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc Default return codes values are any numeric value

ICHRCX02 Options

OPTIONS Specifies that an optional OS/EM control function is to be enabled for ICHRCX02

NOOPTIONS The NOOPTIONS parameter will totally disable the optional OS/EM control function for ICHRCX02.

    Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

FIRST

LAST Specifies whether the optional OS/EM JCL Standards functions for ICHRCX02 will be applied before or after the user exits are invoked.

    Note: OS/EM control functions are invoked FIRST by default.

ABENDNOTIFY

    Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent

to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3

The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LOG

NOLOG   Specifies whether RACF logging should take place.

NOEXTERNALTAPE

EXTERNALTAPE

Control whether RACF will allow a user to read external tape datasets.

When active a user can read any tape dataset when the following criteria is met, thus bypassing the RACF PROTECALL(FAIL) option:

•   A RACF profile does not exist for the dataset.

•   The user has READ access authority or higher to the FACILITY class profile EXTERNAL.TAPE.

ICHRDX01

This is the RACROUTE REQUEST=DEFINE preprocessing exit.

OS/EM supports an optional control function for this exit: Discrete Profiles.

You may specify the RACF classes to be checked. Any class listed may have the option WARN or FAIL.

```
         OS$CNTL RACF                                                   -
          {NOABendnotify|ABendnotify(                                   -
             0|*|id1 {0|*|id2 {0|*|id3}} )}                             -
          {LIBrary(library.dsn)}                                        -
          {NOICHRDX01|ICHRDX01(                                      -
/*                                                          */      -
                 {ENable|DISABLE}                                       -
                 {NUmber( num1 num2 num3 )}                             -
                 {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
                 {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
                 {NOABendnotify|ABendnotify(                            -
                    (0|*|id1a {0|*|id2a {0|*|id3a }})                   -
                    (0|*|id1b {0|*|id2b {0|*|id3b }})                   -
                    (0|*|id1c {0|*|id2c {0|*|id3c }}) })                -
                 {NOLIMit|LIMit(                                        -
                   (jobmask1,...)|*|0                                   -
                  {(jobmask2,...)|*|0                                   -
                  {(jobmask3,...)|*|0}})}                               -
                 {NOVAlidrc|VAlidrc(rc,...)}                            -
                 {NOGoodrc|Goodrc(rc,...)}                              -
                 {NODIsablerc|DISABLERc(rc)}                            -
                 {DEFaultrc(rc)}                                        -
                 {NOOPTIONS|OPTIONS(
                   {NOWARN|WARN}
                   {FIRST|LAST}
                   {NOABENDNOTIFY|ABENDNOTIFY(USERID)}
                   {NODISCRETECHECK|DISCRETECHECK(
                      {NAME(WARN|FAIL),...)}
                   {LOG|NOLOG}
                                                      )}
```

ABENDNOTIFY
Specifies that a TSO message will be sent if any RACF exit ABENDs.

NOABENDNOTIFY
Specifies that no messages will be sent for RACF exit ABENDs.

    id1, id2, id3   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ICHRDX01 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ICHRDX01 modules.

    library.dsn
Specifies the name of a private **authorized** library used to locate and load the RACF ICHRDX01 user exit. The library name should be enclosed in single quotes (').

Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ICHRDX01   Specifies that the ICHRDX01 exit point is to be activated.

NOICHRDX01 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ICHRDX01 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

   num1, num2, num3

   Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

   If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available.   If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ICHRDX01 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of ICHRDX01 user exits be activated. This can be specified at initialization, or later to load and activate ICHRDX01 user exits that were not activated at initialization. The exits will be called in the order listed.

   exit1

   exit2

   exit3
   The module name of the user exit that is assigned to the specified ICHRDX01 exit point.

   *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

   0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ICHRDX01 user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup ICHRDX01 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

   exit1

   exit2

exit3
> The module name of the backup user exit that is assigned to the specified RACF exit point.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup RACF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
> A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
> Specifies that when a ICHRDX01 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ICHRDX01 exit module has ABENDed.

NOABENDNOTIFY
> The NO option can be used to nullify the option to notify a TSO user of ICHRDX01 exit module ABENDs.

> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
> The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
> The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
> The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

> **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
> A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for ICHRDX01 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
> The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by ICHRDX01 user exit modules. A good return code allows subsequent ICHRDX01 user exit modules to be called. OS/EM provides a default list. For example, if a RACF user exit for ICHRDX01 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
    NODISABLERC turns off disable return code checking for the exit point.

rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc   Default return codes values are any numeric value

ICHRDX01 Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for ICHRDX01

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for ICHRDX01.

    Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

ABENDNOTIFY
    Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY
    The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3
The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'
An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
A zero (0) can be used to negate a previous entry of the notify TSO user list.

FIRST

LAST
Specifies whether the optional OS/EM JCL Standards functions for ICHRDX01 will be applied before or after the user exits are invoked.

Note: OS/EM control functions are invoked FIRST by default.

NODISCRETECHECK

DISCRETECHECK
Control whether RACF discrete profiles will be allowed.

Note: You must define a resource in your External Security Manager using class FACILITY for RACF and CA-ACF2, or IBMFAC for CA-TOPSECRET and a resource name of DISCRETE.PROFILE.name where 'name' matches the class name you are protecting. For class DATASET the profile name would be DISCRETE.PROFILE.DATASET.

NAME
RACF class to be checked.

WARN
Discrete profiles for this class will be allowed, but the user will be warned.

FAIL
Discrete profiles for this class will not be allowed, and the request will fail.

LOG

NOLOG
Specifies whether RACF logging should take place.

ICHRDX02

This is the RACROUTE REQUEST=DEFINE postprocessing exit.

OS/EM provides only basic exit support for this exit.

```
          OS$CNTL RACF                                                      –
           {NOABendnotify|ABendnotify(                                      –
              0|*|id1 {0|*|id2 {0|*|id3}} )}                                –
           {LIBrary(library.dsn)}                                          –
           {NOICHRDX02|ICHRDX02(                                   –
/*                                                           */      –
                 {ENable|DISABLE}                                          –
                 {NUmber( num1 num2 num3 )}                                –
                 {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   –
                 {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} –
                 {NOABendnotify|ABendnotify(                              –
                    (0|*|id1a {0|*|id2a {0|*|id3a }})                      –
                    (0|*|id1b {0|*|id2b {0|*|id3b }})                      –
                    (0|*|id1c {0|*|id2c {0|*|id3c }}) })                   –
                 {NOLIMit|LIMit(                                          –
                   (jobmask1,...)|*|0                                      –
                  {(jobmask2,...)|*|0                                      –
                  {(jobmask3,...)|*|0}})}                                  –
                 {NOVAlidrc|VAlidrc(rc,...)}                              –
                 {NOGoodrc|Goodrc(rc,...)}                                –
                 {NODIsablerc|DISABLERc(rc)}                              –
                 {DEFaultrc(rc)}                                          –
                                                             )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any RACF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for RACF exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ICHRDX02 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ICHRDX02 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the RACF ICHRDX02 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ICHRDX02   Specifies that the ICHRDX02 exit point is to be activated.

NOICHRDX02   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ICHRDX02 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

        num1, num2, num3

                Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ICHRDX02 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ICHRDX02 user exits be activated. This can be specified at initialization, or later to load and activate ICHRDX02 user exits that were not activated at initialization. The exits will be called in the order listed.

        exit1

        exit2

        exit3

                The module name of the user exit that is assigned to the specified ICHRDX02 exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ICHRDX02 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ICHRDX02 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

        exit1

        exit2

        exit3

                The module name of the backup user exit that is assigned to the specified RACF exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup RACF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a ICHRDX02 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ICHRDX02 exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of ICHRDX02 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for ICHRDX02 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

      rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by ICHRDX02 user exit modules. A good return code allows subsequent ICHRDX02 user exit modules to be called. OS/EM provides a default list. For example, if a RACF user exit for ICHRDX02 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

      rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
      NODISABLERC turns off disable return code checking for the exit point.

      rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc Default return codes values are any numeric value

ICHRFX01

This is the RACROUTE REQUEST=FASTAUTH preprocessing exit.

OS/EM provides only basic exit support for this exit.

```
        OS$CNTL RACF                                                      -
         {NOABendnotify|ABendnotify(                                      -
            0|*|id1 {0|*|id2 {0|*|id3}} )}                                -
         {LIBrary(library.dsn)}                                           -
         {NOICHRFX01|ICHRFX01(                                   -        -
/*                                                          */            -
                {ENable|DISABLE}                                          -
                {NUmber( num1 num2 num3 )}                                -
                {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}    -
                {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}  -
                {NOABendnotify|ABendnotify(                               -
                   (0|*|id1a {0|*|id2a {0|*|id3a }})                      -
                   (0|*|id1b {0|*|id2b {0|*|id3b }})                      -
                   (0|*|id1c {0|*|id2c {0|*|id3c }}) })                   -
                {NOLIMit|LIMit(                                           -
                  (jobmask1,...)|*|0                                      -
                 {(jobmask2,...)|*|0                                      -
                 {(jobmask3,...)|*|0}})}                                  -
                {NOVAlidrc|VAlidrc(rc,...)}                               -
                {NOGoodrc|Goodrc(rc,...)}                                 -
                {NODIsablerc|DISABLERc(rc)}                               -
                {DEFaultrc(rc)}                                           -
                                                         )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any RACF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for RACF exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ICHRFX01 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ICHRFX01 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the RACF ICHRFX01 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ICHRFX01   Specifies that the ICHRFX01 exit point is to be activated.

NOICHRFX01   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ICHRFX01 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

    num1, num2, num3

        Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

        If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ICHRFX01 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ICHRFX01 user exits be activated. This can be specified at initialization, or later to load and activate ICHRFX01 user exits that were not activated at initialization. The exits will be called in the order listed.

    exit1

    exit2

    exit3
        The module name of the user exit that is assigned to the specified ICHRFX01 exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ICHRFX01 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ICHRFX01 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

    exit1

    exit2

    exit3
        The module name of the backup user exit that is assigned to the specified RACF exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup RACF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a ICHRFX01 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ICHRFX01 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of ICHRFX01 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for ICHRFX01 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by ICHRFX01 user exit modules. A good return code allows subsequent ICHRFX01 user exit modules to be called. OS/EM provides a default list. For example, if a RACF user exit for ICHRFX01 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

      NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

ICHRFX02

This is the RACROUTE REQUEST=FASTAUTH postprocessing exit.

OS/EM provides only basic exit support for this exit.

```
          OS$CNTL RACF                                                    -
           {NOABendnotify|ABendnotify(                                    -
              0|*|id1 {0|*|id2 {0|*|id3}} )}                              -
           {LIBrary(library.dsn)}                                         -
           {NOICHRFX02|ICHRFX02(                                    -
/*                                                            */     -
                  {ENable|DISABLE}                                        -
                  {NUmber( num1 num2 num3 )}                              -
                  {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}  -
                  {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})} -
                  {NOABendnotify|ABendnotify(                             -
                     (0|*|id1a {0|*|id2a {0|*|id3a }})                    -
                     (0|*|id1b {0|*|id2b {0|*|id3b }})                    -
                     (0|*|id1c {0|*|id2c {0|*|id3c }}) })                 -
                  {NOLIMit|LIMit(                                         -
                    (jobmask1,...)|*|0                                    -
                   {(jobmask2,...)|*|0                                    -
                   {(jobmask3,...)|*|0}})}                                -
                  {NOVAlidrc|VAlidrc(rc,...)}                             -
                  {NOGoodrc|Goodrc(rc,...)}                               -
                  {NODIsablerc|DISABLERc(rc)}                             -
                  {DEFaultrc(rc)}                                         -
                                                           )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any RACF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for RACF exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ICHRFX02 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ICHRFX02 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the RACF ICHRFX02 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ICHRFX02   Specifies that the ICHRFX02 exit point is to be activated.

NOICHRFX02   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ICHRFX02 exit point is be passed control for exit module execution.

DISABLE　　　The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER　　　You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS　　　Specifies that any active ICHRFX02 user exits are to be disabled. This is only effective after initialization.

EXITS(...)　　　Specifies that the list of ICHRFX02 user exits be activated. This can be specified at initialization, or later to load and activate ICHRFX02 user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3

The module name of the user exit that is assigned to the specified ICHRFX02 exit point.

*　　　An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0　　　A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP　　　Specifies that all active backup ICHRFX02 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)　　　Specifies that the list of backup ICHRFX02 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3

The module name of the backup user exit that is assigned to the specified RACF exit point.

*　　　An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup RACF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a ICHRFX02 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ICHRFX02 exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of ICHRFX02 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for ICHRFX02 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

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NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

        rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by ICHRFX02 user exit modules. A good return code allows subsequent ICHRFX02 user exit modules to be called. OS/EM provides a default list. For example, if a RACF user exit for ICHRFX02 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

        rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

        NODISABLERC turns off disable return code checking for the exit point.

        rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

        rc   Default return codes values are any numeric value

ICHRIX01

This is the RACROUTE REQUEST=VERIFY preprocessing exit.

OS/EM provides only basic exit support for this exit.

```
          OS$CNTL RACF                                                    -
           {NOABendnotify|ABendnotify(                                    -
              0|*|id1 {0|*|id2 {0|*|id3}} )}                              -
           {LIBrary(library.dsn)}                                         -
           {NOICHRIX01|ICHRIX01(                                  -      -
/*                                                         */      -
                  {ENable|DISABLE}                                       -
                  {NUmber( num1 num2 num3 )}                             -
                  {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3})})})}  -
                  {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3})})})} -
                  {NOABendnotify|ABendnotify(                            -
                     (0|*|id1a {0|*|id2a {0|*|id3a }})                   -
                     (0|*|id1b {0|*|id2b {0|*|id3b }})                   -
                     (0|*|id1c {0|*|id2c {0|*|id3c }}) })                -
                  {NOLIMit|LIMit(                                        -
                    (jobmask1,...)|*|0                                   -
                   {(jobmask2,...)|*|0                                   -
                   {(jobmask3,...)|*|0}})}                               -
                  {NOVAlidrc|VAlidrc(rc,...)}                            -
                  {NOGoodrc|Goodrc(rc,...)}                              -
                  {NODIsablerc|DISABLERc(rc)}                            -
                  {DEFaultrc(rc)}                                        -
                                                        )}
```

ABENDNOTIFY
>   Specifies that a TSO message will be sent if any RACF exit ABENDs.

NOABENDNOTIFY
>   Specifies that no messages will be sent for RACF exit ABENDs.

>   **id1, id2, id3**   You may specify up to three TSO IDs or notification group names
>   to be notified in the case of an ABEND. (See "NFYGROUPS" on
>   page SYS-1.)

LIBRARY   Specifies the loading of a ICHRIX01 exit module from a private **authorized** library
              named library.dsn. If this parameter is omitted then the normal MVS search criteria is
              used for ICHRIX01 modules.

>   **library.dsn**
>   Specifies the name of a private **authorized** library used to locate and load the
>   RACF ICHRIX01 user exit. The library name should be enclosed in single
>   quotes (').

>   **Note:** If the program is not found in this library, no other search is performed
>   and the user exit is **not** loaded.

ICHRIX01   Specifies that the ICHRIX01 exit point is to be activated.

NOICHRIX01   The NO option can be used to completely nullify the exit point and disable and reset
                 any options in effect for it.

ENABLE   Specifies that the named ICHRIX01 exit point is be passed control for exit module
             execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

> **num1, num2, num3**
>> Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
>>
>> If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ICHRIX01 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ICHRIX01 user exits be activated. This can be specified at initialization, or later to load and activate ICHRIX01 user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the user exit that is assigned to the specified ICHRIX01 exit point.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0**   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ICHRIX01 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ICHRIX01 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the backup user exit that is assigned to the specified RACF exit point.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup RACF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a ICHRIX01 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ICHRIX01 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of ICHRIX01 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT Specifies that Job name limits are requested, to limit user exit modules for ICHRIX01 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

* An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

> **rc** Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by ICHRIX01 user exit modules. A good return code allows subsequent ICHRIX01 user exit modules to be called. OS/EM provides a default list. For example, if a RACF user exit for ICHRIX01 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

> **rc** Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
> NODISABLERC turns off disable return code checking for the exit point.

> **rc** Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

> **rc** Default return codes values are any numeric value

ICHRIX02

This is the RACROUTE REQUEST=VERIFY postprocessing exit.

OS/EM provides only basic exit support for this exit.

```
          OS$CNTL RACF                                                      -
           {NOABendnotify|ABendnotify(                                      -
              0|*|id1 {0|*|id2 {0|*|id3}} )}                                -
           {LIBrary(library.dsn)}                                           -
           {NOICHRIX02|ICHRIX02(                                  -         -
/*                                                        */       -
                 {ENable|DISABLE}                                           -
                 {NUmber( num1 num2 num3 )}                                 -
                 {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}     -
                 {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})} -
                 {NOABendnotify|ABendnotify(                                -
                    (0|*|id1a {0|*|id2a {0|*|id3a }})                       -
                    (0|*|id1b {0|*|id2b {0|*|id3b }})                       -
                    (0|*|id1c {0|*|id2c {0|*|id3c }}) })                    -
                 {NOLIMit|LIMit(                                            -
                   (jobmask1,...)|*|0                                       -
                  {(jobmask2,...)|*|0                                       -
                  {(jobmask3,...)|*|0}})}                                   -
                 {NOVAlidrc|VAlidrc(rc,...)}                                -
                 {NOGoodrc|Goodrc(rc,...)}                                  -
                 {NODIsablerc|DISABLERc(rc)}                                -
                 {DEFaultrc(rc)}                                            -
                                                              )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any RACF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for RACF exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ICHRIX02 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ICHRIX02 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the RACF ICHRIX02 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ICHRIX02   Specifies that the ICHRIX02 exit point is to be activated.

NOICHRIX02   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ICHRIX02 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ICHRIX02 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ICHRIX02 user exits be activated. This can be specified at initialization, or later to load and activate ICHRIX02 user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3

The module name of the user exit that is assigned to the specified ICHRIX02 exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ICHRIX02 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ICHRIX02 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3

The module name of the backup user exit that is assigned to the specified RACF exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup RACF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a ICHRIX02 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ICHRIX02 exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of ICHRIX02 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for ICHRIX02 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

        rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by ICHRIX02 user exit modules. A good return code allows subsequent ICHRIX02 user exit modules to be called. OS/EM provides a default list. For example, if a RACF user exit for ICHRIX02 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

        rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

        NODISABLERC turns off disable return code checking for the exit point.

        rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

        rc   Default return codes values are any numeric value

ICHRLX01

This is the RACROUTE REQUEST=LIST pre- and postprocessint exit.

OS/EM provides only basic exit support for this exit.

```
        OS$CNTL RACF                                                    -
         {NOABendnotify|ABendnotify(                                    -
            0|*|id1 {0|*|id2 {0|*|id3}} )}                              -
         {LIBrary(library.dsn)}                                         -
         {NOICHRLX01|ICHRLX01(                                  -
/*                                                     */      -
                {ENable|DISABLE}                                        -
                {NUmber( num1 num2 num3 )}                              -
                {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}  -
                {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})} -
                {NOABendnotify|ABendnotify(                             -
                   (0|*|id1a {0|*|id2a {0|*|id3a }})                    -
                   (0|*|id1b {0|*|id2b {0|*|id3b }})                    -
                   (0|*|id1c {0|*|id2c {0|*|id3c }}) })                 -
                {NOLIMit|LIMit(                                         -
                  (jobmask1,...)|*|0                                    -
                 {(jobmask2,...)|*|0                                    -
                 {(jobmask3,...)|*|0}})}                                -
                {NOVAlidrc|VAlidrc(rc,...)}                             -
                {NOGoodrc|Goodrc(rc,...)}                               -
                {NODIsablerc|DISABLERc(rc)}                             -
                {DEFaultrc(rc)}                                         -
                                                     )}
```

ABENDNOTIFY
Specifies that a TSO message will be sent if any RACF exit ABENDs.

NOABENDNOTIFY
Specifies that no messages will be sent for RACF exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a ICHRLX01 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ICHRLX01 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the RACF ICHRLX01 user exit. The library name should be enclosed in single quotes (').
>
> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ICHRLX01 Specifies that the ICHRLX01 exit point is to be activated.

NOICHRLX01 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named ICHRLX01 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ICHRLX01 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ICHRLX01 user exits be activated. This can be specified at initialization, or later to load and activate ICHRLX01 user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3

The module name of the user exit that is assigned to the specified ICHRLX01 exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ICHRLX01 user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup ICHRLX01 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3

The module name of the backup user exit that is assigned to the specified RACF exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup RACF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a ICHRLX01 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ICHRLX01 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of ICHRLX01 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for ICHRLX01 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by ICHRLX01 user exit modules. A good return code allows subsequent ICHRLX01 user exit modules to be called. OS/EM provides a default list. For example, if a RACF user exit for ICHRLX01 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
      NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

ICHRLX02

This is the RACROUTE REQUEST=LIST selection exit.

OS/EM provides only basic exit support for this exit.

```
         OS$CNTL RACF                                                    -
          {NOABendnotify|ABendnotify(                                    -
             0|*|id1 {0|*|id2 {0|*|id3}} )}                              -
          {LIBrary(library.dsn)}                                         -
          {NOICHRLX02|ICHRLX02(                                  -
/*                                                           */        -
               {ENable|DISABLE}                                         -
               {NUmber( num1 num2 num3 )}                               -
               {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}   -
               {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})} -
               {NOABendnotify|ABendnotify(                              -
                  (0|*|id1a {0|*|id2a {0|*|id3a }})                     -
                  (0|*|id1b {0|*|id2b {0|*|id3b }})                     -
                  (0|*|id1c {0|*|id2c {0|*|id3c }}) })                  -
               {NOLIMit|LIMit(                                          -
                 (jobmask1,...)|*|0                                     -
                {(jobmask2,...)|*|0                                     -
                {(jobmask3,...)|*|0}})}                                 -
               {NOVAlidrc|VAlidrc(rc,...)}                              -
               {NOGoodrc|Goodrc(rc,...)}                                -
               {NODIsablerc|DISABLERc(rc)}                              -
               {DEFaultrc(rc)}                                          -
                                                          )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any RACF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for RACF exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ICHRLX02 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ICHRLX02 modules.

> **library.dsn**
> > Specifies the name of a private **authorized** library used to locate and load the RACF ICHRLX02 user exit. The library name should be enclosed in single quotes (').

> > **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ICHRLX02   Specifies that the ICHRLX02 exit point is to be activated.

NOICHRLX02   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ICHRLX02 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

         num1, num2, num3

                Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ICHRLX02 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ICHRLX02 user exits be activated. This can be specified at initialization, or later to load and activate ICHRLX02 user exits that were not activated at initialization. The exits will be called in the order listed.

         exit1

         exit2

         exit3
                The module name of the user exit that is assigned to the specified ICHRLX02 exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ICHRLX02 user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup ICHRLX02 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

         exit1

         exit2

         exit3
                The module name of the backup user exit that is assigned to the specified RACF exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup RACF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

  Specifies that when a ICHRLX02 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ICHRLX02 exit module has ABENDed.

NOABENDNOTIFY

  The NO option can be used to nullify the option to notify a TSO user of ICHRLX02 exit module ABENDs.

  Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

  (id1a,id1b,id1c)

    The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

  (id2a,id2b,id2c)

    The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

  (id3a,id3b,id3c)

    The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

    Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

  * An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

  0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT Specifies that Job name limits are requested, to limit user exit modules for ICHRLX02 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT The NO option can be used to nullify the option for Job name limits.

  jobmask1

  jobmask2

  jobmask3

    The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

  * An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

  0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

        rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by ICHRLX02 user exit modules. A good return code allows subsequent ICHRLX02 user exit modules to be called. OS/EM provides a default list. For example, if a RACF user exit for ICHRLX02 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

        rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
    NODISABLERC turns off disable return code checking for the exit point.

        rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

        rc   Default return codes values are any numeric value

IRRACX01

This is an ACEE Compression/Expansion exit for task mode, non-cross-memory environments.

OS/EM provides only basic exit support for this exit.

```
        OS$CNTL RACF                                               -
         {NOABendnotify|ABendnotify(                               -
            0|*|id1 {0|*|id2 {0|*|id3}} )}                         -
         {LIBrary(library.dsn)}                                    -
         {NOIRRACX01|IRRACX01(                             -
/*                                                    */       -
                {ENable|DISABLE}                                  -
                {NUmber( num1 num2 num3 )}                        -
                {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}   -
                {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})} -
                {NOABendnotify|ABendnotify(                       -
                   (0|*|id1a {0|*|id2a {0|*|id3a }})              -
                   (0|*|id1b {0|*|id2b {0|*|id3b }})              -
                   (0|*|id1c {0|*|id2c {0|*|id3c }}) })           -
                {NOLIMit|LIMit(                                   -
                  (jobmask1,...)|*|0                              -
                 {(jobmask2,...)|*|0                              -
                 {(jobmask3,...)|*|0}})}                          -
                {NOVAlidrc|VAlidrc(rc,...)}                       -
                {NOGoodrc|Goodrc(rc,...)}                         -
                {NODIsablerc|DISABLERc(rc)}                       -
                {DEFaultrc(rc)}                                   -
                                                       )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any RACF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for RACF exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IRRACX01 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IRRACX01 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the RACF IRRACX01 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IRRACX01   Specifies that the IRRACX01 exit point is to be activated.

NOIRRACX01   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IRRACX01 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

   num1, num2, num3

              Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

              If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IRRACX01 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of IRRACX01 user exits be activated. This can be specified at initialization, or later to load and activate IRRACX01 user exits that were not activated at initialization. The exits will be called in the order listed.

   exit1

   exit2

   exit3
              The module name of the user exit that is assigned to the specified IRRACX01 exit point.

   *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

   0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IRRACX01 user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IRRACX01 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

   exit1

   exit2

   exit3
              The module name of the backup user exit that is assigned to the specified RACF exit point.

   *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup RACF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IRRACX01 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IRRACX01 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IRRACX01 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IRRACX01 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IRRACX01 user exit modules. A good return code allows subsequent IRRACX01 user exit modules to be called. OS/EM provides a default list. For example, if a RACF user exit for IRRACX01 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
      NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

IRRACX02

This is an ACEE Compression/Expansion exit for cross-memory environments and SRB mode.

OS/EM provides only basic exit support for this exit.

```
          OS$CNTL RACF                                                    -
           {NOABendnotify|ABendnotify(                                    -
              0|*|id1 {0|*|id2 {0|*|id3}} )}                              -
           {LIBrary(library.dsn)}                                         -
           {NOIRRACX02|IRRACX02(                                    -
/*                                                           */     -
                 {ENable|DISABLE}                                         -
                 {NUmber( num1 num2 num3 )}                               -
                 {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
                 {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
                 {NOABendnotify|ABendnotify(                             -
                    (0|*|id1a {0|*|id2a {0|*|id3a }})                     -
                    (0|*|id1b {0|*|id2b {0|*|id3b }})                     -
                    (0|*|id1c {0|*|id2c {0|*|id3c }}) })                  -
                 {NOLIMit|LIMit(                                          -
                   (jobmask1,...)|*|0                                     -
                  {(jobmask2,...)|*|0                                     -
                  {(jobmask3,...)|*|0}})}                                 -
                 {NOVAlidrc|VAlidrc(rc,...)}                              -
                 {NOGoodrc|Goodrc(rc,...)}                                -
                 {NODIsablerc|DISABLERc(rc)}                             -
                 {DEFaultrc(rc)}                                          -
                                                           )}
```

ABENDNOTIFY
Specifies that a TSO message will be sent if any RACF exit ABENDs.

NOABENDNOTIFY
Specifies that no messages will be sent for RACF exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a IRRACX02 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IRRACX02 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the RACF IRRACX02 user exit. The library name should be enclosed in single quotes (').
>
> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IRRACX02 Specifies that the IRRACX02 exit point is to be activated.

NOIRRACX02 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named IRRACX02 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

   num1, num2, num3
      Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

      If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IRRACX02 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IRRACX02 user exits be activated. This can be specified at initialization, or later to load and activate IRRACX02 user exits that were not activated at initialization. The exits will be called in the order listed.

   exit1

   exit2

   exit3
      The module name of the user exit that is assigned to the specified IRRACX02 exit point.

   *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

   0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP Specifies that all active backup IRRACX02 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IRRACX02 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

   exit1

   exit2

   exit3
      The module name of the backup user exit that is assigned to the specified RACF exit point.

   *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup RACF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a IRRACX02 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IRRACX02 exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of IRRACX02 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IRRACX02 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IRRACX02 user exit modules. A good return code allows subsequent IRRACX02 user exit modules to be called. OS/EM provides a default list. For example, if a RACF user exit for IRRACX02 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

    NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

IRREVX01

This is the RACF Common Command Exit.

OS/EM provides only basic exit support for this exit.

```
        OS$CNTL RACF                                                       -
         {NOABendnotify|ABendnotify(                                       -
            0|*|id1 {0|*|id2 {0|*|id3}} )}                                 -
         {LIBrary(library.dsn)}                                            -
         {NOIRREVX01|IRREVX01(                                   -         -
/*                                                              */         -
                {ENable|DISABLE}                                          -
                {NUmber( num1 num2 num3 )}                                -
                {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}    -
                {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}  -
                {NOABendnotify|ABendnotify(                               -
                   (0|*|id1a {0|*|id2a {0|*|id3a }})                      -
                   (0|*|id1b {0|*|id2b {0|*|id3b }})                      -
                   (0|*|id1c {0|*|id2c {0|*|id3c }}) })                   -
                {NOLIMit|LIMit(                                           -
                  (jobmask1,...)|*|0                                      -
                 {(jobmask2,...)|*|0                                      -
                 {(jobmask3,...)|*|0}})}                                  -
                {NOVAlidrc|VAlidrc(rc,...)}                               -
                {NOGoodrc|Goodrc(rc,...)}                                 -
                {NODIsablerc|DISABLERc(rc)}                               -
                {DEFaultrc(rc)}                                           -
                                                      )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any RACF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for RACF exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IRREVX01 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IRREVX01 modules.

> **library.dsn**
> > Specifies the name of a private **authorized** library used to locate and load the RACF IRREVX01 user exit. The library name should be enclosed in single quotes (').

> > **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IRREVX01   Specifies that the IRREVX01 exit point is to be activated.

NOIRREVX01   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IRREVX01 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IRREVX01 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IRREVX01 user exits be activated. This can be specified at initialization, or later to load and activate IRREVX01 user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3

The module name of the user exit that is assigned to the specified IRREVX01 exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IRREVX01 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IRREVX01 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3

The module name of the backup user exit that is assigned to the specified RACF exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup RACF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
> Specifies that when a IRREVX01 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IRREVX01 exit module has ABENDed.

NOABENDNOTIFY
> The NO option can be used to nullify the option to notify a TSO user of IRREVX01 exit module ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.
>
> **(id1a,id1b,id1c)**
>> The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.
>
> **(id2a,id2b,id2c)**
>> The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.
>
> **(id3a,id3b,id3c)**
>> The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.
>>
>> **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0**   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IRREVX01 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

> **jobmask1**

> **jobmask2**

> **jobmask3**
>> The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0**   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IRREVX01 user exit modules. A good return code allows subsequent IRREVX01 user exit modules to be called. OS/EM provides a default list. For example, if a RACF user exit for IRREVX01 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
      NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

SAF Command

This subcommand sets which SAF exits will be active, loads the specified user exit modules, loads the specified backup user exit modules, specifies the TSO USERID to be notified if a corresponding user exit module abends, sets additional user exit return code and sets LIMIT checking for the corresponding exit modules.

ICHRTX00

This is the MVS Router Exit.

OS/EM provides only basic exit support for this exit.

```
OS$CNTL SAF                                                          -
 {NOABendnotify|ABendnotify(                                         -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                   -
 {LIBrary(library.dsn)}                                              -
 {NOICHRTX00|ICHRTX00(                                              -
       {ENable|DISABLE}                                             -
       {NUmber( num1 num2 num3 )}                                   -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}    -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}} -
       {NOABendnotify|ABendnotify(                                  -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                         -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                         -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                      -
       {NOLIMit|LIMit(                                              -
         (jobmask1,...)|*|0                                         -
        {(jobmask2,...)|*|0                                         -
        {(jobmask3,...)|*|0}})}                                     -
       {NOVAlidrc|VAlidrc(rc,...)}                                  -
       {NOGoodrc|Goodrc(rc,...)}                                    -
       {NODIsablerc|DISABLERc(rc)}                                  -
       {DEFaultrc(rc)}                                              -
                                                    )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any SAF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for SAF exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a ICHRTX00 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ICHRTX00 modules.

    library.dsn
        Specifies the name of a private **authorized** library used to locate and load the SAF ICHRTX00 user exit. The library name should be enclosed in single quotes (').

        Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ICHRTX00 Specifies that the ICHRTX00 exit point is to be activated.

NOICHRTX00 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named ICHRTX00 exit point is be passed control for exit module execution.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

    num1, num2, num3
        Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

        If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS Specifies that any active ICHRTX00 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of ICHRTX00 user exits be activated. This can be specified at initialization, or later to load and activate ICHRTX00 user exits that were not activated at initialization. The exits will be called in the order listed.

    exit1

    exit2

    exit3
        The module name of the user exit that is assigned to the specified ICHRTX00 exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP Specifies that all active backup ICHRTX00 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ICHRTX00 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

        exit1

        exit2

        exit3

        The module name of the backup user exit that is assigned to the specified SAF exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup SAF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
        Specifies that when a ICHRTX00 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ICHRTX00 exit module has ABENDed.

NOABENDNOTIFY
        The NO option can be used to nullify the option to notify a TSO user of ICHRTX00 exit module ABENDs.

        Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

        (id1a,id1b,id1c)
        The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

        (id2a,id2b,id2c)
        The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

        (id3a,id3b,id3c)
        The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

        Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for ICHRTX00 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

        jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

* An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by ICHRTX00 user exit modules. A good return code allows subsequent ICHRTX00 user exit modules to be called. OS/EM provides a default list. For example, if a SAF user exit for ICHRTX00 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
NODISABLERC turns off disable return code checking for the exit point.

rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc Default return codes values are any numeric value

IRRSXT00

This exit is the SAF Callable Services Router exit.

OS/EM provides only basic exit support for this exit.

```
OS$CNTL SAF                                                         -
 {NOABendnotify|ABendnotify(                                        -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                  -
 {LIBrary(library.dsn)}                                             -
 {NOIRRSXT00|IRRSXT00(                                         -
      {ENable|DISABLE}                                             -
      {NUmber( num1 num2 num3 )}                                    -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}    -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3})})}} -
      {NOABendnotify|ABendnotify(                                   -
         (0|*|id1a {0|*|id2a {0|*|id3a }})                         -
         (0|*|id1b {0|*|id2b {0|*|id3b }})                         -
         (0|*|id1c {0|*|id2c {0|*|id3c }}) })                      -
      {NOLIMit|LIMit(                                               -
        (jobmask1,...)|*|0                                         -
       {(jobmask2,...)|*|0                                         -
       {(jobmask3,...)|*|0}})}                                     -
      {NOVAlidrc|VAlidrc(rc,...)}                                   -
      {NOGoodrc|Goodrc(rc,...)}                                     -
      {NODIsablerc|DISABLERc(rc)}                                   -
      {DEFaultrc(rc)}                                               -
                                          )}}
```

ABENDNOTIFY
Specifies that a TSO message will be sent if any SAF exit ABENDs.

NOABENDNOTIFY
Specifies that no messages will be sent for SAF exit ABENDs.

    id1, id2, id3   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IRRSXT00 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IRRSXT00 modules.

    library.dsn
Specifies the name of a private **authorized** library used to locate and load the SAF IRRSXT00 user exit. The library name should be enclosed in single quotes (').

Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IRRSXT00   Specifies that the IRRSXT00 exit point is to be activated.

NOIRRSXT00   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IRRSXT00 exit point is be passed control for exit module execution.

DISABLE
The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER
You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3
Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS
Specifies that any active IRRSXT00 user exits are to be disabled. This is only effective after initialization.

EXITS(...)
Specifies that the list of IRRSXT00 user exits be activated. This can be specified at initialization, or later to load and activate IRRSXT00 user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3
The module name of the user exit that is assigned to the specified IRRSXT00 exit point.

*
An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP
Specifies that all active backup IRRSXT00 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)
Specifies that the list of backup IRRSXT00 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
The module name of the backup user exit that is assigned to the specified SAF exit point.

*
An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup SAF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IRRSXT00 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IRRSXT00 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IRRSXT00 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IRRSXT00 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IRRSXT00 user exit modules. A good return code allows subsequent IRRSXT00 user exit modules to be called. OS/EM provides a default list. For example, if a SAF user exit for IRRSXT00 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

      NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

SMF Command

This subcommand sets which SMF exits will be active, loads the specified user exit modules, loads the specified backup user exit modules, specifies the TSO USERID to be notified if a corresponding user exit module abends, sets additional user exit return code, sets LIMIT checking for the corresponding exit modules, and specifies the SMF record number used to write audit records.

The optional OS/EM control functions can:

- Extend job and TSO wait time

- Extend job, step, and CPU execution time

- Allow sysout extensions

- Add step and job end statistics

- Verify that users are authorized to submit jobs in selected classes

- Verify that job names match the TSO user ID of the person submitting the job

- Update the TMC with MVS job accounting information

- Controls region size parameters

- Add Accounting information to the Catalog entry.

- Delete files via IEFBR14 without doing a DFSMSHSM RECALL for migrated datasets.

It is recommended that you use program names other than IBM names for user exits.

SMF Audit Records

The RECORD function allows you to specify the SMF Record number which OS/EM will use to write Audit Records. These records contain the input and output of the OS$CNTL command.

```
        OS$CNTL SMF RECORD(nnn)
```

Specify the record number to be used by replacing the 'nnn' in the example above.

See "Appendix E. SMF Record Format" on page E-1 for the format of the SMF record. See member SMFPRINT in the OS/EM SAMPLIB for a job to print these SMF records.

Note: If you have specified the record number in your definition of the OS/EM subsystem statement, be sure you specify the same number here.

IEFACTRT

The termination exit (IEFACTRT) receives control on the normal or abnormal termination of each job step and job. A return code from this exit indicates whether the system is to continue the job (for job steps only) and whether SMF termination records are to be written to the SMF data set.

OS/EM supplies optional control functions for this exit:

- TSO session statistics may be displayed on the TSO users terminal during logoff

- A non-scrollable message may be written to the console if a job step abends

- Require a cancellation reason if a job is cancelled (system 122 and 222 abends)

- Produce step and job end statistics

- Send notify messages for steps with non-zero return codes.

- Add an Estimated Cost to the OS/EM statistics page.

```
          OS$CNTL SMF                                               -
           {NOABendnotify|ABendnotify(                              -
              0|*|id1 {0|*|id2 {0|*|id3 }})}                        -
           {LIBrary(library.dsn)}                                   -
           {NOIEFACTRT|IEFACTRT(                            -
                 {ENable|DISABLE}                                   -
                 {NUmber( num1 num2 num3 )}                         -
                 {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
                 {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
                 {NOABendnotify|ABendnotify(                        -
                    (0|*|id1a {0|*|id2a {0|*|id3a }})               -
                    (0|*|id1b {0|*|id2b {0|*|id3b }})               -
                    (0|*|id1c {0|*|id2c {0|*|id3c }}) })            -
                 {NOLIMit|LIMit(                                    -
                   (jobmask1,...)|*|0                               -
                  {(jobmask2,...)|*|0                               -
                  {(jobmask3,...)|*|0}})}                           -
                 {NOVAlidrc|VAlidrc(rc,...)}                        -
                 {NOGoodrc|Goodrc(rc,...)}                          -
                 {NODIsablerc|DISABLERc(rc)}                        -
                 {DEFaultrc(rc)}                                    -
                 {NOOPTions|OPTions(                                -
                        {NOABENDNotify|ABENDNotify(id)}             -
                        {FIRSt|LAst}                                -
                        {TRace|NOTRace}                             -
                        {NOLogoffdisplay|Logoffdisplay             -
                           {(NODelay|Delay(sec)}} }                 -
                        {NOSTEPNotify|STEPNotify                    -
                           {(NOMincc|Mincc(nnnn))}}                 -
                        {NOABENDMSG|ABENDMSG(                       -
                           {TSO|TSU}|{STC}                          -
                           {jobclass{:jobclass},...)}              -
                        {NOCANcelwtor|CANcelwtor(                   -
                           {TSO|TSU} {STC}                          -
                           {jobclass{:jobclass},...)}             -
                        {NOFIRM|FIRM(                               -
                           'LINE 1' {'LINE 2' {'LINE 3'}} )}       -
                        {NOSTAts|STats(   /* SETS BOTH JOB & STEP */  -
                           {TSO|TSU} {STC}                          -
                           {jobclass{:jobclass},...)}              -
```

```
                     {NOWTo|WTo(        /* SETS BOTH JOB & STEP */    -
                        {TSO|TSU} {STC}                               -
                        {jobclass{:jobclass},...)}                   -
                     {NOSTEPENDStats|STEPENDStats(                    -
                        {TSO|TSU} {STC}                               -
                        {jobclass{:jobclass},...)}                   -
                     {NOSTEPENDWto|STEPENDWto(                        -
                        {TSO|TSU} {STC}                               -
                        {jobclass{:jobclass},...)}                   -
                     {NOEXTendstepwto|EXTendstepwto}                 -
                     {NOJOBENDStats|JOBENDStats(                      -
                        {TSO|TSU} {STC}                               -
                        {jobclass{:jobclass},...)}                   -
                     {NOJOBENDWto|JOBENDWto(                          -
                        {TSO|TSU} {STC}                               -
                        {jobclass{:jobclass},...)}                   -
                     {NOCOndcodetext|COndcodetext(xxxxxxxx)}         -
                     {NOESTimatedcost|ESTimatedcost(                 -
                       {NOMINimumcost|MINimumcost(99999.99)}          -
                       {NOFIXedcost|FIXedcost(99999.99)}             -
                       {NOTCBservice|TCBservice(.9999999)}           -
                       {NOSRBservice|SRBservice(.9999999)}           -
                       {NOIOService|IOService(.9999999)}             -
                       {NOMSOservice|MSOservice(.9999999)}           -
                       {NOTCBCputime|TCBCputime(99.99999)}           -
                       {NOSRBCputime|SRBCputime(99.99999)}           -
                       {NONORmalization|NORmalization(999.9999)}      -
                       {NOCONnecttime|CONnecttime(99.99999)}         -
                       {NOSPEcificmounts|SPEcificmounts(99.99999)}   -
                       {NONONSPEcificmounts|NONspecificmounts(99.99999)} -
                       {NODASdcount|DASdcount(99.99999)}             -
                       {NOTAPecount|TAPecount(99.99999)}             -
                       {NOVIOcount|VIOcount(99.99999)}  )}           -
                     {NOESTimatedcost99|ESTimatedcost99(             -
                       {NOMINimumcost|MINimumcost(99999.99)}          -
                       {NOFIXedcost|FIXedcost(99999.99)}             -
                       {NOTCBservice|TCBservice(.9999999)}           -
                       {NOSRBservice|SRBservice(.9999999)}           -
                       {NOIOService|IOService(.9999999)}             -
                       {NOMSOservice|MSOservice(.9999999)}           -
                       {NOTCBCputime|TCBCputime(99.99999)}           -
                       {NOSRBCputime|SRBCputime(99.99999)}           -
                       {NONORmalization|NORmalization(999.9999)}      -
                       {NOCONnecttime|CONnecttime(99.99999)}         -
                       {NOSPEcificmounts|SPEcificmounts(99.99999)}   -
                       {NONONSPEcificmounts|NONspecificmounts(99.99999)} -
                       {NODASdcount|DASdcount(99.99999)}             -
                       {NOTAPecount|TAPecount(99.99999)}             -
                       {NOVIOcount|VIOcount(99.99999)}  )}  )}
```

ABENDNOTIFY

> Specifies that a TSO message will be sent if any SMF exit ABENDs.

NOABENDNOTIFY

> Specifies that no messages will be sent for SMF exit ABENDs.

> > **id1, id2, id3**   You may specify up to three TSO IDs or notification group names
> > to be notified in the case of an ABEND. (See "NFYGROUPS" on
> > page SYS-1.)

LIBRARY   Specifies the loading of a IEFACTRT exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IEFACTRT modules.

   library.dsn
      Specifies the name of a private **authorized** library used to locate and load the SMF IEFACTRT user exit. The library name should be enclosed in single quotes (').

      Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IEFACTRT   Specifies that the IEFACTRT exit point is to be activated.

NOIEFACTRT The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IEFACTRT exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

   num1, num2, num3
         Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

         If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IEFACTRT user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IEFACTRT user exits be activated. This can be specified at initialization, or later to load and activate IEFACTRT user exits that were not activated at initialization. The exits will be called in the order listed.

   exit1

   exit2

   exit3
         The module name of the user exit that is assigned to the specified IEFACTRT exit point.

   *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

   0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IEFACTRT user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IEFACTRT user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**
>
> **exit2**
>
> **exit3**
> > The module name of the backup user exit that is assigned to the specified SMF exit point.
>
> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup SMF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0** A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
> Specifies that when a IEFACTRT exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IEFACTRT exit module has ABENDed.

NOABENDNOTIFY
> The NO option can be used to nullify the option to notify a TSO user of IEFACTRT exit module ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.
>
> **(id1a,id1b,id1c)**
> > The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.
>
> **(id2a,id2b,id2c)**
> > The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.
>
> **(id3a,id3b,id3c)**
> > The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.
> >
> > **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.
>
> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0** A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT Specifies that Job name limits are requested, to limit user exit modules for IEFACTRT to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT The NO option can be used to nullify the option for Job name limits.

> **jobmask1**

jobmask2

jobmask3
   The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

   * An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

   0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

   rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IEFACTRT user exit modules. A good return code allows subsequent IEFACTRT user exit modules to be called. OS/EM provides a default list. For example, if a SMF user exit for IEFACTRT set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

   rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
   NODISABLERC turns off disable return code checking for the exit point.

   rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

   rc Default return codes values are any numeric value

IEFACTRT Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for IEFACTRT

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for IEFACTRT.

Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

ABENDNOTIFY

Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3

The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

FIRST

LAST   Specifies whether the optional OS/EM JCL Standards functions for IEFACTRT will be applied before or after the user exits are invoked.

Note: OS/EM control functions are invoked FIRST by default.

TRACE   Write GTF Trace records for critical control blocks, used in Problem Determination for OS/EM Optional functions in conjunction with OS/EM support.

NOTRACE   Disables GTF trace records (This is the default)

LOGOFFDISPLAY

Specifies whether TSO session statistics will be displayed on the TSO users terminal during logoff.

NOLOGOFFDISPLAY

Specifying no disables the LOGOFFDISPLAY option.

DELAY

Specifies that during TSO session logoff, the TSO session statistics will be displayed on the TSO user terminal for the number of seconds specified, before TSO session logoff completes.

secs The delay number of seconds before TSO session logoff completes.

STEPNOTIFY   Specifies whether notification messages will be sent to the user ID on the JOBCARD NOTIFY statement for steps ending with a non-zero return code.

NOSTEPNOTIFY

Specifies that messages will not be sent.

MINCC(nnnn)
> Sepcifies the minimum return code that must occur before a message is sent. If zero is specified, a message will be sent for any return code above zero.

NOMINCC
> Same as specifying zero above.

ABENDMSG

NOABENDMSG
> Specifies whether a non-scrollable message will be written to the console if a job step abends. If the message is non-scrollable, the operator has to specifically delete the message from the console screen, thus assuring that the operator sees the abend message.

jobclass
> A list of execution Job classes to which the control definition is applied, TSU, TSO, and/or STC are valid entries. A colon (:) may be used to specify an inclusive range of classes. For example, A:Z may be entered to specify classes A through Z.

CANCELWTOR

NOCANCELWTOR
> Specifies whether the operator will be queried for a cancellation reason if the job is canceled (122 and 222 system abends).

jobclass
> A list of execution Job classes to which the control definition is applied, TSU, TSO, and/or STC are valid entries. A colon (:) may be used to specify an inclusive range of classes. For example, A:Z may be entered to specify classes A through Z.

FIRM

NOFIRM   Specifies whether a title will be placed in the step ending statistics box.

title1

title2

title3   These are the titles which will be placed in the step ending statistics box. You are allowed up to three title lines; each one of which must be enclosed in single (') quotes (or apostrophe). The maximum length of each line is 40 characters.

STATS

NOSTATS   Specifies whether both Job and step ending statistics will be printed when each Job step and the Job.

jobclass
> A list of execution Job classes to which the control definition is applied, TSU, TSO, and/or STC are valid entries. A colon (:) may be used to specify an inclusive range of classes. For example, A:Z may be entered to specify classes A through Z.

WTO

NOWTO   Specifies whether the return code from each completed job step and the highest return code for the Job will be placed in the JES message log.

jobclass
> A list of execution Job classes to which the control definition is applied, TSU, TSO, and/or STC are valid entries. A colon (:) may be used to specify an inclusive range of classes. For example, A:Z may be entered to specify classes A through Z.

STEPENDSTATS

NOSTEPENDSTATS
Specifies whether step ending statistics will be printed when each job step finishes.

jobclass
> A list of execution Job classes to which the control definition is applied, TSU, TSO, and/or STC are valid entries. A colon (:) may be used to specify an inclusive range of classes. For example, A:Z may be entered to specify classes A through Z.

STEPENDWTO

NOSTEPENDWTO
Specifies whether the return code from each completed job step will be placed in the JES2 message log.

jobclass
> A list of execution Job classes to which the control definition is applied, TSU, TSO, and/or STC are valid entries. A colon (:) may be used to specify an inclusive range of classes. For example, A:Z may be entered to specify classes A through Z.

Note: If TSU/TSO and/or STC classses are entered, the operating system may additionally issue an IEF170I message at execution time for these tasks. This message may be ignored and added to your MPF PARMLIB member or automated operations product for suppression.

EXTENDSTEPWTO

NOEXTENDSTEPWTO
Specifies whether the extended STEPENDWTO message OS$ACT248 will replace message OS$ACT097. The extended message contains the CPU time and I/O counts.

JOBENDSTATS

NOJOBENDSTATS
Specifies whether step ending statistics will be printed when each job step finishes.

jobclass
> A list of execution Job classes to which the control definition is applied, TSU, TSO, and/or STC are valid entries. A colon (:) may be used to specify an inclusive range of classes. For example, A:Z may be entered to specify classes A through Z.

JOBENDWTO

NOJOBENDWTO
Specifies whether the highest return code from a Job step will be placed in the JES message log.

jobclass
>A list of execution Job classes to which the control definition is applied, TSU, TSO, and/or STC are valid entries. A colon (:) may be used to specify an inclusive range of classes. For example, A:Z may be entered to specify classes A through Z.

>**Note:** If TSU/TSO and/or STC classses are entered, the operating system may additionally issue an IEF170I message at execution time for these tasks. This message may be ignored and added to your MPF PARMLIB member or automated operations product for suppression.

CONDCODETEXT

NOCONDCODETEXT
>Specifies up to 8 characters to be printed for the condition code when the step is flushed.

ESTIMATEDCOST
>Specifies values for estimated cost function defaults.

NOESTIMATEDCOST
>No default values for the estimated cost function will be used.

MINIMUMCOST
>A value of the form 99999.99. If specified, it will be used as the cost of a job when the calculated cost is lower.

NOMINIMUMCOST
>Specifies that no minimum cost value will be used. Only the calculated cost will be displayed. Same as specifying a value of zero.

FIXEDCOST   A value of the form 99999.99. If specified, it will be added to the value calculated for a job.

NOFIXEDCOST
>Specifies that no fixed cost value will be used. Same as specifying a value of zero.

TCBSERVICE   A rate value of the form .9999999 specifying the cost of a TCB service unit. The number of TCB service units in the SMF type 30 record field, SMF30CSU, is multiplied by this rate to obtain the cost.

NOTCBSERVICE
>Specifies that no TCB service units will be used in calculating the cost of this step/job. Same as specifying a value of zero.

SRBSERVICE   A rate value of the form .9999999 specifying the cost of a SRB service unit. The number of SRB service units in the SMF type 30 record field, SMF30SRB, is multiplied by this rate to obtain the cost.

NOSRBSERVICE
>Specifies that no SRB service units will be used in calculating the cost of this step/job. Same as specifying a value of zero.

IOSERVICE   A value of the form .9999999 specifying the cost of an I/O service unit. The number of I/O service units in the SMF type 30 record field, SMF30IO, is multiplied by this rate to obtain the cost.

NOIOSERVICE
>Specifies that no I/O service units will be used in calculating the cost of this step/job. Same as specifying a value of zero.

MSOSERVICE A value of the form .9999999 specifying the cost of an MSO service unit. The number of MSO service units in the SMF type 30 record field, SMF30MSO, is multiplied by this rate to obtain the cost.

NOMSOSERVICE
> Specifies that no MSO service units will be used in calculating the cost of this step/job. Same as specifying a value of zero.

TCBCPUTIME A value of the form 99.99999 specifying the cost of a TCB CPU second. The number of TCB CPU seconds in the SMF type 30 record field, SMF30CPT, is multiplied by this rate to obtain the cost. If a normalization factor is specified, the cost calculated will be multiplied by the factor.

NOTCBCPUTIME
> Specifies that no TCB CPU seconds will be used in calculating the cost of this step/job. Same as specifying a value of zero.

SRBCPUTIME A value of the form 99.99999 specifying the cost of a SRB CPU second. The number of SRB CPU seconds in the SMF type 30 record field, SMF30CPS, is multiplied by this rate to obtain the cost. If a normalization factor is specified, the cost calculated will be multiplied by the factor.

NOSRBCPUTIME
> Specifies that no SRB CPU seconds will be used in calculating the cost of this step/job. Same as specifying a value of zero.

NORMALIZATION
> A multiplier factor of the form 999.9999 that may be used to normalize processor speeds. When specified it is applied only to costs based on TCB and SRB CPU time usage to account for differences in processor speeds.

NONORMALIZATION
> Specifies that normalization will not be applied to CPU times. Same as specifying a value of zero.

CONNECTTIME
> A value of the form 99.99999 specifying the cost of a Device Connect Time second. The number of Device Connect Time seconds in the SMF type 30 record field, SMF30TCN, is multiplied by this rate to obtain the cost.

NOCONNECTTIME
> Specifies that device connect time will not be used to calculate the cost of this step/job. Same as specifying a value of zero.

SPECIFICMOUNTS
> A value of the form 99.99999 specifying the cost of a specific tape mount. The number of specific tape mounts contained in the SMF type 30 record field, SMF30TPR, is multiplied by this rate to obtain the cost.

NOSPECIFICMOUNTS
> Specifies that specific tape mounts will not be used to calculate the cost of this step/job. Same as specifying a value of zero.

NONSPECIFICMOUNTS
> A value of the form 99.99999 specifying the cost of a non-specific tape mount. The number of non-specific tape mounts contained in the SMF type 30 record field, SMF30PTM, is multiplied by this rate to obtain the cost.

NONONSPECIFICMOUNTS
> Specifies that non specific tape mounts will not be used to calculate the cost of this step/job. Same as specifying a value of zero.

DASDCOUNT A value of the form 99.99999 specifying the cost of a disk I/O. The number of disk I/Os contained in the SMF type 30 record field, SMF30BLK (when the SMF30DEV field indicates DASD), is multiplied by this rate to obtain the cost.

NODASDCOUNT
Specifies that DASD I/Os will not be used to calculate the cost of this step/job. Same as specifying a value of zero.

TAPECOUNT A value of the form 99.99999 specifying the cost of a tape I/O. The number of tape I/Os contained in the SMF type record field, SMF30BLK (when the SMF30DEV field indicates tape), is multiplied by this rate to obtain the cost.

NOTAPECOUNT
Specifies that TAPE I/Os will not be used to calculate the cost of this step/job. Same as specifying a value of zero.

VIOCOUNT A value of the form 99.99999 specifying the cost of a virtual I/O. The number of virtual I/Os contained in the SMF 30 record type field, SMF30BLK (when the SMF30DEV field indicates VIO), is multiplied by this rate to obtain the cost.

NOVIOCOUNT Specifies that VIO I/Os will not be used to calculate the cost of this step/job. Same as specifying a value of zero.

ESTIMATEDCOST99
Specifies values for estimated cost groups 1 to 16. The SYSTEMID field is required for these 16 groups.

NOESTIMATEDCOST99
The specified group (1 to 16) will not be used.

SYSTEMID The SMFID of the system where these rates will be used to calculate the estimated cost of jobs.

MINIMUMCOST
A value of the form 99999.99. If specified, it will be used as the cost of a job when the calculated cost is lower.

NOMINIMUMCOST
Specifies that no minimum cost value will be used. Only the calculated cost will be displayed. Same as specifying a value of zero.

FIXEDCOST A value of the form 99999.99. If specified, it will be added to the value calculated for a job.

NOFIXEDCOST
Specifies that no fixed cost value will be used. Same as specifying a value of zero.

TCBSERVICE A rate value of the form .9999999 specifying the cost of a TCB service unit. The number of TCB service units in the SMF type 30 record field, SMF30CSU, is multiplied by this rate to obtain the cost.

NOTCBSERVICE
Specifies that no TCB service units will be used in calculating the cost of this step/job. Same as specifying a value of zero.

SRBSERVICE A rate value of the form .9999999 specifying the cost of a SRB service unit. The number of SRB service units in the SMF type 30 record field, SMF30SRB, is multiplied by this rate to obtain the cost.

NOSRBSERVICE
Specifies that no SRB service units will be used in calculating the cost of this step/job. Same as specifying a value of zero.

IOSERVICE	A value of the form .9999999 specifying the cost of an I/O service unit. The number of I/O service units in the SMF type 30 record field, SMF30IO, is multiplied by this rate to obtain the cost.

NOIOSERVICE

Specifies that no I/O service units will be used in calculating the cost of this step/job. Same as specifying a value of zero.

MSOSERVICE	A value of the form .9999999 specifying the cost of an MSO service unit. The number of MSO service units in the SMF type 30 record field, SMF30MSO, is multiplied by this rate to obtain the cost.

NOMSOSERVICE

Specifies that no MSO service units will be used in calculating the cost of this step/job. Same as specifying a value of zero.

TCBCPUTIME	A value of the form 99.99999 specifying the cost of a TCB CPU second. The number of TCB CPU seconds in the SMF type 30 record field, SMF30CPT, is multiplied by this rate to obtain the cost. If a normalization factor is specified, the cost calculated will be multiplied by the factor.

NOTCBCPUTIME

Specifies that no TCB CPU seconds will be used in calculating the cost of this step/job. Same as specifying a value of zero.

SRBCPUTIME	A value of the form 99.99999 specifying the cost of a SRB CPU second. The number of SRB CPU seconds in the SMF type 30 record field, SMF30CPS, is multiplied by this rate to obtain the cost. If a normalization factor is specified, the cost calculated will be multiplied by the factor.

NOSRBCPUTIME

Specifies that no SRB CPU seconds will be used in calculating the cost of this step/job. Same as specifying a value of zero.

NORMALIZATION

A multiplier factor of the form 999.9999 that may be used to normalize processor speeds. When specified it is applied only to costs based on TCB and SRB CPU time usage to account for differences in processor speeds.

NONORMALIZATION

Specifies that normalization will not be applied to CPU times. Same as specifying a value of zero.

CONNECTTIME

A value of the form 99.99999 specifying the cost of a Device Connect Time second. The number of Device Connect Time seconds in the SMF type 30 record field, SMF30TCN, is multiplied by this rate to obtain the cost.

NOCONNECTTIME

Specifies that device connect time will not be used to calculate the cost of this step/job. Same as specifying a value of zero.

SPECIFICMOUNTS

A value of the form 99.99999 specifying the cost of a specific tape mount. The number of specific tape mounts contained in the SMF type 30 record field, SMF30TPR, is multiplied by this rate to obtain the cost.

NOSPECIFICMOUNTS

Specifies that specific tape mounts will not be used to calculate the cost of this step/job. Same as specifying a value of zero.

NONSPECIFICMOUNTS

A value of the form 99.99999 specifying the cost of a non-specific tape mount. The number of non-specific tape mounts contained in the SMF type 30 record field, SMF30PTM, is multiplied by this rate to obtain the cost.

NONONSPECIFICMOUNTS

Specifies that non specific tape mounts will not be used to calculate the cost of this step/job. Same as specifying a value of zero.

DASDCOUNT A value of the form 99.99999 specifying the cost of a disk I/O. The number of disk I/Os contained in the SMF type 30 record field, SMF30BLK (when the SMF30DEV field indicates DASD), is multiplied by this rate to obtain the cost.

NODASDCOUNT

Specifies that DASD I/Os will not be used to calculate the cost of this step/job. Same as specifying a value of zero.

TAPECOUNT A value of the form 99.99999 specifying the cost of a tape I/O. The number of tape I/Os contained in the SMF type record field, SMF30BLK (when the SMF30DEV field indicates tape), is multiplied by this rate to obtain the cost.

NOTAPECOUNT

Specifies that TAPE I/Os will not be used to calculate the cost of this step/job. Same as specifying a value of zero.

VIOCOUNT A value of the form 99.99999 specifying the cost of a virtual I/O. The number of virtual I/Os contained in the SMF 30 record type field, SMF30BLK (when the SMF30DEV field indicates VIO), is multiplied by this rate to obtain the cost.

NOVIOCOUNT Specifies that VIO I/Os will not be used to calculate the cost of this step/job. Same as specifying a value of zero.

The following command will activate the optional OS/EM functions for IEFACTRT:

```
OS$CNTL IEFACTRT(OPTIONS( -
   ABENDNOTIFY(SPKRP) -
   LOGOFFDISPLAY ( DELAY (15) ) -
   STATS(A:Z 0:9) -
   FIRM('E.S.A. SOFTWARE' ' ' -
     'DEVELOPMENT SERVICES') -
   WTO  -
   CANCELWTOR(A C D) -
   ABENDMSG(A B C D) -
   ESTIMATEDCOST ( -
     MINIMUMCOST(0000750) -
     TCBCPUTIME(0002500) ) )
```

All optional functions are activated.

• Job end and step end statistics will be printed for every jobclass since classes A:Z and 0:9 are specified

• A TITLE will be placed in the step ending statistics box

• The return code for each Job step and the highest return code for the Job will be placed in the JES2 message log for every job class (no job classes are specified; therefore, the option applies to every job class)

• The operator will be queried for a cancellation reason for job classes A, C, and D

• Abend messages for jobs in classes A, B, C, and D will not scroll off the console screen until the operator deletes them.

- The estimated cost of the job will be printed along with the job statistics.

IEFUAV

The user account validation exit (IEFUAV) receives control during the set-up and execution of APPC/MVS transaction programs (TPs), whose profiles specify TAILOR_ACCOUNT(YES). IEFUAV is used to validate the accounting information of TP users. A return code from this exit routine indicates whether processing for the unit of work should continue or be cancelled.

OS/EM supplies only basic exit control functions for this exit.

```
OS$CNTL SMF                                                    -
  {NOABendnotify|ABendnotify(                                  -
     0|*|id1 {0|*|id2 {0|*|id3 }})}                            -
  {LIBrary(library.dsn)}                                       -
  {NOIEFUAV|IEFUAV(                                            -
        {ENable|DISABLE}                                       -
        {NUmber( num1 num2 num3 )}                             -
        {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
        {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
        {NOABendnotify|ABendnotify(                            -
           (0|*|id1a {0|*|id2a {0|*|id3a }})                   -
           (0|*|id1b {0|*|id2b {0|*|id3b }})                   -
           (0|*|id1c {0|*|id2c {0|*|id3c }}) })                -
        {NOLIMit|LIMit(                                        -
          (jobmask1,...)|*|0                                   -
         {(jobmask2,...)|*|0                                   -
         {(jobmask3,...)|*|0}})}                               -
        {NOVAlidrc|VAlidrc(rc,...)}                            -
        {NOGoodrc|Goodrc(rc,...)}                              -
        {NODIsablerc|DISABLERc(rc)}                            -
        {DEFaultrc(rc)}                                        -
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any SMF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for SMF exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IEFUAV exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IEFUAV modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the SMF IEFUAV user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IEFUAV   Specifies that the IEFUAV exit point is to be activated.

NOIEFUAV   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IEFUAV exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

      num1, num2, num3

            Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

            If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IEFUAV user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IEFUAV user exits be activated. This can be specified at initialization, or later to load and activate IEFUAV user exits that were not activated at initialization. The exits will be called in the order listed.

      exit1

      exit2

      exit3

            The module name of the user exit that is assigned to the specified IEFUAV exit point.

      *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

      0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IEFUAV user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IEFUAV user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

      exit1

      exit2

      exit3

            The module name of the backup user exit that is assigned to the specified SMF exit point.

      *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup SMF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IEFUAV exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IEFUAV exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IEFUAV exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IEFUAV to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

        rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IEFUAV user exit modules. A good return code allows subsequent IEFUAV user exit modules to be called. OS/EM provides a default list. For example, if a SMF user exit for IEFUAV set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

        rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

        NODISABLERC turns off disable return code checking for the exit point.

        rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

        rc   Default return codes values are any numeric value

IEFUJI

The job initiation exit (IEFUJI) receives control before a job on the input queue is selected for initiation. A return code from this exit indicates whether the system is to continue processing the job.

OS/EM supplies optional control functions for this exit:

- Verify that a user is authorized to submit a job in the class used

- Verify that the jobname matches the TSO user ID of the person submitting the job

- Update the TMC with MVS job accounting information

```
OS$CNTL SMF                                                       -
 {NOABendnotify|ABendnotify(                                      -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                -
 {LIBrary(library.dsn)}                                           -
 {NOIEFUJI|IEFUJI(                                                -
        {ENable|DISABLE}                                          -
        {NUmber( num1 num2 num3 )}                                -
        {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}      -
        {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}    -
        {NOABendnotify|ABendnotify(                               -
           (0|*|id1a {0|*|id2a {0|*|id3a }})                      -
           (0|*|id1b {0|*|id2b {0|*|id3b }})                      -
           (0|*|id1c {0|*|id2c {0|*|id3c }}) })                   -
        {NOLIMit|LIMit(                                           -
          (jobmask1,...)|*|0                                      -
         {(jobmask2,...)|*|0                                      -
         {(jobmask3,...)|*|0}})}                                  -
        {NOVAlidrc|VAlidrc(rc,...)}                               -
        {NOGoodrc|Goodrc(rc,...)}                                 -
        {NODIsablerc|DISABLERc(rc)}                               -
        {DEFaultrc(rc)}                                           -
        {NOOPTions|OPTions(                                       -
                {NOABendnotify|ABendnotify(id)}                   -
                {FIRST|LAST}                                      -
                {TRace|NOTRace}                                   -
                {NOJOBClasscheck|                                 -
                   JOBClasscheck(LOG|NOLOG)}                      -
                {NOJOBNamecheck|JOBNamecheck(                     -
                   NOCLASS?|CLASS?(                               -
                        Include(jobmask,...)                      -
                        AND|OR                                    -
                        Exclude(jobmask,...) ) ...)}              -
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any SMF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for SMF exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IEFUJI exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IEFUJI modules.

library.dsn

> Specifies the name of a private **authorized** library used to locate and load the SMF IEFUJI user exit. The library name should be enclosed in single quotes (').
>
> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IEFUJI Specifies that the IEFUJI exit point is to be activated.

NOIEFUJI The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named IEFUJI exit point is be passed control for exit module execution.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

> Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
>
> If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS Specifies that any active IEFUJI user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of IEFUJI user exits be activated. This can be specified at initialization, or later to load and activate IEFUJI user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3

> The module name of the user exit that is assigned to the specified IEFUJI exit point.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP Specifies that all active backup IEFUJI user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IEFUJI user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were

not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
> The module name of the backup user exit that is assigned to the specified SMF exit point.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup SMF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
> A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
> Specifies that when a IEFUJI exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IEFUJI exit module has ABENDed.

NOABENDNOTIFY
> The NO option can be used to nullify the option to notify a TSO user of IEFUJI exit module ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.
>
> **(id1a,id1b,id1c)**
>> The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.
>
> **(id2a,id2b,id2c)**
>> The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.
>
> **(id3a,id3b,id3c)**
>> The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.
>>
>> **Note:**   See "NFYGROUPS" on page SYS-1 for more information about notify groups.
>
> *****
>> An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0**
>> A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IEFUJI to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

> **jobmask1**

> **jobmask2**

jobmask3

>   The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

> **0** A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

> **rc** Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IEFUJI user exit modules. A good return code allows subsequent IEFUJI user exit modules to be called. OS/EM provides a default list. For example, if a SMF user exit for IEFUJI set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

> **rc** Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

>   NODISABLERC turns off disable return code checking for the exit point.

> **rc** Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

> **rc** Default return codes values are any numeric value

IEFUJI Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for IEFUJI

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for IEFUJI.

Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

ABENDNOTIFY

Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3

The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'

An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0

A zero (0) can be used to negate a previous entry of the notify TSO user list.

FIRST

LAST

Specifies whether the optional OS/EM JCL Standards functions for IEFUJI will be applied before or after the user exits are invoked.

Note: OS/EM control functions are invoked FIRST by default.

TRACE

Write GTF Trace records for critical control blocks, used in Problem Determination for OS/EM Optional functions in conjunction with OS/EM support.

NOTRACE

Disables GTF trace records (This is the default)

JOBCLASSCHECK

Checks that the user is authorized to submit a job in the class used. For RACF and CA-ACF2, this check is done using the classname "FACILITY" and resource name "JOBCLASS.x" (where x is the desired class); therefore, each named jobclass must be properly defined. If the JOBCLASS is not properly defined, the submission will be allowed. For CA-TOPSECRET, this check is done using the classname IBMFAC or DATASET. The resource name is the same as above.

LOG

NOLOG

Specifies whether RACF logging should take place.

NOJOBCLASSCHECK

Specifying NOJOBCLASSCHECK disables this option.

JOBNAMECHECK

Specifies that checking of Jobnames by Job Class is requested.

NOJOBNAMECHECK

Specifies that checking of Jobnames by Job Class is not requested.

CLASS?

Specifies the Job Class that is to be checked, i.e. CLASSA specifies that

Jobnames in Job Class A are to be checked. Valid values are CLASSA - CLASS9.

NOCLASS?

Specifies the Job Class that is not to be checked, i.e. NOCLASSA specifies that Jobnames for Jobs in Job Class A are not to be checked. Valid values are NOCLASSA - NOCLASS9.

INCLUDE

Specifies that the list of Jobname masks that are specified are allowed to execute in CLASS?.

(jobmask,...)

A list of jobname mask(s) to be included to run in Jobclass CLASS?. Jobname masks can be used to specify a range of jobnames without having to individually specify each one. Jobname masks are constructed using the same qualifiers as for volume masks -- see the discussion starting on "Volume/Jobname Masks" on page C-1

AND

Specifies the logical connective between the INCLUDE Jobname Mask(s) and the EXCLUDE Jobname mask(s).

If the logical condition is AND then both the INCLUDE Jobname Mask(s) and the EXCLUDE Jobname mask(s) are checked. If the Jobname matches the INCLUDE Jobname mask(s) and also matches the EXCLUDE Jobname mask(s) the Job is cancelled.

OR If the logical condition is OR then the Jobname must match the INCLUDE Jobname mask(s) or not match the EXCLUDE Jobname mask(s) in order to execute in this Jobclass.

EXCLUDE

Specifies the list of Jobname masks that are not allowed to execute in CLASS?.

(jobmask,...)

A list of jobname mask(s) to be excluded to run in Jobclass CLASS?. Jobname masks can be used to specify a range of jobnames without having to individually specify each one. Jobname masks are constructed using the same qualifiers as for volume masks -- see the discussion starting on "Volume/Jobname Masks" on page C-1

IEFUJP

The job purge exit (IEFUJP) receives control when a job is ready to be purged from the system (after the job has terminated and all SYSOUT output that pertains to the job has been written). A return code from this exit indicates whether the SMF job purge record (type 26) is to be written to the SMF data set.

OS/EM supplies only basic exit control functions for this exit.

```
OS$CNTL SMF                                                     -
 {NOABendnotify|ABendnotify(                                    -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                              -
 {LIBrary(library.dsn)}                                         -
 {NOIEFUJP|IEFUJP(                                              -
      {ENable|DISABLE}                                          -
      {NUmber( num1 num2 num3 )}                                -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}} -
      {NOABendnotify|ABendnotify(                               -
         (0|*|id1a {0|*|id2a {0|*|id3a }})                      -
         (0|*|id1b {0|*|id2b {0|*|id3b }})                      -
         (0|*|id1c {0|*|id2c {0|*|id3c }}) })                   -
      {NOLIMit|LIMit(                                           -
        (jobmask1,...)|*|0                                      -
       {(jobmask2,...)|*|0                                      -
       {(jobmask3,...)|*|0}})}                                  -
      {NOVAlidrc|VAlidrc(rc,...)}                               -
      {NOGoodrc|Goodrc(rc,...)}                                 -
      {NODIsablerc|DISABLERc(rc)}                               -
      {DEFaultrc(rc)}                                           -
```

ABENDNOTIFY

Specifies that a TSO message will be sent if any SMF exit ABENDs.

NOABENDNOTIFY

Specifies that no messages will be sent for SMF exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IEFUJP exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IEFUJP modules.

> **library.dsn**
>
> Specifies the name of a private **authorized** library used to locate and load the SMF IEFUJP user exit. The library name should be enclosed in single quotes (').
>
> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IEFUJP   Specifies that the IEFUJP exit point is to be activated.

NOIEFUJP   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IEFUJP exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IEFUJP user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IEFUJP user exits be activated. This can be specified at initialization, or later to load and activate IEFUJP user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3
The module name of the user exit that is assigned to the specified IEFUJP exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IEFUJP user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IEFUJP user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
The module name of the backup user exit that is assigned to the specified SMF exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup SMF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a IEFUJP exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IEFUJP exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of IEFUJP exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IEFUJP to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

        rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IEFUJP user exit modules. A good return code allows subsequent IEFUJP user exit modules to be called. OS/EM provides a default list. For example, if a SMF user exit for IEFUJP set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

        rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
        NODISABLERC turns off disable return code checking for the exit point.

        rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

        rc   Default return codes values are any numeric value

IEFUJV

The job validation exit (IEFUJV) receives control before each job control statement (or cataloged proce-dure) in the input stream is interpreted. This exit receives control after all the JCL is converted and again after all the JCL is interpreted. IEFUJV is not invoked for JCL comment statements. A return code from this exit indicates whether the system is to continue processing the job.

OS/EM supplies only basic exit control functions for this exit.

```
OS$CNTL SMF                                                     -
  {NOABendnotify|ABendnotify(                                   -
     0|*|id1 {0|*|id2 {0|*|id3 }})}                            -
  {LIBrary(library.dsn)}                                        -
  {NOIEFUJV|IEFUJV(                                             -
       {ENable|DISABLE}                                        -
       {NUmber( num1 num2 num3 )}                              -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
       {NOABendnotify|ABendnotify(                             -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                   -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                   -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) )                 -
       {NOLIMit|LIMit(                                         -
         (jobmask1,...)|*|0                                    -
        {(jobmask2,...)|*|0                                    -
        {(jobmask3,...)|*|0}})}                                -
       {NOVAlidrc|VAlidrc(rc,...)}                             -
       {NOGoodrc|Goodrc(rc,...)}                               -
       {NODIsablerc|DISABLERc(rc)}                             -
       {DEFaultrc(rc)}                                         -
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any SMF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for SMF exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IEFUJV exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IEFUJV modules.

> **library.dsn**
> > Specifies the name of a private **authorized** library used to locate and load the SMF IEFUJV user exit. The library name should be enclosed in single quotes (').

> > **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IEFUJV   Specifies that the IEFUJV exit point is to be activated.

NOIEFUJV   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IEFUJV exit point is be passed control for exit module exe-cution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

> **num1, num2, num3**
>> Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
>>
>> If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IEFUJV user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IEFUJV user exits be activated. This can be specified at initialization, or later to load and activate IEFUJV user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the user exit that is assigned to the specified IEFUJV exit point.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0**   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IEFUJV user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IEFUJV user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the backup user exit that is assigned to the specified SMF exit point.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup SMF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IEFUJV exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IEFUJV exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IEFUJV exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IEFUJV to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IEFUJV user exit modules. A good return code allows subsequent IEFUJV user exit modules to be called. OS/EM provides a default list. For example, if a SMF user exit for IEFUJV set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

    NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

IEFUSI

The step initiation exit (IEFUSI) receives control before each job step is started (before allocation). A return code from this exit indicates whether the system is to continue processing the job step, or whether the job is to be cancelled.

OS/EM supplies an optional Virtual Storage Control function. This function allows you to control by job class, job name or program name, the amount of virtual storage a job may use.

OS/EM also provides the ability to delete files without issuing a DFSMSHSM RECALL when the program name is IEFBR14 and the files coded have a retention setting of DELETE.

```
OS$CNTL SMF                                                         -
 {NOABendnotify|ABendnotify(                                        -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                  -
 {LIBrary(library.dsn)}                                             -
 {NOIEFUSI|IEFUSI(                                      -           -
      {ENable|DISABLE}                                              -
      {NUmber( num1 num2 num3 )}                                    -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}          -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}        -
      {NOABendnotify|ABendnotify(                                   -
         (0|*|id1a {0|*|id2a {0|*|id3a }})                          -
         (0|*|id1b {0|*|id2b {0|*|id3b }})                          -
         (0|*|id1c {0|*|id2c {0|*|id3c }}) })                       -
      {NOLIMit|LIMit(                                               -
        (jobmask1,...)|*|0                                          -
       {(jobmask2,...)|*|0                                          -
       {(jobmask3,...)|*|0}})}                                      -
      {NOVAlidrc|VAlidrc(rc,...)}                                   -
      {NOGoodrc|Goodrc(rc,...)}                                     -
      {NODIsablerc|DISABLERc(rc)}                                   -
      {DEFaultrc(rc)}                                               -
      {NOOPTions|OPTions(                                           -
           {NOABendnotify|ABendnotify(id)}                          -
           {FIRST|LAST}                                             -
           {TRace|NOTRace}                                          -
           {NOQuickdelete|Quickdelete}                              -
           {NOREGIONOVerride|REGIONOVerride}                        -
           {NOWEight|WEight(                                        -
              {PRogram(n)}                                          -
              {JOBCLass(n)}                                         -
              {JOBNAme(n)}    )}                                    -
           {NOREgion|REgion(                                        -
             regionbelow|*|0  {regionabove|*|0                      -
             {limitbelow|*|0   {limitabove|*|0                      -
             {dflthspsz|*|0    {totalhspsz|*|0                      -
             {totalhsps|*|0                                         -
             {memlimit|*|0 }}}}}} )}                                -
           {NOREgion1|REgion1(                                      -
             regionbelow|*|0  {regionabove|*|0                      -
             {limitbelow|*|0   {limitabove|*|0                      -
             {dflthspsz|*|0    {totalhspsz|*|0                      -
             {totalhsps|*|0                                         -
             {memlimit|*|0 }}}}}} )}                                -
           {NOJOBCLass|JOBCLass(                                    -
               INClude(jobclass{:jobclass} ...)|                    -
               EXClude(jobclass{:jobclass} ...)  ) }                -
```

```
                        {NOJOBNAme|JOBNAme(                            –
                           INClude(name ...)|EXClude(name ...) ) }     –
                        {NOPGMName|PGMName(                            –
                           INClude(name ...)|EXClude(name ...) ) }     –
                                                                       –
                ...                                                    –
                                                                       –
                        {NOREgion32|REgion32(                          –
                          regionbelow|*|0  {regionabove|*|0            –
                        {limitbelow|*|0    {limitabove|*|0             –
                        {dflthspsz|*|0     {totalhspsz|*|0             –
                        {totalhsps|*|0                                –
                        {memlimit|*|0 }}}}}} )}                        –
                        {NOJOBCLass|JOBCLass(                          –
                           INClude(jobclass{:jobclass} ...)|           –
                           EXClude(jobclass{:jobclass} ...)  ) }       –
                        {NOJOBNAme|JOBNAme(                            –
                           INClude(name ...)|EXClude(name ...) ) }     –
                        {NOPGMName|PGMName(                            –
                           INClude(name ...)|EXClude(name ...) ) }     –
                                              )}     )}     )}
```

ABENDNOTIFY

Specifies that a TSO message will be sent if any SMF exit ABENDs.

NOABENDNOTIFY

Specifies that no messages will be sent for SMF exit ABENDs.

id1, id2, id3 You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a IEFUSI exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IEFUSI modules.

library.dsn

Specifies the name of a private **authorized** library used to locate and load the SMF IEFUSI user exit. The library name should be enclosed in single quotes (').

Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IEFUSI Specifies that the IEFUSI exit point is to be activated.

NOIEFUSI The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named IEFUSI exit point is be passed control for exit module execution.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IEFUSI user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IEFUSI user exits be activated. This can be specified at initialization, or later to load and activate IEFUSI user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3
The module name of the user exit that is assigned to the specified IEFUSI exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IEFUSI user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IEFUSI user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
The module name of the backup user exit that is assigned to the specified SMF exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup SMF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a IEFUSI exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IEFUSI exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of IEFUSI exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
> The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
> The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
> The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

> **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IEFUSI to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
> The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IEFUSI user exit modules. A good return code allows subsequent IEFUSI user exit modules to be called. OS/EM provides a default list. For example, if a SMF user exit for IEFUSI set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check

the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
    NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

IEFUSI Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for IEFUSI

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for IEFUSI.

    Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

ABENDNOTIFY
    Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY
    The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

    Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

    id1 id2 id3
        The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

    '*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

FIRST

LAST   Specifies whether the optional OS/EM JCL Standards functions for IEFUSI will be applied before or after the user exits are invoked.

Note: OS/EM control functions are invoked FIRST by default.

TRACE Write GTF Trace records for critical control blocks, used in Problem Determination for OS/EM Optional functions in conjunction with OS/EM support.

NOTRACE Disables GTF trace records (This is the default)

QUICKDELETE
Specifies that any files coded with a retention setting of DELETE and the program name is IEFBR14 will be deleted by OS/EM. No RECALL will be performed. Instead a HDELETE will be generated.

NOQUICKDELETE
OS/EM will not be involved with file deletions via IEFBR14.

REGIONOVERRIDE
Specifies that if a qualifying job requests less than the amount allowed by the OS$USI controls, the jobs request will be increased.

NOREGIONOVERRIDE
If NOREGIONOVERRIDE is specified, it nullifies this option.

WEIGHT Specifies which type of include/exclude list will be given the most weight when determining which extension list group to use.

> **PROGRAM(n)**
> Specify the weight to be added to a PROGRAM name include/exclude list. Enter a number from 1 to 9.

> **JOBCLASS(n)**
> Specify the weight to be added to a JOBCLASS include/exclude list. Enter a number from 1 to 9.

> **JOBNAME(n)**
> Specify the weight to be added to a JOBNAME include/exclude list. Enter a number from 1 to 9.

REGION Specifies the default values used for storage utilization control. The values on the REGION statement are used if none of the REGION1 through REGION32 definitions apply.

NOREGION Specifying NOREGION nullifies this option. If REGION is not specified but any of the REGION1 through REGION32 parameters are specified, the defaults will be those of your MVS system.

> **regionbelow**
> Numeric value (in K) which specifies the initial amount of storage allocated to an address space below the 16M line. A negative value may be entered indicating that the amount of storage is to be calculated by subtracting this value from the size of the private area currently available below the 16M line. Because the private area is also used for various system control blocks, choose a value large enough to take this into consideration.

> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the region below is not to be changed. As a default, the asterisk would be omitted where it would normally be implied. This is a positional parameter, and must be coded where shown.

> **0** A zero may be specified to indicate that a prior value of region below is being nullified. The value then becomes your installation's MVS default for this parameter. This is a positional parameter, and must be coded where shown.

regionabove

Numeric value (in K) which specifies the initial amount of storage allocated to an address space above the 16M line.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the region above is not to be changed. As a default, the asterisk would be omitted where it would normally be implied. This is a positional parameter, and must be coded where shown.

0   A zero may be specified to indicate that a prior value of region above is being nullified. The value then becomes your installation's MVS default for this parameter. This is a positional parameter, and must be coded where shown.

limitbelow

Numeric value (in K) which specifies the maximum amount of storage which a program can GETMAIN below the 16M line. A negative value may be entered indicating that the amount of storage is to be calculated by subtracting this value from the size of the private area currently available below the 16M line. Because the private area is also used for various system control blocks, choose a value large enough to take this into consideration.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the limit below is not to be changed. As a default, the asterisk would be omitted where it would normally be implied. This is a positional parameter, and must be coded where shown.

0   A zero may be specified to indicate that a prior value of limit below is being nullified. The value then becomes your installation's MVS default for this parameter. This is a positional parameter, and must be coded where shown.

limabove

Numeric value (in K) which specifies the maximum amount of storage which a program can GETMAIN above the 16M line.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the limit above is not to be changed. As a default, the asterisk would be omitted where it would normally be implied. This is a positional parameter, and must be coded where shown.

0   A zero may be specified to indicate that a prior value of limit above is being nullified. The value then becomes your installation's MVS default for this parameter. This is a positional parameter, and must be coded where shown.

dflthspsz

Numeric value which specifies the default data space and HIPERSPACE size. It is specified in blocks of 4k bytes and must be in the range of 1-80000 hex. The IBM supplied default is 956K (x'000000EF' x 4K).

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the Default data/HIPERSPACE size is not to be changed. As a default, the asterisk would be omitted where it would normally be implied. This is a positional parameter, and must be coded where shown.

0   A zero may be specified to indicate that a prior value of Default data/HIPERSPACE size is being nullified. The value then becomes your installation's MVS default for this parameter. This is a positional parameter, and must be coded where shown.

totalhspsz

Maximum combined size for all user key data spaces and HIPERSPACES owned within an address space (in megabytes). The system-supplied default and the maximum that can be specified is $((2^{**}24)-1)$ megabytes.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the Maximum data/HIPERSPACE size is not to be changed. As a default, the asterisk would be omitted where it would normally be implied. This is a positional parameter, and must be coded where shown.

0 A zero may be specified to indicate that a prior value of Maximum data/HIPERSPACE size is being nullified. The value then becomes your installation's MVS default for this parameter. This is a positional parameter, and must be coded where shown.

totalhsps
Maximum number for all user key data spaces and HIPERSPACES owned within an address space (in megabytes). The system-supplied default is 50. The maximum that can be specified is $((2^{**}32)-1)$.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the Maximum data/HIPERSPACE size is not to be changed. As a default, the asterisk would be omitted where it would normally be implied. This is a positional parameter, and must be coded where shown.

0 A zero may be specified to indicate that a prior value of Maximum data/HIPERSPACE size is being nullified. The value then becomes your installation's MVS default for this parameter. This is a positional parameter, and must be coded where shown.

memlimit
Amount of storage a user may obtain above the 2 gigabyte bar up to a maximum of 16 exabytes. The value must be entered with the storage type specified as the last character of the amount, i.e. 16G would indicate 16 gigabytes, and 2P would indicate 2 petabytes. Use **M** for megabytes, **G** for gigabytes, **T** for terabytes and **P** for petabytes.

0M A value of 0M indicates that **NO** space above the 2G bar may be used.

0 A zero may be specified to indicate that a prior value of memlimit is being nullified. The value then becomes your installation's MVS default.

REGION1-32

NOREGION1-32
Allows the creation of up to 32 control definitions based on a list of jobclasses, jobnames, or program names.

Specifying NOREGION1-NOREGION32 nullifies the named option.

regionbelow
Numeric value (in K) which specifies the initial amount of storage allocated to an address space below the 16M line.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the region below is not to be changed. As a default, the asterisk would be omitted where it would normally be implied. This is a positional parameter, and must be coded where shown.

0 A zero may be specified to indicate that a prior value of region below is being nullified. The value then becomes your installation's MVS default for this parameter. This is a positional parameter, and must be coded where shown.

regionabove
Numeric value (in K) which specifies the initial amount of storage allocated to an address space above the 16M line.

*	An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the region above is not to be changed. As a default, the asterisk would be omitted where it would normally be implied. This is a positional parameter, and must be coded where shown.
0	A zero may be specified to indicate that a prior value of region above is being nullified. The value then becomes your installation's MVS default for this parameter. This is a positional parameter, and must be coded where shown.

limitbelow
>Numeric value (in K) which specifies the maximum amount of storage which a program can GETMAIN below the 16M line.

*	An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the limit below is not to be changed. As a default, the asterisk would be omitted where it would normally be implied. This is a positional parameter, and must be coded where shown.
0	A zero may be specified to indicate that a prior value of limit below is being nullified. The value then becomes your installation's MVS default for this parameter. This is a positional parameter, and must be coded where shown.

limabove
>Numeric value (in K) which specifies the maximum amount of storage which a program can GETMAIN above the 16M line.

*	An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the limit above is not to be changed. As a default, the asterisk would be omitted where it would normally be implied. This is a positional parameter, and must be coded where shown.
0	A zero may be specified to indicate that a prior value of limit above is being nullified. The value then becomes your installation's MVS default for this parameter. This is a positional parameter, and must be coded where shown.

dflthspsz
>Numeric value which specifies the default data space and HIPERSPACE size. It is specified in blocks of 4k bytes and must be in the range of 1-80000 hex. The IBM supplied default is 956K (x'000000EF' x 4K).

*	An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the Default data/HIPERSPACE size is not to be changed. As a default, the asterisk would be omitted where it would normally be implied. This is a positional parameter, and must be coded where shown.
0	A zero may be specified to indicate that a prior value of Default data/HIPERSPACE size is being nullified. The value then becomes your installation's MVS default for this parameter. This is a positional parameter, and must be coded where shown.

totalhspsz
>Maximum combined size for all user key data spaces and HIPERSPACES owned within an address space (in megabytes). The system-supplied default and the maximum that can be specified is $((2**24)-1)$ megabytes.

*	An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the Maximum data/HIPERSPACE size is not to be changed. As a default, the asterisk would be omitted where it would normally be implied. This is a positional parameter, and must be coded where shown.
0	A zero may be specified to indicate that a prior value of Maximum data/HIPERSPACE size is being nullified. The value then becomes your instal-

lation's MVS default for this parameter. This is a positional parameter, and must be coded where shown.

totalhsps
Maximum number for all user key data spaces and HIPERSPACES owned within an address space (in megabytes). The system-supplied default is 50. The maximum that can be specified is ((2**32)-1).

*
An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the Maximum data/HIPERSPACE size is not to be changed. As a default, the asterisk would be omitted where it would normally be implied. This is a positional parameter, and must be coded where shown.

0
A zero may be specified to indicate that a prior value of Maximum data/HIPERSPACE size is being nullified. The value then becomes your installation's MVS default for this parameter. This is a positional parameter, and must be coded where shown.

memlimit
Amount of storage a user may obtain above the 2 gigabyte bar up to a maximum of 16 exabytes. The value must be entered with the storage type specified as the last character of the amount, i.e. 16G would indicate 16 gigabytes, and 2P would indicate 2 petabytes. Use **M** for megabytes, **G** for gigabytes, **T** for terabytes and **P** for petabytes.

0M
A value of 0M indicates that **NO** space above the 2G bar may be used.

0
A zero may be specified to indicate that a prior value of memlimit is being nullified. The value then becomes your installation's MVS default.

JOBCLASS
Specifies which jobclasses that will be effected by this selection list. Either an include list or an exclude list may be specified.

NOJOBCLASS
If NOJOBCLASS is specified, jobclasses are not considered by this selection group.

INC

EXC
Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection criteria. An exclude list states that all items not in the list will be used.

jobclass
A list of execution Job classes to which the control definition is applied, TSU, TSO, and/or STC are valid entries. A colon (:) may be used to specify an inclusive range of classes. For example, A:Z may be entered to specify classes A through Z.

JOBNAME
Specifies which jobs will be considered by this selection group. Either an include list or an exclude list of jobnames may be specified.

NOJOBNAME
Specifing NOJOBNAME means that jobnames are not used by this selection group.

INC

EXC

Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection criteria. An exclude list states that all items not in the list will be used.

jobname

A list of job names or jobname masks to which the control definition is applied.

PGMNAME

Specifies which programs will be considered for region controls by this selection group. Either an include list or an exclude list may be specified.

NOPGMNAME

If NOPGMNAME is specified, then program names are not considered by this selection group.

INC

EXC

Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection criteria. An exclude list states that all items not in the list will be used.

pgmname

A list of program names or program name masks to which the control definition is applied.

SMF IEFUSI optional control functions

The following example shows the activation of IEFUSI with a user exit, USREXIT, specified. It also shows the establishment of the storage allocation rules which will be used. How those rules are interpreted are explained after the example.

```
OS$CNTL SMF IEFUSI(EXITS(USREXIT) –
  OPTIONS(FIRST –
    WEIGHT(PROGRAM(3) JOBNAME(2) JOBCLASS(1)) –
    REGION(4096 4096 1024 1024 0 0 0 2G) –
    REGION1(3092 3092 2048 0 JOBCLASS(INC(A X))) –
    REGION4(3092 0 2048 2048 300 10 75 JOBNAME(INC(BISP040))) –
    REGION10(8192 40960 8704 45960 200 40 10 1T –
        PGMNAME(INC(COBOL)))))
```

This sample command illustrates the manner in which the IEFUSI control definitions are applied. It also illustrates how the definitions are merged to create the final control definition for a specific program, job, or job class.

Note: Optional OS/EM processing is applied before giving control to the user exit USREXIT since FIRST is specified. This parameter could have been omitted since FIRST is the default.

The final control definition is built in the following manner:

• Program name

   If PGMNAME is COBOL, the program will be given a 8192K region below the line, a 40960K region above the line and it will be able to GETMAIN 8704K below the line and 45960K above the line. The amount of storage available to the program below the line is determined in the following steps.

• Job name

If the JOBNAME is BISP040, then the job will be given a 3092K region below the line and will be able to GETMAIN 2048K below and above the line. The amount of storage available to job BISP040 is determined in the following steps. Default Hiperspace is 300 4K blocks, a total of 10 megabytes of hiperspace is allowed for this Job, and maximum of 75 dataspaces and/or hiperspaces can be created by this Job.

If job BISP040 contains program COBOL, then COBOL will be given 3092K below the line and its control definition will be complete. If job BISP040 does not contain program COBOL, then the amount of storage it will be given above the line is yet to be determined.

- Job class

  If the JOBCLASS is either A or X, then any jobs running in these two classes will be given a 3092K region below and above the line; and will be able to GETMAIN 2048K below the line. The amount of storage available for GETMAIN above the line will come from the, default, REGION parameter; in this case, 1024K will be given for GETMAIN purposes above the line. If the default REGION parameter had not been entered, then the MVS default would apply.

  If job BISP040 is run in either classes A or X, then its control definition is complete. Job BISP040 will be given 3092K above the line. If job BISP040 is run in any other class, the default REGION parameter applies, and job BISO040 would be given 4096K above the line. Again, if the REGION parameter had not been coded, the MVS default would apply. If program COBOL is in some job other than BISP040, but is run in a job in either job class A or X, its definition is complete and it will be given 3092K below the line. If COBOL is not run in either job class A or X, it will be given 4096K below the line since this is the value on the REGION parameter. The MVS default would apply if the REGION parameter had not been coded.

- All others

  All other programs, jobs, and job classes will use the values coded with the REGION keyword. They will be given a 4096K region below and above the line, and will be able to GETMAIN 1024K below and above the line. If the REGION keyword had not been coded, the standard MVS defaults for these values would apply.

The following table may help in visualizing how the control definition is built:

For each of the four categories - PGMNAME, JOBNAME, JOBCLASS, OTHERS - an * in the rb (region below), ra (region above), lb (limit below), and la (limit above) columns represents a possible completion of the control definition for storage control. As the table shows, the PGMNAME control definition can be completed from more entered definitions than JOBNAME, JOBNAME from more than JOBCLASS, and JOBCLASS from more than OTHERS.

	PGMNAME				JOBNAME				JOBCLASS				OTHERS			
	rb	ra	lb	la	rb	ra	lb	la	rb	ra	lb	la	rb	ra	lb	la
REGION	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
REGIONn w/JOBCLASS	*	*	*	*	*	*	*	*	*	*	*	*				
REGIONn w/JOBNAME	*	*	*	*	*	*	*	*								
REGIONn w/PGMNAME	*	*	*	*												

Optional OS/EM processing is applied based on the weights specified. If you do not enter the WEIGHTS parameter, then the following order is used:

1. Program names are checked against any specified program names.

2. Job names are checked against any specified job names.

3.   Job classes are checked against any specified job classes.

4.   Any program name, job name, or job class that does not match any of your specifications will use the values entered with the REGION keyword, if you have entered the REGION keyword.

5.   The number of the REGIONn keyword does not imply any hierarchy in OS/EM processing. However, the REGIONn parameters are searched sequentially, and the first match will be used.

For example, if COBOL were a program name in the REGION4 parameter and in the REGION9 parameter, whatever values coded in the REGION4 parameter would be the ones used.

Note: Each of the REGION1 through REGION32 keywords is used for either jobclasses, job names, or program names.

Note: While not entirely clear from the above example, it is not necessary that a user exit be specified to obtain use of the OS/EM control function. The two specifications are independent.

The command would be entered as follows if only the OS/EM optional function were being activated:

```
OS$CNTL SMF IEFUSI  -
  OPTIONS(FIRST -
    WEIGHT(PROGRAM(3) JOBNAME(2) JOBCLASS(1)) -
    REGION(4096 4096 1024 1024) -
    REGION1(3092 3092 2048 0(JOBCLASS(A X)) -
    REGION4(3092 0 2048 2048(JOBNAME(BISP040)) -
    REGION10(0 1024 2048 1024(PGMNAME(COBOL)))
```

IEFUSO

The SYSOUT limit exit (IEFUSO) receives control when the number of records written to an output data set exceeds the output limit for that data set. A return code from this exit indicates whether the system is to continue processing the job with a new output limit.

OS/EM provides the Sysout Extension Control function for this exit.

The Sysout Extension Control function of OS/EM allows you to give extensions to jobs which go over the system line limit. The control can be by jobname, program name, job class or sysout class. It may also be controled by RACF resource.

```
        OS$CNTL SMF                                                   -
         {NOABendnotify|ABendnotify(                                  -
            0|*|id1 {0|*|id2 {0|*|id3 }})}                            -
         {LIBrary(library.dsn)}                                       -
         {NOIEFUSO|IEFUSO(                                     -
                {ENable|DISABLE}                                      -
                {NUmber( num1 num2 num3 )}                            -
                {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
                {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3})})}} -
                {NOABendnotify|ABendnotify(                           -
                   (0|*|id1a {0|*|id2a {0|*|id3a }})                  -
                   (0|*|id1b {0|*|id2b {0|*|id3b }})                  -
                   (0|*|id1c {0|*|id2c {0|*|id3c }}) })               -
                {NOLIMit|LIMit(                                       -
                  (jobmask1,...)|*|0                                  -
                 {(jobmask2,...)|*|0                                  -
                 {(jobmask3,...)|*|0}})}                              -
                {NOVAlidrc|VAlidrc(rc,...)}                           -
                {NOGoodrc|Goodrc(rc,...)}                             -
                {NODIsablerc|DISABLERc(rc)}                           -
                {DEFaultrc(rc)}                                       -
                {NOOPTions|OPTions(                                   -
                        {NOABendnotify|ABendnotify(id)}               -
                        {FIRST|LAST}                                  -
                        {TRace|NOTRace}                               -
                        {NOWEight|WEight(                             -
                           {SYsout(n)}                                -
                           {PRogram(n)}                               -
                           {JOBNAme(n)}                               -
                           {JOBCLass(n)} )}                           -
                        {NOEXTension|EXTension(                       -
                           {lines}                                    -
                           {NOWTO|WTO}                                -
                           {NOWTOR|WTOR(nn)}  )}                       -
   Extensions 1 thru 32
                        {NOEXTENSION__|EXTENSION__(                   -
                           {lines}                                    -
                           {NOWTO|WTO}                                -
                           {NOWTOR|WTOR(nn)}                          -
                           {NOSYsout|SYsout(                          -
                              INClude(class,...)|EXClude(class,...))}  -
                           {NOJOBCLass|JOBCLass(                      -
                              INClude(jobcls,...)|EXClude(jobcls,...))}-
                           {NOJOBNAme|JOBNAme(                        -
                              INClude(jobnme,...)|EXClude(jobnme,...))}-
                           {NOPRogram|PRogram(                        -
```

```
                                    INClude(pgmnme,...)|EXClude(pgmnme,...))}-
      RACF Entry
                              {NORACF|RACF(                                    -
                                {lines}                                        -
                                {NOWTO|WTO}                                     -
                                {NOWTOR|WTOR(nn)}                               -
                                RESource(resource) ) }
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any SMF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for SMF exit ABENDs.

> > **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IEFUSO exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IEFUSO modules.

> **library.dsn**
> > Specifies the name of a private **authorized** library used to locate and load the SMF IEFUSO user exit. The library name should be enclosed in single quotes (').

> > **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IEFUSO   Specifies that the IEFUSO exit point is to be activated.

NOIEFUSO   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IEFUSO exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

> **num1, num2, num3**
> > Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

> > If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IEFUSO user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IEFUSO user exits be activated. This can be specified at initialization, or later to load and activate IEFUSO user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3
> The module name of the user exit that is assigned to the specified IEFUSO exit point.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
> A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IEFUSO user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IEFUSO user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
> The module name of the backup user exit that is assigned to the specified SMF exit point.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup SMF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
> A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
> Specifies that when a IEFUSO exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IEFUSO exit module has ABENDed.

NOABENDNOTIFY
> The NO option can be used to nullify the option to notify a TSO user of IEFUSO exit module ABENDs.

> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
> The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
> The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
> The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT Specifies that Job name limits are requested, to limit user exit modules for IEFUSO to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

* An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by IEFUSO user exit modules. A good return code allows subsequent IEFUSO user exit modules to be called. OS/EM provides a default list. For example, if a SMF user exit for IEFUSO set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
NODISABLERC turns off disable return code checking for the exit point.

rc	Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc	Default return codes values are any numeric value

IEFUSO Options

OPTIONS Specifies that an optional OS/EM control function is to be enabled for IEFUSO

NOOPTIONS The NOOPTIONS parameter will totally disable the optional OS/EM control function for IEFUSO.

Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

ABENDNOTIFY
Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3
The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*' An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

FIRST

LAST Specifies whether the optional OS/EM JCL Standards functions for IEFUSO will be applied before or after the user exits are invoked.

Note: OS/EM control functions are invoked FIRST by default.

TRACE Write GTF Trace records for critical control blocks, used in Problem Determination for OS/EM Optional functions in conjunction with OS/EM support.

NOTRACE Disables GTF trace records (This is the default)

WEIGHT Specifies which type of include/exclude list will be given the most weight when determining which extension list group to use.

SYSOUT(n)
Specify the weight to be added to a SYSOUT class include/exclude list. Enter a number from 1 to 4.

PROGRAM(n)
Specify the weight to be added to a PROGRAM name include/exclude list. Enter a number from 1 to 4.

JOBNAME(n)
Specify the weight to be added to a JOBNAME include/exclude list. Enter a number from 1 to 4.

JOBCLASS(n)
Specify the weight to be added to a JOBCLASS include/exclude list. Enter a number from 1 to 4.

EXTENSION Specify the default options to use if no extension list group matches the current job. Avoid S722 abends.

NOEXTENSION
Nullifies the default options.

lines Enter the number of lines by which a job's sysout will be allowed to extend.

WTO
Specifies that a WTO be written for each sysout extension that is performed. See message OS$USO149.

NOWTO
Specifying NOWTO disables the WTO for each sysout extension thas is performed.

WTOR(nn)
Specifies that a WTO and a reply to either continue the job or cancel it will be requested from the operator after nn sysout extensions are performed. See message OS$USO152.

NOWTOR
Specifying NOWTOR disables the WTOR option.

EXTENSION1-32

NOEXTENSION1-32
Allows the creation of up to 32 control definitions (selection groups) based on a list of sysout classes, program names, jobnames or job classes.

Specifying NOEXTENSION1-NOEXTENSION32 nullifies the named option.

lines Enter the number of lines by which a jobs sysout will be allowed to extend.

WTO
Specifies that a WTO be written for each sysout extension that is performed. See message OS$USO149.

NOWTO
Specifying NOWTO disables the WTO for each sysout extension thas is performed.

WTOR(nn)
Specifies that a WTO and a reply to either continue the job or cancel it will be requested from the operator after nn sysout extensions are performed. See message OS$USO152.

NOWTOR
Specifying NOWTOR disables the WTOR option.

SYSOUT

Specifies which SYSOUT classes will have their sysout limit extended. You may specify either an include or exclude list of sysout classes.

NOSYSOUT

Specifying NOSYSOUT nullifies this option.

INC

EXC

Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection criteria. An exclude list states that all items not in the list will be used.

class Specify the sysout classes for this list. You may specify the classes as a range by separating the first and last class with a ':' (colon). i.e. D:F will cause classes D, E and F to be included in the list.

JOBCLASS

Specifies which Jobclasses will have their sysout limit extended. You may specify either an include or exclude list of jobclasses.

NOJOBCLASS

Specifying NOJOBCLASS nullifies this option.

INC

EXC

Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection criteria. An exclude list states that all items not in the list will be used.

jobclass

Specifies which Jobclasses will have their sysout limit extended. Jobclasses may be entered in a range, i.e. D:F would have classes D, E and F added to the list.

JOBNAME

Specifies by Jobname, which jobs will have their sysout limit extended. You may specify either an include or exclude list of jobnames.

NOJOBNAME

Specifying NOJOBNAME nullifies this option.

INC

EXC

Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection criteria. An exclude list states that all items not in the list will be used.

jobname

Specifies which jobs will have their sysout limit extended. Jobnames may be entered as a mask.

PROGRAM

Specifies by Program name, which jobs will have their sysout limit extended. You may specify either an include or exclude list of program names.

NOPROGRAM

Specifying NOPROGRAM nullifies this option.

INC

EXC
>
> Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection criteria. An exclude list states that all items not in the list will be used.
>
> **pgmname**
> > Specifies which programs will have their sysout limit extended. Program names may be entered as a mask.

RACF   A RACF resource may be specified which controls sysout extensions. This resource is only checked if no other matching entries are found.

NORACF   Entering NORACF nullifies this option.

lines Enter the number of lines by which a jobs sysout will be allowed to extend.

WTO
> Specifies that a WTO be written for each sysout extension that is performed. See message OS$USO149.

NOWTO
> Specifying NOWTO disables the WTO for each sysout extension thas is performed.

WTOR(nn)
> Specifies that a WTO and a reply to either continue the job or cancel it will be requested from the operator after nn sysout extensions are performed. See message OS$USO152.

NOWTOR
> Specifying NOWTOR disables the WTOR option.

RESOURCE
> Specify the name of the RACF FACILITY class resource being used to control Sysout Extensions.

IEFUTL

The time limit exit (IEFUTL) receives control when one of the following time limits expires:

* The job CPU time limit (from the JOB statement)

* The step CPU time limit (from the EXEC statement, the default from the job entry subsystem)

* The continuous wait time limit for the job (from the SMFPRMxx JWT parameter)

A return code from this exit indicates whether the system is to continue processing the job step with a new time limit.

OS/EM provides support to set execution time by job class, extend execution time at both the job and step level, and to extend wait time for batch jobs, TSO users and/or terminals.

For both step and job cpu time, you may specify individual job classes or all classes to be given the default time extension. You can specify time extension by class which is different than the default time. You may also request OS/EM issue a WTO every time an extension is given.

To ensure that a job is not overlooked while extensions are being given, a WTOR is issued every 1 to 99 times an extension is granted.

Wait time extensions may be granted by job class, and for TSO activity, by user ID, terminal ID and active hours by day of week.

```
          OS$CNTL SMF                                                   -
           {NOABendnotify|ABendnotify(                                  -
              0|*|id1 {0|*|id2 {0|*|id3 }})}                            -
           {LIBrary(library.dsn)}                                       -
           {NOIEFUTL|IEFUTL(                                         -
                {ENable|DISABLE}                                        -
                {NUmber( num1 num2 num3 )}                              -
                {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}  -
                {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})} -
                {NOABendnotify|ABendnotify(                             -
                   (0|*|id1a {0|*|id2a {0|*|id3a }})                    -
                   (0|*|id1b {0|*|id2b {0|*|id3b }})                    -
                   (0|*|id1c {0|*|id2c {0|*|id3c }}) })                 -
                {NOLIMit|LIMit(                                         -
                  (jobmask1,...)|*|0                                    -
                 {(jobmask2,...)|*|0                                    -
                 {(jobmask3,...)|*|0}})}                                -
                {NOVAlidrc|VAlidrc(rc,...)}                            -
                {NOGoodrc|Goodrc(rc,...)}                               -
                {NODIsablerc|DISABLERc(rc)}                             -
                {DEFaultrc(rc)}                                         -
                {NOOPTions|OPTions(                                     -
                        {NOABendnotify|ABendnotify(id)}                 -
                        {FIrst|LAst}                                    -
                        {TRace|NOTRace}                                 -
                        {NOWEight|WEight(                            -
                            {DAy(N)}                                    -
                            {PRogram(N)}                                -
                            {TErminal(N)}                               -
                            {JOBClass(N)}                               -
                            {JOBName(N)}  )}                            -
                        {NOEXTENSION|EXTENSION(                         -
                            {NOWAit|WAit({MINS} {NOWTO|WTO} )}          -
                            {NOTSOdisc|TSOdisc({MINS} {nowto|wto} )}    -
```

```
                        {NOJObcpu│JObcpu({SECS} {NOWTO│WTO}           -
                          {NOWTOR│WTOR{(NN)}}   )}                    -
                        {NOSTepcpu│STepcpu({SECS} {NOWTO│WTO}         -
                          {NOWTOR│WTOR{(NN)}}   )}
     Extensions 1 thru 32
                        {NOEXTENSION__│EXTENSION__(                   -
                          {NOWAit│WAit({MINS} {NOWTO│WTO}   )}        -
                          {NOTSOdisc│TSOdisc({MINS} {NOWTO│WTO} )}    -
                          {NOJObcpu│JObcpu({SECS} {NOWTO│WTO}         -
                            {NOWTOR│WTOR{(NN)}}   )}                  -
                          {NOSTepcpu│STepcpu({SECS} {NOWTO│WTO}       -
                            {NOWTOR│WTOR{(NN)}}   )}                  -
                          {NOJOBClass│JOBClass(                       -
                            INC(jobclass,...) │ EXC(jobclass,...) )}  -
                          {NOJOBName│JOBName(                         -
                            INC(jobname,...) │ EXC(jobname,...) )}    -
                          {NOTErminal│TErminal(                       -
                            INC(term,...) │ EXC(term,...) )}          -
                          {NOPRogram│PRogram(                         -
                            INC(pgmname,...) │ EXC(pgmname,...) )}    -
                          {NODAys│DAys(0│*│NNNN:NNNN,...)}          -
                        {NORACFWAit│RACFWAit(                         -
                          {NOWAIT│WAIT{(MINS) {NOWTO│WTO} )}          -
                           RESOURCE(waitresource {LOG│NOLOG})  )}     -
                        {NORACFJObcpu│RACFJObcpu(                     -
                          {NOJObcpu│JObcpu({SECS} {NOWTO│WTO}         -
                            {NOWTOR│WTOR{(NN)}}   )}                  -
                           RESOURCE(jobresource {LOG│NOLOG})  )}      -
                        {NORACFSTepcpu│RACFSTepcpu(                   -
                          {NOSTepcpu│STepcpu({SECS} {NOWTO│WTO}       -
                            {NOWTOR│WTOR{(NN)}}   )}                  -
                           RESOURCE(stepresource {LOG│NOLOG})  )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any SMF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for SMF exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IEFUTL exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IEFUTL modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the SMF IEFUTL user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IEFUTL   Specifies that the IEFUTL exit point is to be activated.

NOIEFUTL   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IEFUTL exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

   num1, num2, num3

>   Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

>   If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IEFUTL user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IEFUTL user exits be activated. This can be specified at initialization, or later to load and activate IEFUTL user exits that were not activated at initialization. The exits will be called in the order listed.

   exit1

   exit2

   exit3
>   The module name of the user exit that is assigned to the specified IEFUTL exit point.

   *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

   0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IEFUTL user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IEFUTL user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

   exit1

   exit2

   exit3
>   The module name of the backup user exit that is assigned to the specified SMF exit point.

*　　An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup SMF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0　　A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IEFUTL exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IEFUTL exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IEFUTL exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*　　An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0　　A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT　　Specifies that Job name limits are requested, to limit user exit modules for IEFUTL to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT　　The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*　　An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0　　A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

    rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by IEFUTL user exit modules. A good return code allows subsequent IEFUTL user exit modules to be called. OS/EM provides a default list. For example, if a SMF user exit for IEFUTL set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

    rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
    NODISABLERC turns off disable return code checking for the exit point.

    rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc Default return codes values are any numeric value

IEFUTL Options

OPTIONS Specifies that an optional OS/EM control function is to be enabled for IEFUTL

NOOPTIONS The NOOPTIONS parameter will totally disable the optional OS/EM control function for IEFUTL.

    Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

ABENDNOTIFY
    Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY
    The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

    Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3
> The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'
> An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
> A zero (0) can be used to negate a previous entry of the notify TSO user list.

FIRST

LAST
Specifies whether the optional OS/EM JCL Standards functions for IEFUTL will be applied before or after the user exits are invoked.

Note: OS/EM control functions are invoked FIRST by default.

TRACE
Write GTF Trace records for critical control blocks, used in Problem Determination for OS/EM Optional functions in conjunction with OS/EM support.

NOTRACE
Disables GTF trace records (This is the default)

WEIGHT
Specifies which type of include/exclude list will be given the most weight when determining which extension list group to use.

> **DAY(N)**
> > Specify the weight to be added to a DAY include/exclude list. Enter a number from 1 to 5.
>
> **PROGRAM(N)**
> > Specify the weight to be added to a PROGRAM name include/exclude list. Enter a number from 1 to 5.
>
> **TERMINAL(N)**
> > Specify the weight to be added to a TERMINAL name include/exclude list. Enter a number from 1 to 5.
>
> **JOBCLASS(N)**
> > Specify the weight to be added to a JOBCLASS include/exclude list. Enter a number from 1 to 5.
>
> **JOBNAME(N)**
> > Specify the weight to be added to a JOBNAME include/exclude list. Enter a number from 1 to 5.

EXTENSION
Specify the default options to use if no extension list group matches the current job.

> **WAIT**
> > Specifies whether extensions for SMF wait time should be performed. Avoid S522 abends.
>
> **NOWAIT**
> > Specifying NOWAIT disables the S522 avoidance option.
>
> > **MINS**
> > > Specify the amout of time, in minutes, that a jobs wait time should be extended.
>
> > **WTO**
> > > Specifies that a WTO be written for each wait extension that is performed. The message issued is OS$UTL120.

NOWTO

Specifying NOWTO disables the WTO for each wait extension that is performed.

TSODISC

Specifies the amount of time a terminal may be inactive before being disconnected from VTAM.

NOTSODISC

Specifying NOTSODISC nullifies this options.

mins

Specify the amount of time, in minutes, that a terminal can be inactive until being disconnected from VTAM.

JOBCPU

Specifies whether extensions for Job CPU time will be granted, eliminate S322 abends.

NOJOBCPU

Specifying NOJOBCPU nullifies this option.

SECS

Specify the amount of time, in seconds, that a jobs CPU time should be extended.

WTO

Specifies that a WTO be written for each wait extension that is performed. The message issued is OS$UTL120.

NOWTO

Specifying NOWTO disables the WTO for each wait extension that is performed.

WTOR(nn)

Specifies that a WTO and a reply to either continue the job or not will be requested from the operator after nn CPU extensions are performed. See message OS$UTL114.

NOWTOR

Specifying NOWTOR disables the WTOR option.

STEPCPU

Specifies whether extensions for step CPU time will be granted, eliminate S322 abends.

NOSTEPCPU

Specifying NOSTEPCPU nullifies this option.

SECS

Specify the amout of time, in seconds, that a jobs CPU time should be extended.

WTO

Specifies that a WTO be written for each wait extension that is performed. The message issued is OS$UTL120.

NOWTO

Specifying NOWTO disables the WTO for each wait extension that is performed.

WTOR(nn)

Specifies that a WTO and a reply to either continue the job or not will be

requested from the operator after nn CPU extensions are performed. See message OS$UTL114.

NOWTOR
Specifying NOWTOR disables the WTOR option.

EXTENSION1-32

NOEXTENSION1-32
Allows the creation of up to 32 control definitions (selection groups) based on a list of jobnames, jobclasses, terminal ID's, program names and time of day by day of week.

Specifying NOEXTENSION1-NOEXTENSION32 nullifies the named option.

WAIT
Specifies whether extensions for SMF wait time should be performed. Avoid S522 abends.

NOWAIT
Specifying NOWAIT disables the S522 avoidance option.

MINS
Specify the amout of time, in minutes, that a jobs wait time should be extended.

WTO
Specifies that a WTO be written for each wait extension that is performed. The message issued is OS$UTL120.

NOWTO
Specifying NOWTO disables the WTO for each wait extension that is performed.

TSODISC
Specifies the amount of time a terminal may be inactive before being disconnected from VTAM.

NOTSODISC
Specifying NOTSODISC nullifies this options.

mins
Specify the amount of time, in minutes, that a terminal can be inactive until being disconnected from VTAM.

JOBCPU
Specifies whether extensions for Job CPU time will be granted, eliminate S322 abends.

NOJOBCPU
Specifying NOJOBCPU nullifies this option.

SECS
Specify the amout of time, in seconds, that a jobs CPU time should be extended.

WTO
Specifies that a WTO be written for each wait extension that is performed. The message issued is OS$UTL120.

NOWTO
Specifying NOWTO disables the WTO for each wait extension that is performed.

WTOR(nn)
> Specifies that a WTO and a reply to either continue the job or not will be requested from the operator after nn CPU extensions are performed. See message OS$UTL114.

NOWTOR
> Specifying NOWTOR disables the WTOR option.

STEPCPU
Specifies whether extensions for step CPU time will be granted, eliminate S322 abends.

NOSTEPCPU
Specifying NOSTEPCPU nullifies this option.

> **SECS**
>> Specify the amout of time, in seconds, that a jobs CPU time should be extended.

> **WTO**
>> Specifies that a WTO be written for each wait extension that is performed. The message issued is OS$UTL120.

> **NOWTO**
>> Specifying NOWTO disables the WTO for each wait extension that is performed.

> **WTOR(nn)**
>> Specifies that a WTO and a reply to either continue the job or not will be requested from the operator after nn CPU extensions are performed. See message OS$UTL114.

> **NOWTOR**
>> Specifying NOWTOR disables the WTOR option.

JOBCLASS
Specifies which Jobclasses will have their time extended.

NOJOBCLASS
Specifying NOCLASS nullifies this option.

> **INC**

> **EXC**
>> Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection criteria. An exclude list states that all items not in the list will be used.

>> **jobclass**
>>> A list of execution Job classes to which the control definition is applied, TSU, TSO, and/or STC are valid entries. A colon (:) may be used to specify an inclusive range of classes. For example, A:Z may be entered to specify classes A through Z.

JOBNAME
Specifies which jobs will have their time extended.

NOJOBNAME
Specifying NOJOBNAME nullifies this option.

> **INC**

EXC
>   Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection criteria. An exclude list states that all items not in the list will be used.

>   **jobname**
>   >   Specify either a jobname, or a jobname mask for the include/exclude list.

TERMINAL
>   Specifies that a list of VTAM terminal ids or VTAM terminal id mask follows to be included or excluded for OS$UTL extensions.

NOTERMINAL
>   Specifies that VTAM terminal ids or VTAM terminal id masks will not be used for OS$UTL extensions.

>   **INC** Include the following list of VTAM terminal ids for OS$UTL extensions.

>   **EXC**
>   >   Exclude the following list of VTAM terminal ids from OS$UTL extensions.

>   **term**
>   >   A list of VTAM terminal ids or VTAM terminal id masks to be either included or excluded from OS$UTL extensions.

PROGRAM
>   Specifies which programs will have their time extended.

NOPROGRAM
>   Specifying NOPROGRAM nullifies this option.

>   **INC**

>   **EXC**
>   >   Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection criteria. An exclude list states that all items not in the list will be used.

>   **pgmname**
>   >   Specify either a program name, or a program name mask for the include/exclude list.

DAYS
>   Specifies that certain days with start and end times will be specified for OS$UTL extension processing

NODAYS
>   Specifies that no days are specified for OS$UTL extension processing

>   **HHMM:HHMM**
>   >   Specify the time that Wait Extensions will be granted. This parameter is positional, starting with Monday. See '*' for placeholder.

>   *****   Use an asterisk ('*') as a place holder to specify that the corresponding day is to be left alone.

>   **0**   Use a zero ('0') to indicate that the corresponding day is to be turned off.

RACFWAIT   Specifies extensions for SMF wait time will be performed and control will be via the listed RACF resource. This check is not performed if the job/terminal being checked matches any of the previously defined controls.

NORACFWAIT
> Specifying NORACFWAIT nullifies this option.

> **MINS**
> > Specify the amout of time, in minutes, that a jobs wait time should be extended.

> **WTO**
> > Specifies that a WTO be written for each wait extension that is performed. The message issued is OS$UTL120.

> **NOWTO**
> > Specifying NOWTO disables the WTO for each wait extension that is performed.

> **RESOURCE**
> > Enter the RACF resource name and whether RACF logging will be performed.

> > **waitresource**
> > > The name of the RACF resource.

> > > **LOG**

> > > **NOLOG**
> > > > Specifies whether RACF logging should take place.

RACFJOBCPU Specifies extensions for Job CPU time will be granted and controlled via the listed RACF resource. This check is not performed if the job being checked matches any of the previously defined controls.

NORACFJOBCPU
> Specifying NORACFJOBCPU nullifies this option.

> **SECS**
> > Specify the amout of time, in seconds, that a jobs CPU time should be extended.

> **WTO**
> > Specifies that a WTO be written for each wait extension that is performed. The message issued is OS$UTL120.

> **NOWTO**
> > Specifying NOWTO disables the WTO for each wait extension that is performed.

> **WTOR(nn)**
> > Specifies that a WTO and a reply to either continue the job or not will be requested from the operator after nn CPU extensions are performed. See message OS$UTL114.

> **NOWTOR**
> > Specifying NOWTOR disables the WTOR option.

> **RESOURCE**
> > Enter the RACF resource name and whether RACF logging will be performed.

> > **jobresource**
> > > The name of the RACF resource.

> > > **LOG**

> > > **NOLOG**
> > > > Specifies whether RACF logging should take place.

RACFSTEPCPU

> Specifies that extensions for step CPU time will be granted and controlled via the listed RACF resource. This check is not performed if the job being checked matches any of the previously defined controls.

NORACFSTEPCPU

> Specifying NORACFSTEPCPU nullifies this option.

> **SECS**
>
> > Specify the amout of time, in seconds, that a jobs CPU time should be extended.

> **WTO**
>
> > Specifies that a WTO be written for each wait extension that is performed. The message issued is OS$UTL120.

> **NOWTO**
>
> > Specifying NOWTO disables the WTO for each wait extension that is performed.

> **WTOR(nn)**
>
> > Specifies that a WTO and a reply to either continue the job or not will be requested from the operator after nn CPU extensions are performed. See message OS$UTL114.

> **NOWTOR**
>
> > Specifying NOWTOR disables the WTOR option.

> **RESOURCE**
>
> > Enter the RACF resource name and whether RACF logging will be performed.

> > **stepresource**
> >
> > > The name of the RACF resource.

> > **LOG**

> > **NOLOG**
> >
> > > Specifies whether RACF logging should take place.

Example Wait

The following example shows the activation of IEFUTL with a user exit, USREXIT, specified. It shows extending SMF wait time (i.e Tape Mount Time) for all jobclasses. It also shows extension of SMF wait time for TSO users whose ID starts with a SP, on the days Monday through Friday times 8 am to 7:30 pm. The extension provided is 15 minutes. After 7:30 pm when the next SMF wait time interval expires, the TSO ID will be cancelled by the system. The extension is valid for 24 hours both Saturday and Sunday.

```
OS$CNTL SMF IEFUTL(EXITS(USREXIT) +
    OPTIONS ( FIRST +
        EXTENSION1 ( +
            WAIT ( 15 ) +
            JOBCLASS ( INC ( A:9 ) ) +
                     ) +
        EXTENSION2 ( +
            WAIT ( 15 ) +
            JOBNAME ( INC ( SP- ) ) +
            DAYS ( +
                    0800:1930  +
                    0800:1930  +
                    0800:1930  +
                    0800:1930  +
                    0800:1930  +
                    0000:2400  +
                    0000:2400  ) +
                  ) +
          ) )
```

Note: Optional OS/EM processing is applied before giving control to the user exit USREXIT since FIRST is specified. This parameter could have been omitted since FIRST is the default.

IEFU29

The SMF dump exit (IEFU29) receives control when an SMF data set becomes full. A return code from this exit indicates whether the dump message (IEE362I or IEE362A) is to be issued.

OS/EM supplies only basic exit control functions for this exit.

```
OS$CNTL SMF                                                         -
  {NOABendnotify|ABendnotify(                                       -
     0|*|id1 {0|*|id2 {0|*|id3 }})}                                 -
  {LIBrary(library.dsn)}                                           -
  {NOIEFU29|IEFU29(                                                -
        {ENable|DISABLE}                                          -
        {NUmber( num1 num2 num3 )}                                -
        {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}      -
        {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}    -
        {NOABendnotify|ABendnotify(                                -
           (0|*|id1a {0|*|id2a {0|*|id3a }})                       -
           (0|*|id1b {0|*|id2b {0|*|id3b }})                       -
           (0|*|id1c {0|*|id2c {0|*|id3c }}) })                    -
        {NOLIMit|LIMit(                                            -
          (jobmask1,...)|*|0                                       -
         {(jobmask2,...)|*|0                                       -
         {(jobmask3,...)|*|0}})}                                   -
        {NOVAlidrc|VAlidrc(rc,...)}                                -
        {NOGoodrc|Goodrc(rc,...)}                                  -
        {NODIsablerc|DISABLERc(rc)}                                -
        {DEFaultrc(rc)}                                            -
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any SMF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for SMF exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IEFU29 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IEFU29 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the SMF IEFU29 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IEFU29   Specifies that the IEFU29 exit point is to be activated.

NOIEFU29   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IEFU29 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

    num1, num2, num3

        Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

        If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IEFU29 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IEFU29 user exits be activated. This can be specified at initialization, or later to load and activate IEFU29 user exits that were not activated at initialization. The exits will be called in the order listed.

    exit1

    exit2

    exit3
        The module name of the user exit that is assigned to the specified IEFU29 exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IEFU29 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IEFU29 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

    exit1

    exit2

    exit3
        The module name of the backup user exit that is assigned to the specified SMF exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup SMF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

  Specifies that when a IEFU29 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IEFU29 exit module has ABENDed.

NOABENDNOTIFY

  The NO option can be used to nullify the option to notify a TSO user of IEFU29 exit module ABENDs.

  Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

  (id1a,id1b,id1c)

    The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

  (id2a,id2b,id2c)

    The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

  (id3a,id3b,id3c)

    The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

    Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

  * An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

  0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT Specifies that Job name limits are requested, to limit user exit modules for IEFU29 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT The NO option can be used to nullify the option for Job name limits.

  jobmask1

  jobmask2

  jobmask3

    The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

  * An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

  0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

        rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IEFU29 user exit modules. A good return code allows subsequent IEFU29 user exit modules to be called. OS/EM provides a default list. For example, if a SMF user exit for IEFU29 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

        rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

        NODISABLERC turns off disable return code checking for the exit point.

        rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

        rc   Default return codes values are any numeric value

IEFU83

The SMF record exit (IEFU83) receives control before each record is written to the SMF data set. A return code from this exit indicates whether the system is to suppress the current SMF record.

OS/EM supplies optional control functions for this exit.

- Catalog Account Control

   The **Catalog Account** function of OS/EM can be used to place up to 32 bytes of JOB or STEP accounting information into the catalog record for a newly created VSAM dataset or SMS-managed non-VSAM dataset. Additionally, the Job's User ID is placed into the Owner field of the catalog record. Neither of these fields is overridden if the information has already been provided.

   The **DCOLLECT** function of IDCAMS can be used to gather this information to produce charge-back reports for DASD utilization.

```
OS$CNTL SMF                                                   -
 {NOABendnotify|ABendnotify(                                  -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                            -
 {LIBrary(library.dsn)}                                       -
 {NOIEFU83|IEFU83(                                       -
        {ENable|DISABLE}                                      -
        {NUmber( num1 num2 num3 )}                            -
        {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}   -
        {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})} -
        {NOABendnotify|ABendnotify(                           -
           (0|*|id1a {0|*|id2a {0|*|id3a }})                  -
           (0|*|id1b {0|*|id2b {0|*|id3b }})                  -
           (0|*|id1c {0|*|id2c {0|*|id3c }}) })               -
        {NOLIMit|LIMit(                                       -
          (jobmask1,...)|*|0                                  -
         {(jobmask2,...)|*|0                                  -
         {(jobmask3,...)|*|0}})}                              -
        {NOVAlidrc|VAlidrc(rc,...)}                           -
        {NOGoodrc|Goodrc(rc,...)}                             -
        {NODIsablerc|DISABLERc(rc)}                           -
        {DEFaultrc(rc)}                                       -
        {NOOPTions|OPTions(                                 -
        {NOABendnotify|ABendnotify(ID)}                     -
        {FIrst|LAst}                                        -
        {NOERRacct|ERRacct(x)}                              -
        {ARcstc(name name)}                                -
        {NODEFowner|DEFowner(owner)}                        -
        {NOWEight|WEight(                                   -
            {USerid(n)}                                     -
            {JOBClass(n)}                                   -
            {JOBName(n)}                                    -
            {GRoupnm(n)} )}                                 -
        {NOCATALOGACCT|CATALOGACCT(                         -
          acctfld1 |*|0                                    -
          startpos1|*|0                                    -
          length1  |*|0                                    -
          acctfld2 |*|0                                    -
          startpos2|*|0                                    -
          length2  |*|0                                    -
          acctfld3 |*|0                                    -
          startpos3|*|0                                    -
          length3  |*|0                                    -
```

```
                  acctfld4 |*|0                           –
                  startpos4|*|0                           –
                  length4  |*|0                           –
                  acctfld5 |*|0                           –
                  startpos5|*|0                           –
                  length5  |*|0                           –
                  acctfld6 |*|0                           –
                  startpos6|*|0                           –
                  length6  |*|0                           –
                  acctfld7 |*|0                           –
                  startpos7|*|0                           –
                  length7  |*|0                           –
                  acctfld8 |*|0                           –
                  startpos8|*|0                           –
                  length8  |*|0)}                         –
            {NOCATALOGACCT1|CATALOGACCT1(                  –
                  acctfld1 |*|0                           –
                  startpos1|*|0                           –
                  length1  |*|0                           –
                  acctfld2 |*|0                           –
                  startpos2|*|0                           –
                  length2  |*|0                           –
                  acctfld3 |*|0                           –
                  startpos3|*|0                           –
                  length3  |*|0                           –
                  acctfld4 |*|0                           –
                  startpos4|*|0                           –
                  length4  |*|0                           –
                  acctfld5 |*|0                           –
                  startpos5|*|0                           –
                  length5  |*|0                           –
                  acctfld6 |*|0                           –
                  startpos6|*|0                           –
                  length6  |*|0                           –
                  acctfld7 |*|0                           –
                  startpos7|*|0                           –
                  length7  |*|0                           –
                  acctfld8 |*|0                           –
                  startpos8|*|0                           –
                  length8  |*|0                           –
                  {NOJOBClass|                            –
                     JOBClass(                            –
                     INClude(jobclass{:jobclass} ...)|    –
                     EXClude(jobclass{:jobclass} ...)  )}–
                  {NOJOBName|                             –
                     JOBName(                             –
                     INClude(name ...)|                   –
                     EXClude(name ...) ) }                –
                  {NOUSERID                               –
                     USERID(                              –
                     INCLUDE(NAME ...)  |                 –
                     EXCLUDE(NAME ...)  ) }               –
                  {NOGROUPNM                              –
                     GROUPNM(                             –
                     INCLUDE(NAME ...)  |                 –
                     EXCLUDE(NAME ...)  ) }               –
                        )}                                –
                     ... ... ...                          –
            {NOCATALOGACCT16|CATALOGACCT16(               –
```

```
                  acctfld1 |*|0                              –
                  startpos1|*|0                              –
                  length1  |*|0                              –
                  acctfld2 |*|0                              –
                  startpos2|*|0                              –
                  length2  |*|0                              –
                  acctfld3 |*|0                              –
                  startpos3|*|0                              –
                  length3  |*|0                              –
                  acctfld4 |*|0                              –
                  startpos4|*|0                              –
                  length4  |*|0                              –
                  acctfld5 |*|0                              –
                  startpos5|*|0                              –
                  length5  |*|0                              –
                  acctfld6 |*|0                              –
                  startpos6|*|0                              –
                  length6  |*|0                              –
                  acctfld7 |*|0                              –
                  startpos7|*|0                              –
                  length7  |*|0                              –
                  acctfld8 |*|0                              –
                  startpos8|*|0                              –
                  length8  |*|0                              –
                  {NOJOBClass|                               –
                     JOBClass(                               –
                     INClude(jobclass{:jobclass} ...)|       –
                     EXClude(jobclass{:jobclass} ...)  )}–
                  {NOJOBName|                                –
                     JOBName(                                –
                     INClude(name ...)|                      –
                     EXClude(name ...) ) }                   –
                  {NOUSERID                                  –
                     USERID(                                 –
                     INCLUDE(NAME ...)   |                   –
                     EXCLUDE(NAME ...)   ) }                 –
                  {NOGROUPNM                                 –
                     GROUPNM(                                –
                     INCLUDE(NAME ...)   |                   –
                     EXCLUDE(NAME ...)   ) }                 –
                          )} ) }
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any SMF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for SMF exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IEFU83 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IEFU83 modules.

> **library.dsn**
>> Specifies the name of a private **authorized** library used to locate and load the

SMF IEFU83 user exit. The library name should be enclosed in single quotes (').

Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IEFU83   Specifies that the IEFU83 exit point is to be activated.

NOIEFU83   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IEFU83 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

        num1, num2, num3

            Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

            If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IEFU83 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IEFU83 user exits be activated. This can be specified at initialization, or later to load and activate IEFU83 user exits that were not activated at initialization. The exits will be called in the order listed.

        exit1

        exit2

        exit3

            The module name of the user exit that is assigned to the specified IEFU83 exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IEFU83 user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IEFU83 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
> The module name of the backup user exit that is assigned to the specified SMF exit point.

*
> An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup SMF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
> A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
> Specifies that when a IEFU83 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IEFU83 exit module has ABENDed.

NOABENDNOTIFY
> The NO option can be used to nullify the option to notify a TSO user of IEFU83 exit module ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.
>
> **(id1a,id1b,id1c)**
> > The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.
>
> **(id2a,id2b,id2c)**
> > The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.
>
> **(id3a,id3b,id3c)**
> > The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.
> >
> > **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.
>
> *****
> > An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0**
> > A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT
Specifies that Job name limits are requested, to limit user exit modules for IEFU83 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT
The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
> The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use

the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

* An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by IEFU83 user exit modules. A good return code allows subsequent IEFU83 user exit modules to be called. OS/EM provides a default list. For example, if a SMF user exit for IEFU83 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
NODISABLERC turns off disable return code checking for the exit point.

rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

rc Default return codes values are any numeric value

IEFU83 Options

OPTIONS Specifies that an optional OS/EM control function is to be enabled for IEFU83

NOOPTIONS The NOOPTIONS parameter will totally disable the optional OS/EM control function for IEFU83.

Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

ABENDNOTIFY
Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent

to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3

The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

FIRST

LAST   Specifies whether the optional OS/EM JCL Standards functions for IEFU83 will be applied before or after the user exits are invoked.

Note: OS/EM control functions are invoked FIRST by default.

ERRACCT   This option allows you to specify a fill character to be used whenever a selected account code field is either missing, or has a length shorter than that specified. The character is propagated into the catalog for the length specified, or 32, whichever is shorter.

x   Fill character

NOERRACCT   Specifying **NO** clears any previously entered error code.

ARCSTC   Specify the name of the started task(s) which handles recalling or recovering datasets which have been migrated or backed up. Two names may be specified. If you are running IBM's DFSMSHSM this name might be HSM. This is a **required** keyword so that OS/EM does not try to add accounting information to datasets being recalled from migration or recovered from a backup, as the accounting information available would be for the archive manager, not the creating job or user.

name
The actual name of the started task.

DEFOWNER   Allows you to specify an owner ID to be used in the event that OS/EM is unable to locate a valid value in the ACEE.

owner   Owner ID value to be used. May be up to 8 characters in length.

NODEFOWNER

Clears any previously entered owner ID. Nothing will be entered in the catalog in the event OS/EM is unable to locate the value in the ACEE.

WEIGHT   Allows you to control which selection list is used in the event that multiple lists match. The list with the highest weight will be used. In the event multiple lists have equal weights, or no weights have been assigned, the first matching list is used.

USERID(n) A 1 digit number to be added to the total weight of any list that contains a matching User ID value.

JOBCLASS(n) A 1 digit number to be added to the total weight of any list that contains a matching jobclass value.

JOBNAME(n) A 1 digit number to be added to the total weight of any list that contains a matching jobname value.

GROUPNM(n) A 1 digit number to be added to the total weight of any list that contains a matching RACF Group Name value.

NOWEIGHT Specifying NOWEIGHT negates any previously entered weights. The first matching selection list will be used.

CATALOGACCT

Allows you to specify up to 8 account code fields which will be used to build the 32 byte account number field in the catalog. These values will only apply if there are no matching selection lists.

Note: To use this option, please verify that record type 61 is enabled in the SMFPRMxx member.

If a catalog account field is already present, e.g., it was specified on the IDCAMS DEFINE statement, it will not be replaced by this option.

If both JOB and STEP accounting information are present, STEP accounting takes precedence.

acctfld1-8 Enter the number of the accounting field to be used.

* An astrick (*) can be used as a placeholder to indicate that a prior value for the acctfld1 is not to be changed.

0 A zero may be specified to indicate that the first non-blank accounting field is to be used.

startpos1-8 Specify the position within the selected accounting field to start moving data.

* An asterisk (*) can be used as a placeholder to indicate that a prior value for this position is not to be changed.

0 A zero may be specified, but will be treated as the value 1.

length1-8 Specify the length of data to move. Specify a value from 1 to 32. If the accounting field selected does not contain data for the length specified the ERRACCT character (if specified) or nulls (if ERRACCT not specified) will be propagated to the specified length.

* An asterisk (*) can be used as a placeholder to indicate that a prior value for this position is not to be changed.

0 A zero will negate this group. Nothing will be moved.

NOCATALOGACCT

Specifying **NO** disables the default selections. If no matching selection list if found, a catalog entry is not created.

CATALOGACCT1-16

Up to 16 selection lists may be specified. Each list will have its own set of 8 possible accounting fields to be processed and in addition will have either Include or Exclude lists of job classes, job names, user IDs or RACF group names which must match the currently running job to be processed.

acctfld1-8 Enter the number of the accounting field to be used.

* An astrick (*) can be used as a placeholder to indicate that a prior value for the acctfld1 is not to be changed.

0   A zero may be specified to indicate that the first non-blank accounting field is to be used.

startpos1-8 Specify the position within the selected accounting field to start moving data.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position is not to be changed.

0   A zero may be specified, but will be treated as the value 1.

length1-8 Specify the length of data to move. Specify a value from 1 to 32. If the accounting field selected does not contain data for the length specified the ERRACCT character (if specified) or nulls (if ERRACCT not specified) will be propagated to the specified length.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position is not to be changed.

0   A zero will negate this group. Nothing will be moved.

JOBCLASS Specifies which jobclassees that will be affected by this selection list. Either an include list or an exclude list may be specified.

NOJOBCLASS If NOJOBCLASS is specified, jobclasses are not considered by this selection group.

> **INC**

> **EXC** Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection criteria. An exclude list states that all items not in the list will be used.

>> **jobclass**
>> A list of execution Job classes to which the control definition is applied, TSU, TSO, and/or STC are valid entries. A colon (:) may be used to specify an inclusive range of classes. For example, A:Z may be entered to specify classes A through Z.

JOBNAME Specifies which jobs will be considered by this selection group. Either an include list or an exclude list of jobnames may be specified.i Jobnames may be specified as a jobname mask.

NOJOBNAME Specifying NOJOBNAME means that jobnames are not used by this selection group.

> **INC**

> **EXC**
> Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection criteria. An exclude list states that all items not in the list will be used.

>> **jobname**
>> A list of job names or job name masks to which the control definition is applied.

USERID Specifies which user IDs will be considered for catalog account controls by this selection group. Either an include list or an exclude list may be specified.

NOUSERID Specifying NOUSERID means that user IDs are not used by this selection group.

INC

EXC
Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection criteria. An exclude list states that all items not in the list will be used.

userid
A list of user IDs or user ID masks to which the control definition is applied.

GROUPNM Specifies which RACF group names will be considered for catalog account controls by this selection group. Either an include list or an exclude list may be specified.

NOGROUPNM Specifying NOGROUPNM means that RACF group names are not used by this selection group.

INC

EXC
Specify whether the attached list is to be included or excluded. An include list states that the items in the list will be used as the selection criteria. An exclude list states that all items not in the list will be used.

groupnm
A list of RACF group names or group name masks to which the control definition is applied.

Restrictions/Requirements

1. The SMFPRMxx member of SYS1.PARMLIB must be updated to ensure that SMF record type 61 is enabled. Also, SMF exits IEFUJI, IEFUSI, IEFU83 and IEFACTRT must be enabled.

2. Only VSAM and SMS-managed non-VSAM datasets will have their OWNER and ACCOUNT fields altered in the catalog and only if those fields are NULL. For VSAM files only the data catalog entries has the OWNER field altered and the ACCOUNT field is altered on the data entry.

3. If both JOB and STEP accounting fields are present, the STEP accounting fields takes precedence.

4. If the catalog account field function is turned on after TSO logon, you'll need to logoff/logon (drive IEFUJI exit) in order to get accounting information placed into datasets created under TSO.

Examples

The following examples use these CATALOGACCT controls:

```
OS$CNTL SMF IEFU83(OPTIONS(ERRACCT(*) CATALOGACCT( 1 1 8 -
                                                    2 1 8 -
                                                    3 1 8 -
                                                    4 1 8 ) -
                                    CATALOGACCT1( 1 5 4 -
                                                    2 5 4 -
                                                    3 5 4 -
                                                    4 5 4 -
                                      JOBNAME(INC(SPXX-)) -
                                                    ) )
```

1. Example 1

A job with the following JOB card and no ACCT= parameter on the EXEC statement creates a dataset.

```
//SPYYY JOB (ACCTFLD1,,ACCTFLD3),...
```

Since the JOB name does not match the criterion for selection group 1 and there is no STEP accounting field, the catalog account field would be build from the Default selection group as follows:

- Subfield 1 would cause 8 bytes starting in position 1 of accounting field 1 to be moved, i.e. ACCTFLD1

- Subfield 2 would cause 8 bytes of the error code (*) to be appended since there is no accounting field 2 on the JOB statement, i.e. ACCTFLD1********

- Subfield 3 would cause 8 bytes starting in position 1 of accounting field 3 to be appended, i.e. ACCTFLD1********ACCTFLD3

- Subfield 4 would cause 8 bytes of the error code (*) to be appended since there is no accounting field 4 on the JOB statement.

This would cause the 32-byte value

```
ACCTFLD1********ACCTFLD3********
```

to be placed in the catalog account field.

2. Example 2

Same as above but add the following account field parameter to the EXEC statement:

```
ACCT=(,ACCTFLD2,,ACCTFLD4)
```

The default selection group would apply again since there still is no JOB name match but since there is STEP accounting information it will provide the value for the catalog account field.

Since there are no accounting fields 1 or 3 the value obtained by processing the subfields would be:

```
********ACCTFLD2********ACCTFLD4
```

3. Example 3

Remove the STEP accounting parameter and change the JOB name to SPXX123.

Now there is a match on JOB name with the criterion for selection group 1 (CATALOGACCT1 above).

- Subfield 1 would cause 4 bytes starting in position 5 of accounting field 1 to be moved, i.e. FLD1

- Subfield 2 would cause 4 bytes of the error code (*) to be appended since there is no accounting field 2 on the JOB statement, i.e. FLD1****

- Subfield 3 would cause 4 bytes starting in position 5 of accounting field 3 to be appended, i.e. FLD1****FLD3

- Subfield 4 would cause 4 bytes of the error code (*) to be appended since there is no accounting field 4 on the JOB statement.

This would cause the following to be placed in the catalog account field:

```
FLD1****FLD3****
```

IEFU84

The SMF record exit (IEFU84) receives control when the SMF writer routine is branch-entered and is not entered in cross-memory mode. A return code from this exit indicates whether the system is to suppress the current SMF record.

OS/EM supplies only basic exit control functions for this exit.

```
OS$CNTL SMF                                                           -
 {NOABendnotify|ABendnotify(                                          -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                    -
 {LIBrary(library.dsn)}                                              -
 {NOIEFU84|IEFU84(                                                   -
      {ENable|DISABLE}                                               -
      {NUmber( num1 num2 num3 )}                                     -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}           -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}         -
      {NOABendnotify|ABendnotify(                                    -
         (0|*|id1a {0|*|id2a {0|*|id3a }})                           -
         (0|*|id1b {0|*|id2b {0|*|id3b }})                           -
         (0|*|id1c {0|*|id2c {0|*|id3c }}) })                        -
      {NOLIMit|LIMit(                                                -
        (jobmask1,...)|*|0                                           -
       {(jobmask2,...)|*|0                                           -
       {(jobmask3,...)|*|0}})}                                       -
      {NOVAlidrc|VAlidrc(rc,...)}                                    -
      {NOGoodrc|Goodrc(rc,...)}                                      -
      {NODIsablerc|DISABLERc(rc)}                                    -
      {DEFaultrc(rc)}                                                -
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any SMF exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for SMF exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IEFU84 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IEFU84 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the SMF IEFU84 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IEFU84   Specifies that the IEFU84 exit point is to be activated.

NOIEFU84   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IEFU84 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

               num1, num2, num3
                              Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                              If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IEFU84 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IEFU84 user exits be activated. This can be specified at initialization, or later to load and activate IEFU84 user exits that were not activated at initialization. The exits will be called in the order listed.

               exit1

               exit2

               exit3
                              The module name of the user exit that is assigned to the specified IEFU84 exit point.

      *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

      0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IEFU84 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IEFU84 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

               exit1

               exit2

               exit3
                              The module name of the backup user exit that is assigned to the specified SMF exit point.

      *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup SMF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
>
> Specifies that when a IEFU84 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IEFU84 exit module has ABENDed.

NOABENDNOTIFY
>
> The NO option can be used to nullify the option to notify a TSO user of IEFU84 exit module ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.
>
> **(id1a,id1b,id1c)**
>> The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.
>
> **(id2a,id2b,id2c)**
>> The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.
>
> **(id3a,id3b,id3c)**
>> The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.
>>
>> **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0**   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IEFU84 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

> **jobmask1**
>
> **jobmask2**
>
> **jobmask3**
>> The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0**   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

    rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by IEFU84 user exit modules. A good return code allows subsequent IEFU84 user exit modules to be called. OS/EM provides a default list. For example, if a SMF user exit for IEFU84 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

    rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
    NODISABLERC turns off disable return code checking for the exit point.

    rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc Default return codes values are any numeric value

IEFU85

The SMF record exit (IEFU85) receives control when the SMF writer routine is branch-entered and is entered in cross-memory mode. A return code from this exit indicates whether the system is to suppress the current SMF record.

OS/EM supplies only basic exit control functions for this exit.

```
OS$CNTL SMF                                                        -
  {NOABendnotify|ABendnotify(                                      -
     0|*|id1 {0|*|id2 {0|*|id3 }})}                                -
  {LIBrary(library.dsn)}                                           -
  {NOIEFU85|IEFU85(                                           -
        {ENable|DISABLE}                                          -
        {NUmber( num1 num2 num3 )}                                -
        {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}      -
        {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}  -
        {NOABendnotify|ABendnotify(                               -
           (0|*|id1a {0|*|id2a {0|*|id3a }})                      -
           (0|*|id1b {0|*|id2b {0|*|id3b }})                      -
           (0|*|id1c {0|*|id2c {0|*|id3c }}) })                   -
        {NOLIMit|LIMit(                                           -
          (jobmask1,...)|*|0                                      -
         {(jobmask2,...)|*|0                                      -
         {(jobmask3,...)|*|0}})}                                  -
        {NOVAlidrc|VAlidrc(rc,...)}                               -
        {NOGoodrc|Goodrc(rc,...)}                                 -
        {NODIsablerc|DISABLERc(rc)}                               -
        {DEFaultrc(rc)}                                           -
```

ABENDNOTIFY

Specifies that a TSO message will be sent if any SMF exit ABENDs.

NOABENDNOTIFY

Specifies that no messages will be sent for SMF exit ABENDs.

id1, id2, id3   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IEFU85 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IEFU85 modules.

library.dsn

Specifies the name of a private **authorized** library used to locate and load the SMF IEFU85 user exit. The library name should be enclosed in single quotes (').

Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IEFU85   Specifies that the IEFU85 exit point is to be activated.

NOIEFU85   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IEFU85 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

      num1, num2, num3

            Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

            If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IEFU85 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IEFU85 user exits be activated. This can be specified at initialization, or later to load and activate IEFU85 user exits that were not activated at initialization. The exits will be called in the order listed.

      exit1

      exit2

      exit3
            The module name of the user exit that is assigned to the specified IEFU85 exit point.

      *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

      0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IEFU85 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IEFU85 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

      exit1

      exit2

      exit3
            The module name of the backup user exit that is assigned to the specified SMF exit point.

      *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup SMF user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IEFU85 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IEFU85 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IEFU85 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IEFU85 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

    rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IEFU85 user exit modules. A good return code allows subsequent IEFU85 user exit modules to be called. OS/EM provides a default list. For example, if a SMF user exit for IEFU85 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

    rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
    NODISABLERC turns off disable return code checking for the exit point.

    rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc   Default return codes values are any numeric value

SMF Exit Activation

The following example assumes that SMF exits IEFUJV, IEFACTRT, and IEFU29 are to be activated at OS/EM initialization. Further, user exits are supplied for IEFUJV and IEFACTRT, and an exit to dump the SMF datasets is supplied for IEFU29:

```
OS$CNTL SMF  –
   IEFUJV(EXITS(UJVEXT1)) –
   IEFACTRT(EXITS(USREXIT1 USREXIT2)) –
   IEFU29(EXITS(DUMPEXT))
```

Disabling of a SMF exit

The following example illustrates the issuance of OS$CNTL from TSO to disable SMF exit IEFUJV.

```
OS$CNTL SMF NOIEFUJV
```

Replacing one SMF exit with another

Assume that at initialization IEFUTL was activated with user exits USREXIT1, USREXIT2, and USREXIT3:

```
OS$CNTL SMF IEFUTL(EXITS(USREXIT1 USREXIT2 USREXIT3))
```

and now USREXIT4 is to replace USREXIT2. Each of the following commands would accomplish this:

```
OS$CNTL SMF IEFUTL(EXITS(USREXIT1 USREXIT4 USREXIT3))

OS$CNTL SMF IEFUTL(EXITS(* USREXIT4 *)

OS$CNTL SMF IEFUTL(EXITS(* USREXIT4))
```

The last example shows the final asterisk as omitted since the asterisk would be assumed by default. The first asterisk cannot be omitted so that proper positioning can be maintained.

SMF Command   SMF-91

SVC Command

This subcommand allows SVCs to be either deleted so they can not be executed or, optionally, replaced with a user-written program.

Syntax Notation

```
OS$CNTL SVC nnn                 -
    {DELETE|REPLACE(pgmname)}   -
    {TYPE(n)}                   -
    {LOCKS({CMS} {LOCAL})}      -
    {APF}                       -
    {AR}                        -
    {NONPREEMPT}                -
    {CLEARCVTUSER}              -
    {LIBRARY(load.lib.name)}
```

nnn　　　　　This is the number of the SVC which is to be deleted or replaced.

DELETE　　　Specifying DELETE removes the SVC from the system. If DELETE is specified, no other control words should be specified.

REPLACE　　Specifying REPLACE will cause the named program to be loaded and replace the selected SVC.

> **pgmname**
> The name of the program to be loaded as the SVC replacement. If LIBRARY is not additionally specified, the standard search routines are used to locate the load module.

TYPE(n)　　　Specify the type of SVC you are replacing. Valid types are 1 through 6.

LOCKS

> **CMS**

> **LOCAL**
> Specify the type of lock your program needs. If the SVC type is '1' the LOCAL lock is not allowed. If the type is '6', neither type of lock is allowed. If the type is '2, 3 or 4', you MUST specify LOCAL if CMS is specified.

APF　　　　　If only APF authorized programs should be allowed to execute this SVC, specify APF.

AR　　　　　Specify AR if the SVC replacement should be accessed in Access Register mode.

NONPREEMPT

> Specify NONPREEMPT to keep the system from preempting your program to handle I/O.

CLEARCVTUSER
>> Specify CLEARCVTUSER to have the User CVT field cleared before the new SVC is loaded.

LIBRARY

>> **load.lib.name**
>>> Enter the name of the library where the SVC replacement program resides. If not entered, the standard search routines are used to locate the load module. The library name should be enclosed in single quotes (').

SYSTEM Command

ACF2CAN

This subcommand allows OS/EM to temporarily override the ACF2 non-cancel user attribute. This allows you to enforce OS/EM's controls such as JOBCLASSCHECK and account number checking or any of the JCL Standards controls.

```
OS$CNTL SYSTEM NOACF2CAN|ACF2CAN
```

ACF2CAN   Specifies that the ACF2 non-cancel user attribute will be overridden.

NOACF2CAN   Specifies that OS/EM will not attempt to override the ACF2 non-cancel user attribute. Any user with this attribute will be able to bypass OS/EM controls.

EXPIRE

By default, OS/EM will display the message **OS$DCN031 *WARNING* OS/EM WILL EXPIRE IN xx DAYS** every hour beginning 30 days before the current authorization code expires.

To disable this message you may use the EXPIRE subcommand.

```
OS$CNTL SYSTEM                                              -
        {EXpire ( WARN|NOWARN )}
```

EXPIRE Used to control the display of message OS$DCN031.

       WARN   Will produce message OS$DCN031 every hour for 30 days prior to authorization code expiration.

       NOWARN Disables display of the warning message.

NFYGROUPS

You may create up to 32 notification groups. Each group name may be used in place of a TSO ID for any of the ABENDNOTIFY keywords.

```
OS$CNTL SYSTEM                                                      -
        {NFygroups (                                               -
            grpnme1 (id1 {id2 {id3 {id4 {id5 {id6 {id7 {id8}}}}}}}) -
            ...
            grpnme32(id1 {id2 {id3 {id4 {id5 {id6 {id7 {id8}}}}}}}) -
                )}
```

NFYGROUPS   Specifies that notification groups are being used.

grpnme1

grpnme32
You may specify up to 32 different notification groups. The names of the groups are limited to 7 characters and must begin with a letter.

id1 id2 id3 id4 id5 id6 id7 id8
Each group may contain up to 8 individual TSO IDs.

SYSNOTIFY

You may have OS/EM send ABEND notify messages to 3 TSO IDs or Notify Group names when ever **any** OS/EM exit ABENDs.

```
OS$CNTL SYSTEM                                                        -
        {NOSYSnotify|SYSnotify (                                      -
          id1 {id2 {id3}} ) }
```

SYSNOTIFY   Specifies that certain TSO IDs or notify groups will be sent a TSO message in the event that an OS/EM exit ABENDs.

NOSYSNOTIFY
No TSO messages will be sent in the event of an OS/EM exit ABEND unless specified at the exit level.

id1

id2

id3   You may specify up to three TSO IDs or notify groups.

USERNOTIFY

You may have OS/EM send ABEND notify messages to 3 TSO IDs or Notify Group names when ever **any**user exit ABENDs.

```
OS$CNTL SYSTEM                                                        -
        {NOUSernotify|USernotify (                                    -
          id1 {id2 {id3}} ) }
```

USERNOTIFY   Specifies that certain TSO IDs or notify groups will be sent a TSO message in the event that a user exit ABENDs.

NOUSERNOTIFY
No TSO messages will be sent in the event of a user exit ABEND unless specified at the exit level.

id1

id2

id3   You may specify up to three TSO IDs or notify groups.

PERFSTATS

You may have OS/EM collect and report performance statistics. Because of the added overhead caused by collection it is suggested that this option not be used except for a limited period of time.

```
OS$CNTL SYSTEM                                                     –
        {NOPERFSTATS│PERFSTATS}
```

PERFSTATS   OS/EM will collect performance statistics. The information collected includes the number of times an exit point is entered, the amount of time spent in OS/EM controllers and interface modules, the number of times an exit was called and the amount of time spent in the exit.

NOPERFSTATS Performance counts and timings will not be collected or reported. When this option is processed all counts and timings are returned to zero.

TSO Command

This subcommand sets whether TSO exits will be active, and sets LIMIT checking for the corresponding exit modules.

OS/EM provides the following optional functions:

- Reformat job statement accounting information

- Verify user is authorized to specified job classes

- Verify user is defined to RACF

- Verify user may submit jobs with operating system commands

- Verify user may submit jobs with JES2 commands

- Verify job name matches USERID

- Insert missing NOTIFY parameter

- Have TSO insert RACF password into the TSB, required if using options to add TSO passwords to the job card

- Have TSO deliver broadcast messages during logon

ICQAMFX1

Exit ICQAMFX1 is the Application Manager function pre-initialization exit.

OS/EM supplies only basic exit control functions for ICQAMFX1.

```
OS$CNTL TSO                                                        -
 {NOABendnotify|ABendnotify(                                       -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                 -
 {LIBrary(library.dsn)}                                            -
 {NOICQAMFX1|ICQAMFX1(                                        -
       {ENable|DISABLE}                                           -
       {NUmber( num1 num2 num3 )}                                 -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}    -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
       {NOABendnotify|ABendnotify(                               -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                      -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                      -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                   -
       {NOLIMit|LIMit(                                           -
         (jobmask1,...)|*|0                                      -
        {(jobmask2,...)|*|0                                      -
        {(jobmask3,...)|*|0}})}                                  -
       {NOVAlidrc|VAlidrc(rc,...)}                               -
       {NOGoodrc|Goodrc(rc,...)}                                 -
       {NODIsablerc|DISABLERc(rc)}                               -
       {DEFaultrc(rc)}                                           -
                                               )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a ICQAMFX1 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ICQAMFX1 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO ICQAMFX1 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ICQAMFX1 Specifies that the ICQAMFX1 exit point is to be activated.

NOICQAMFX1 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named ICQAMFX1 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3
Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ICQAMFX1 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ICQAMFX1 user exits be activated. This can be specified at initialization, or later to load and activate ICQAMFX1 user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3
The module name of the user exit that is assigned to the specified ICQAMFX1 exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ICQAMFX1 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ICQAMFX1 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
The module name of the backup user exit that is assigned to the specified TSO exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a ICQAMFX1 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ICQAMFX1 exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of ICQAMFX1 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for ICQAMFX1 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

     rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by ICQAMFX1 user exit modules. A good return code allows subsequent ICQAMFX1 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for ICQAMFX1 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

     rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

     NODISABLERC turns off disable return code checking for the exit point.

     rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

     rc   Default return codes values are any numeric value

ICQAMFX2

Exit ICQAMFX2 is the Application Manager function post-termination exit.

OS/EM supplies only basic exit control functions for ICQAMFX2.

```
        OS$CNTL TSO                                                        -
         {NOABendnotify|ABendnotify(                                       -
            0|*|id1 {0|*|id2 {0|*|id3 }})}                                 -
         {LIBrary(library.dsn)}                                            -
         {NOICQAMFX2|ICQAMFX2(                                         -
               {ENable|DISABLE}                                            -
               {NUmber( num1 num2 num3 )}                                  -
               {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}    -
               {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
               {NOABendnotify|ABendnotify(                                 -
                  (0|*|id1a {0|*|id2a {0|*|id3a }})                        -
                  (0|*|id1b {0|*|id2b {0|*|id3b }})                        -
                  (0|*|id1c {0|*|id2c {0|*|id3c }}) })                     -
               {NOLIMit|LIMit(                                             -
                 (jobmask1,...)|*|0                                        -
                {(jobmask2,...)|*|0                                        -
                {(jobmask3,...)|*|0}})}                                    -
               {NOVAlidrc|VAlidrc(rc,...)}                                 -
               {NOGoodrc|Goodrc(rc,...)}                                   -
               {NODIsablerc|DISABLERc(rc)}                                 -
               {DEFaultrc(rc)}                                             -
                                                             )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ICQAMFX2 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ICQAMFX2 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO ICQAMFX2 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ICQAMFX2   Specifies that the ICQAMFX2 exit point is to be activated.

NOICQAMFX2 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ICQAMFX2 exit point is be passed control for exit module execution.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

    num1, num2, num3
        Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

        If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS Specifies that any active ICQAMFX2 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of ICQAMFX2 user exits be activated. This can be specified at initialization, or later to load and activate ICQAMFX2 user exits that were not activated at initialization. The exits will be called in the order listed.

    exit1

    exit2

    exit3
        The module name of the user exit that is assigned to the specified ICQAMFX2 exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP Specifies that all active backup ICQAMFX2 user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup ICQAMFX2 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

    exit1

    exit2

    exit3
        The module name of the backup user exit that is assigned to the specified TSO exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0　　　　A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a ICQAMFX2 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ICQAMFX2 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of ICQAMFX2 exit module ABENDS.

Note:　See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note:　See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*　　　　An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0　　　　A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT　　　Specifies that Job name limits are requested, to limit user exit modules for ICQAMFX2 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT　　The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*　　　　An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0　　　　A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC　　Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by ICQAMFX2 user exit modules. A good return code allows subsequent ICQAMFX2 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for ICQAMFX2 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

      NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

ICQAMPX1

Exit ICQAMPX1 is the Application Manager Panel pre-display exit.

OS/EM supplies only basic exit control functions for ICQAMPX1.

```
        OS$CNTL TSO                                                      -
         {NOABendnotify|ABendnotify(                                    -
            0|*|id1 {0|*|id2 {0|*|id3 }})}                              -
         {LIBrary(library.dsn)}                                         -
         {NOICQAMPX1|ICQAMPX1(                                       -
              {ENable|DISABLE}                                         -
              {NUmber( num1 num2 num3 )}                               -
              {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}    -
              {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
              {NOABendnotify|ABendnotify(                              -
                 (0|*|id1a {0|*|id2a {0|*|id3a }})                     -
                 (0|*|id1b {0|*|id2b {0|*|id3b }})                     -
                 (0|*|id1c {0|*|id2c {0|*|id3c }}) })                  -
              {NOLIMit|LIMit(                                          -
                (jobmask1,...)|*|0                                     -
               {(jobmask2,...)|*|0                                     -
               {(jobmask3,...)|*|0}})}                                 -
              {NOVAlidrc|VAlidrc(rc,...)}                              -
              {NOGoodrc|Goodrc(rc,...)}                                -
              {NODIsablerc|DISABLERc(rc)}                              -
              {DEFaultrc(rc)}                                          -
                                                           )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ICQAMPX1 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ICQAMPX1 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO ICQAMPX1 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ICQAMPX1   Specifies that the ICQAMPX1 exit point is to be activated.

NOICQAMPX1 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ICQAMPX1 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

      num1, num2, num3

              Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

              If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ICQAMPX1 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ICQAMPX1 user exits be activated. This can be specified at initialization, or later to load and activate ICQAMPX1 user exits that were not activated at initialization. The exits will be called in the order listed.

      exit1

      exit2

      exit3

              The module name of the user exit that is assigned to the specified ICQAMPX1 exit point.

      *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

      0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ICQAMPX1 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ICQAMPX1 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

      exit1

      exit2

      exit3

              The module name of the backup user exit that is assigned to the specified TSO exit point.

      *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a ICQAMPX1 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ICQAMPX1 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of ICQAMPX1 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for ICQAMPX1 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by ICQAMPX1 user exit modules. A good return code allows subsequent ICQAMPX1 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for ICQAMPX1 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
      NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

ICQAMPX2

Exit ICQAMPX2 is the Application Manager Panel post-display routine.

OS/EM supplies only basic exit control functions for ICQAMPX2.

```
OS$CNTL TSO                                                        -
  {NOABendnotify|ABendnotify(                                      -
     0|*|id1 {0|*|id2 {0|*|id3 }})}                                -
  {LIBrary(library.dsn)}                                           -
  {NOICQAMPX2|ICQAMPX2(                                         -
       {ENable|DISABLE}                                            -
       {NUmber( num1 num2 num3 )}                                  -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}     -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
       {NOABendnotify|ABendnotify(                                 -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                        -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                        -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                     -
       {NOLIMit|LIMit(                                             -
         (jobmask1,...)|*|0                                        -
        {(jobmask2,...)|*|0                                        -
        {(jobmask3,...)|*|0}})}                                    -
       {NOVAlidrc|VAlidrc(rc,...)}                                 -
       {NOGoodrc|Goodrc(rc,...)}                                   -
       {NODIsablerc|DISABLERc(rc)}                                 -
       {DEFaultrc(rc)}                                             -
                                                       )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a ICQAMPX2 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for ICQAMPX2 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO ICQAMPX2 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ICQAMPX2   Specifies that the ICQAMPX2 exit point is to be activated.

NOICQAMPX2 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named ICQAMPX2 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3
Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active ICQAMPX2 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of ICQAMPX2 user exits be activated. This can be specified at initialization, or later to load and activate ICQAMPX2 user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3
The module name of the user exit that is assigned to the specified ICQAMPX2 exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup ICQAMPX2 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup ICQAMPX2 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
The module name of the backup user exit that is assigned to the specified TSO exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a ICQAMPX2 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a ICQAMPX2 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of ICQAMPX2 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for ICQAMPX2 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

    rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by ICQAMPX2 user exit modules. A good return code allows subsequent ICQAMPX2 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for ICQAMPX2 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

    rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
    NODISABLERC turns off disable return code checking for the exit point.

    rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc   Default return codes values are any numeric value

IEEVSNX0

Exit IEEVSNX0 is the Operator SEND subcommand initialization routine.

OS/EM supplies only basic exit control functions for IEEVSNX0.

```
        OS$CNTL TSO                                                     -
         {NOABendnotify|ABendnotify(                                    -
            0|*|id1 {0|*|id2 {0|*|id3 }})}                              -
         {LIBrary(library.dsn)}                                         -
         {NOIEEVSNX0|IEEVSNX0(                                          -
               {ENable|DISABLE}                                         -
               {NUmber( num1 num2 num3 )}                               -
               {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}     -
               {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
               {NOABendnotify|ABendnotify(                              -
                  (0|*|id1a {0|*|id2a {0|*|id3a }})                     -
                  (0|*|id1b {0|*|id2b {0|*|id3b }})                     -
                  (0|*|id1c {0|*|id2c {0|*|id3c }}) })                  -
               {NOLIMit|LIMit(                                          -
                 (jobmask1,...)|*|0                                     -
                {(jobmask2,...)|*|0                                     -
                {(jobmask3,...)|*|0}})}                                 -
               {NOVAlidrc|VAlidrc(rc,...)}                              -
               {NOGoodrc|Goodrc(rc,...)}                                -
               {NODIsablerc|DISABLERc(rc)}                              -
               {DEFaultrc(rc)}                                          -
                                                    )}
```

ABENDNOTIFY

        Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY

        Specifies that no messages will be sent for TSO exit ABENDs.

        id1, id2, id3   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IEEVSNX0 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IEEVSNX0 modules.

        library.dsn

        Specifies the name of a private **authorized** library used to locate and load the TSO IEEVSNX0 user exit. The library name should be enclosed in single quotes (').

        Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IEEVSNX0   Specifies that the IEEVSNX0 exit point is to be activated.

NOIEEVSNX0   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IEEVSNX0 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IEEVSNX0 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IEEVSNX0 user exits be activated. This can be specified at initialization, or later to load and activate IEEVSNX0 user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3

The module name of the user exit that is assigned to the specified IEEVSNX0 exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IEEVSNX0 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IEEVSNX0 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3

The module name of the backup user exit that is assigned to the specified TSO exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
   Specifies that when a IEEVSNX0 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IEEVSNX0 exit module has ABENDed.

NOABENDNOTIFY
   The NO option can be used to nullify the option to notify a TSO user of IEEVSNX0 exit module ABENDs.

   Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

   (id1a,id1b,id1c)
     The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

   (id2a,id2b,id2c)
     The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

   (id3a,id3b,id3c)
     The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

     Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

   * An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

   0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IEEVSNX0 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT The NO option can be used to nullify the option for Job name limits.

   jobmask1

   jobmask2

   jobmask3
     The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

   * An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

   0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

    rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IEEVSNX0 user exit modules. A good return code allows subsequent IEEVSNX0 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IEEVSNX0 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

    rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
    NODISABLERC turns off disable return code checking for the exit point.

    rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc   Default return codes values are any numeric value

IEEVSNX1

Exit IEEVSNX1 is the Operator SEND subcommand pre-display routine.

OS/EM supplies only basic exit control functions for IEEVSNX1.

```
        OS$CNTL TSO                                                        -
         {NOABendnotify|ABendnotify(                                       -
            0|*|id1 {0|*|id2 {0|*|id3 }})}                                 -
         {LIBrary(library.dsn)}                                            -
         {NOIEEVSNX1|IEEVSNX1(                                             -
               {ENable|DISABLE}                                           -
               {NUmber( num1 num2 num3 )}                                  -
               {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}     -
               {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}  -
               {NOABendnotify|ABendnotify(                                 -
                  (0|*|id1a {0|*|id2a {0|*|id3a }})                        -
                  (0|*|id1b {0|*|id2b {0|*|id3b }})                        -
                  (0|*|id1c {0|*|id2c {0|*|id3c }}) })                     -
               {NOLIMit|LIMit(                                             -
                 (jobmask1,...)|*|0                                        -
                {(jobmask2,...)|*|0                                        -
                {(jobmask3,...)|*|0}})}                                    -
               {NOVAlidrc|VAlidrc(rc,...)}                                 -
               {NOGoodrc|Goodrc(rc,...)}                                   -
               {NODIsablerc|DISABLERc(rc)}                                 -
               {DEFaultrc(rc)}                                             -
                                                      )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IEEVSNX1 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IEEVSNX1 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IEEVSNX1 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IEEVSNX1   Specifies that the IEEVSNX1 exit point is to be activated.

NOIEEVSNX1   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IEEVSNX1 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

        num1, num2, num3

                Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IEEVSNX1 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of IEEVSNX1 user exits be activated. This can be specified at initialization, or later to load and activate IEEVSNX1 user exits that were not activated at initialization. The exits will be called in the order listed.

        exit1

        exit2

        exit3

                The module name of the user exit that is assigned to the specified IEEVSNX1 exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IEEVSNX1 user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IEEVSNX1 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

        exit1

        exit2

        exit3

                The module name of the backup user exit that is assigned to the specified TSO exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IEEVSNX1 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IEEVSNX1 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IEEVSNX1 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IEEVSNX1 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

    rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IEEVSNX1 user exit modules. A good return code allows subsequent IEEVSNX1 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IEEVSNX1 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

    rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
    NODISABLERC turns off disable return code checking for the exit point.

    rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc   Default return codes values are any numeric value

IEEVSNX2

Exit IEEVSNX2 is the Operator SEND subcommand pre-save routine.

OS/EM supplies only basic exit control functions for IEEVSNX2.

```
OS$CNTL TSO                                                      -
 {NOABendnotify|ABendnotify(                                     -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                               -
 {LIBrary(library.dsn)}                                          -
 {NOIEEVSNX2|IEEVSNX2(                                          -
      {ENable|DISABLE}                                           -
      {NUmber( num1 num2 num3 )}                                 -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}    -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})} -
      {NOABendnotify|ABendnotify(                                -
         (0|*|id1a {0|*|id2a {0|*|id3a }})                       -
         (0|*|id1b {0|*|id2b {0|*|id3b }})                       -
         (0|*|id1c {0|*|id2c {0|*|id3c }}) })                    -
      {NOLIMit|LIMit(                                            -
        (jobmask1,...)|*|0                                       -
       {(jobmask2,...)|*|0                                       -
       {(jobmask3,...)|*|0}})}                                   -
      {NOVAlidrc|VAlidrc(rc,...)}                                -
      {NOGoodrc|Goodrc(rc,...)}                                  -
      {NODIsablerc|DISABLERc(rc)}                                -
      {DEFaultrc(rc)}                                            -
                                                       )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IEEVSNX2 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IEEVSNX2 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IEEVSNX2 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IEEVSNX2   Specifies that the IEEVSNX2 exit point is to be activated.

NOIEEVSNX2   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IEEVSNX2 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IEEVSNX2 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IEEVSNX2 user exits be activated. This can be specified at initialization, or later to load and activate IEEVSNX2 user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3

The module name of the user exit that is assigned to the specified IEEVSNX2 exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IEEVSNX2 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IEEVSNX2 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3

The module name of the backup user exit that is assigned to the specified TSO exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IEEVSNX2 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IEEVSNX2 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IEEVSNX2 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IEEVSNX2 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

> **rc**   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IEEVSNX2 user exit modules. A good return code allows subsequent IEEVSNX2 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IEEVSNX2 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

> **rc**   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
NODISABLERC turns off disable return code checking for the exit point.

> **rc**   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

> **rc**   Default return codes values are any numeric value

IEEVSNX3

Exit IEEVSNX3 is the Operator SEND subcommand failure routine.

OS/EM supplies only basic exit control functions for IEEVSNX3.

```
        OS$CNTL TSO                                                    -
         {NOABendnotify|ABendnotify(                                   -
            0|*|id1 {0|*|id2 {0|*|id3 }})}                             -
         {LIBrary(library.dsn)}                                        -
         {NOIEEVSNX3|IEEVSNX3(                                        -
               {ENable|DISABLE}                                        -
               {NUmber( num1 num2 num3 )}                              -
               {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3})})})}   -
               {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3})})})} -
               {NOABendnotify|ABendnotify(                             -
                  (0|*|id1a {0|*|id2a {0|*|id3a }})                    -
                  (0|*|id1b {0|*|id2b {0|*|id3b }})                    -
                  (0|*|id1c {0|*|id2c {0|*|id3c }}) })                 -
               {NOLIMit|LIMit(                                         -
                 (jobmask1,...)|*|0                                    -
                {(jobmask2,...)|*|0                                    -
                {(jobmask3,...)|*|0}})}                                -
               {NOVAlidrc|VAlidrc(rc,...)}                             -
               {NOGoodrc|Goodrc(rc,...)}                               -
               {NODIsablerc|DISABLERc(rc)}                             -
               {DEFaultrc(rc)}                                         -
                                                        )}
```

ABENDNOTIFY

Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY

Specifies that no messages will be sent for TSO exit ABENDs.

    id1, id2, id3   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IEEVSNX3 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IEEVSNX3 modules.

    library.dsn

Specifies the name of a private **authorized** library used to locate and load the TSO IEEVSNX3 user exit. The library name should be enclosed in single quotes (').

Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IEEVSNX3   Specifies that the IEEVSNX3 exit point is to be activated.

NOIEEVSNX3   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IEEVSNX3 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

        num1, num2, num3

                Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IEEVSNX3 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IEEVSNX3 user exits be activated. This can be specified at initialization, or later to load and activate IEEVSNX3 user exits that were not activated at initialization. The exits will be called in the order listed.

        exit1

        exit2

        exit3
                The module name of the user exit that is assigned to the specified IEEVSNX3 exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IEEVSNX3 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IEEVSNX3 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

        exit1

        exit2

        exit3
                The module name of the backup user exit that is assigned to the specified TSO exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IEEVSNX3 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IEEVSNX3 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IEEVSNX3 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IEEVSNX3 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

    rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by IEEVSNX3 user exit modules. A good return code allows subsequent IEEVSNX3 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IEEVSNX3 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

    rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

    NODISABLERC turns off disable return code checking for the exit point.

    rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc Default return codes values are any numeric value

IEEVSNX4

Exit IEEVSNX4 is the Operator SEND subcommand termination routine.

OS/EM supplies only basic exit control functions for IEEVSNX4.

```
        OS$CNTL TSO                                                 -
         {NOABendnotify|ABendnotify(                                -
            0|*|id1 {0|*|id2 {0|*|id3 }})}                          -
         {LIBrary(library.dsn)}                                     -
         {NOIEEVSNX4|IEEVSNX4(                                      -
              {ENable|DISABLE}                                      -
              {NUmber( num1 num2 num3 )}                            -
              {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}  -
              {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
              {NOABendnotify|ABendnotify(                           -
                 (0|*|id1a {0|*|id2a {0|*|id3a }})                  -
                 (0|*|id1b {0|*|id2b {0|*|id3b }})                  -
                 (0|*|id1c {0|*|id2c {0|*|id3c }}) })               -
              {NOLIMit|LIMit(                                       -
                (jobmask1,...)|*|0                                  -
               {(jobmask2,...)|*|0                                  -
               {(jobmask3,...)|*|0}})}                              -
              {NOVAlidrc|VAlidrc(rc,...)}                           -
              {NOGoodrc|Goodrc(rc,...)}                             -
              {NODIsablerc|DISABLERc(rc)}                           -
              {DEFaultrc(rc)}                                       -
                                                      )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> > **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IEEVSNX4 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IEEVSNX4 modules.

> **library.dsn**
> > Specifies the name of a private **authorized** library used to locate and load the TSO IEEVSNX4 user exit. The library name should be enclosed in single quotes (').

> > **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IEEVSNX4   Specifies that the IEEVSNX4 exit point is to be activated.

NOIEEVSNX4   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IEEVSNX4 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

        num1, num2, num3

                Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IEEVSNX4 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IEEVSNX4 user exits be activated. This can be specified at initialization, or later to load and activate IEEVSNX4 user exits that were not activated at initialization. The exits will be called in the order listed.

        exit1

        exit2

        exit3
                The module name of the user exit that is assigned to the specified IEEVSNX4 exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IEEVSNX4 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IEEVSNX4 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

        exit1

        exit2

        exit3
                The module name of the backup user exit that is assigned to the specified TSO exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a IEEVSNX4 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IEEVSNX4 exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of IEEVSNX4 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IEEVSNX4 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IEEVSNX4 user exit modules. A good return code allows subsequent IEEVSNX4 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IEEVSNX4 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

      NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

IKJADINI

Exit IKJADINI is the ALTLIB initialization routine.

OS/EM supplies only basic exit control functions for IKJADINI.

```
OS$CNTL TSO                                                          -
 {NOABendnotify|ABendnotify(                                         -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                   -
 {LIBrary(library.dsn)}                                              -
 {NOIKJADINI|IKJADINI(                                               -
       {ENable|DISABLE}                                             -
       {NUmber( num1 num2 num3 )}                                   -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3})})})}        -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3})})})} -
       {NOABendnotify|ABendnotify(                                   -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                         -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                         -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                      -
       {NOLIMit|LIMit(                                              -
         (jobmask1,...)|*|0                                         -
        {(jobmask2,...)|*|0                                         -
        {(jobmask3,...)|*|0}})}                                     -
       {NOVAlidrc|VAlidrc(rc,...)}                                  -
       {NOGoodrc|Goodrc(rc,...)}                                    -
       {NODIsablerc|DISABLERc(rc)}                                  -
       {DEFaultrc(rc)}                                              -
                                                   )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a IKJADINI exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJADINI modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJADINI user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJADINI Specifies that the IKJADINI exit point is to be activated.

NOIKJADINI The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named IKJADINI exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

> **num1, num2, num3**
>> Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
>>
>> If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJADINI user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJADINI user exits be activated. This can be specified at initialization, or later to load and activate IKJADINI user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the user exit that is assigned to the specified IKJADINI exit point.

> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

> **0**   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJADINI user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJADINI user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the backup user exit that is assigned to the specified TSO exit point.

> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
    Specifies that when a IKJADINI exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJADINI exit module has ABENDed.

NOABENDNOTIFY
    The NO option can be used to nullify the option to notify a TSO user of IKJADINI exit module ABENDs.

    Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

    (id1a,id1b,id1c)
      The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

    (id2a,id2b,id2c)
      The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

    (id3a,id3b,id3c)
      The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

      Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

    * An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJADINI to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

    jobmask1

    jobmask2

    jobmask3
      The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

    * An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

    rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by IKJADINI user exit modules. A good return code allows subsequent IKJADINI user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJADINI set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

    rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
    NODISABLERC turns off disable return code checking for the exit point.

    rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc Default return codes values are any numeric value

IKJADTER

Exit IKJADTER is the ALTLIB termination routine.

OS/EM supplies only basic exit control functions for IKJADTER.

```
OS$CNTL TSO                                                          -
  {NOABendnotify|ABendnotify(                                        -
     0|*|id1 {0|*|id2 {0|*|id3 }})}                                  -
  {LIBrary(library.dsn)}                                             -
  {NOIKJADTER|IKJADTER(                                           -
        {ENable|DISABLE}                                            -
        {NUmber( num1 num2 num3 )}                                  -
        {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}    -
        {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
        {NOABendnotify|ABendnotify(                                 -
           (0|*|id1a {0|*|id2a {0|*|id3a }})                        -
           (0|*|id1b {0|*|id2b {0|*|id3b }})                        -
           (0|*|id1c {0|*|id2c {0|*|id3c }}) })                     -
        {NOLIMit|LIMit(                                             -
          (jobmask1,...)|*|0                                        -
         {(jobmask2,...)|*|0                                        -
         {(jobmask3,...)|*|0}})}                                    -
        {NOVAlidrc|VAlidrc(rc,...)}                                 -
        {NOGoodrc|Goodrc(rc,...)}                                   -
        {NODIsablerc|DISABLERc(rc)}                                 -
        {DEFaultrc(rc)}                                             -
                                                      )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJADTER exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJADTER modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJADTER user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJADTER   Specifies that the IKJADTER exit point is to be activated.

NOIKJADTER   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJADTER exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

    num1, num2, num3

        Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

        If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJADTER user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJADTER user exits be activated. This can be specified at initialization, or later to load and activate IKJADTER user exits that were not activated at initialization. The exits will be called in the order listed.

    exit1

    exit2

    exit3

        The module name of the user exit that is assigned to the specified IKJADTER exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJADTER user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJADTER user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

    exit1

    exit2

    exit3

        The module name of the backup user exit that is assigned to the specified TSO exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJADTER exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJADTER exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJADTER exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJADTER to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

    rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJADTER user exit modules. A good return code allows subsequent IKJADTER user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJADTER set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

    rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
    NODISABLERC turns off disable return code checking for the exit point.

    rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc   Default return codes values are any numeric value

IKJCNXAC

Exit IKJCNXAC is the CONSOLE activation routine.

OS/EM supplies only basic exit control functions for IKJCNXAC.

```
OS$CNTL TSO                                                          -
  {NOABendnotify|ABendnotify(                                        -
     0|*|id1 {0|*|id2 {0|*|id3 }})}                                  -
  {LIBrary(library.dsn)}                                             -
  {NOIKJCNXAC|IKJCNXAC(                                          -
       {ENable|DISABLE}                                             -
       {NUmber( num1 num2 num3 )}                                   -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}     -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
       {NOABendnotify|ABendnotify(                                  -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                         -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                         -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                      -
       {NOLIMit|LIMit(                                              -
         (jobmask1,...)|*|0                                         -
        {(jobmask2,...)|*|0                                         -
        {(jobmask3,...)|*|0}})}                                     -
       {NOVAlidrc|VAlidrc(rc,...)}                                  -
       {NOGoodrc|Goodrc(rc,...)}                                    -
       {NODIsablerc|DISABLERc(rc)}                                  -
       {DEFaultrc(rc)}                                              -
                                                    )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a IKJCNXAC exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJCNXAC modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJCNXAC user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJCNXAC Specifies that the IKJCNXAC exit point is to be activated.

NOIKJCNXAC The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named IKJCNXAC exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

       num1, num2, num3

           Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

           If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJCNXAC user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of IKJCNXAC user exits be activated. This can be specified at initialization, or later to load and activate IKJCNXAC user exits that were not activated at initialization. The exits will be called in the order listed.

       exit1

       exit2

       exit3

           The module name of the user exit that is assigned to the specified IKJCNXAC exit point.

       *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

       0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJCNXAC user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IKJCNXAC user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

       exit1

       exit2

       exit3

           The module name of the backup user exit that is assigned to the specified TSO exit point.

       *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJCNXAC exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJCNXAC exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJCNXAC exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJCNXAC to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

> **rc**   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJCNXAC user exit modules. A good return code allows subsequent IKJCNXAC user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJCNXAC set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

> **rc**   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

    NODISABLERC turns off disable return code checking for the exit point.

> **rc**   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

> **rc**   Default return codes values are any numeric value

IKJCNXCD

Exit IKJCNXCD is the CONPROFS pre-display routine.

OS/EM supplies only basic exit control functions for IKJCNXCD.

```
OS$CNTL TSO                                                         -
 {NOABendnotify|ABendnotify(                                        -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                  -
 {LIBrary(library.dsn)}                                             -
 {NOIKJCNXCD|IKJCNXCD(                                           -
      {ENable|DISABLE}                                             -
      {NUmber( num1 num2 num3 )}                                    -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}      -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
      {NOABendnotify|ABendnotify(                                   -
         (0|*|id1a {0|*|id2a {0|*|id3a }})                          -
         (0|*|id1b {0|*|id2b {0|*|id3b }})                          -
         (0|*|id1c {0|*|id2c {0|*|id3c }}) })                       -
      {NOLIMit|LIMit(                                               -
        (jobmask1,...)|*|0                                          -
       {(jobmask2,...)|*|0                                          -
       {(jobmask3,...)|*|0}})}                                      -
      {NOVAlidrc|VAlidrc(rc,...)}                                   -
      {NOGoodrc|Goodrc(rc,...)}                                     -
      {NODIsablerc|DISABLERc(rc)}                                   -
      {DEFaultrc(rc)}                                               -
                                                    )}
```

ABENDNOTIFY

> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY

> Specifies that no messages will be sent for TSO exit ABENDs.

> > **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a IKJCNXCD exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJCNXCD modules.

> **library.dsn**
> > Specifies the name of a private **authorized** library used to locate and load the TSO IKJCNXCD user exit. The library name should be enclosed in single quotes (').

> > **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJCNXCD Specifies that the IKJCNXCD exit point is to be activated.

NOIKJCNXCD The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named IKJCNXCD exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

   num1, num2, num3

   Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

   If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJCNXCD user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJCNXCD user exits be activated. This can be specified at initialization, or later to load and activate IKJCNXCD user exits that were not activated at initialization. The exits will be called in the order listed.

   exit1

   exit2

   exit3
   The module name of the user exit that is assigned to the specified IKJCNXCD exit point.

   *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

   0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJCNXCD user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJCNXCD user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

   exit1

   exit2

   exit3
   The module name of the backup user exit that is assigned to the specified TSO exit point.

   *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJCNXCD exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJCNXCD exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJCNXCD exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT Specifies that Job name limits are requested, to limit user exit modules for IKJCNXCD to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

* An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

        rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJCNXCD user exit modules. A good return code allows subsequent IKJCNXCD user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJCNXCD set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

        rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
        NODISABLERC turns off disable return code checking for the exit point.

        rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

        rc   Default return codes values are any numeric value

IKJCNXCI

Exit IKJCNXCI is the CONPROFS initialization routine.

OS/EM supplies only basic exit control functions for IKJCNXCI.

```
OS$CNTL TSO                                                              -
 {NOABendnotify|ABendnotify(                                             -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                       -
 {LIBrary(library.dsn)}                                                  -
 {NOIKJCNXCI|IKJCNXCI(                                                   -
       {ENable|DISABLE}                                                  -
       {NUmber( num1 num2 num3 )}                                        -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}             -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
       {NOABendnotify|ABendnotify(                                       -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                             -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                             -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                          -
       {NOLIMit|LIMit(                                                   -
         (jobmask1,...)|*|0                                             -
        {(jobmask2,...)|*|0                                             -
        {(jobmask3,...)|*|0}})}                                         -
       {NOVAlidrc|VAlidrc(rc,...)}                                       -
       {NOGoodrc|Goodrc(rc,...)}                                         -
       {NODIsablerc|DISABLERc(rc)}                                       -
       {DEFaultrc(rc)}                                                   -
                                                   )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJCNXCI exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJCNXCI modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJCNXCI user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJCNXCI   Specifies that the IKJCNXCI exit point is to be activated.

NOIKJCNXCI   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJCNXCI exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

    num1, num2, num3
        Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

        If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJCNXCI user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJCNXCI user exits be activated. This can be specified at initialization, or later to load and activate IKJCNXCI user exits that were not activated at initialization. The exits will be called in the order listed.

    exit1

    exit2

    exit3
        The module name of the user exit that is assigned to the specified IKJCNXCI exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJCNXCI user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJCNXCI user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

    exit1

    exit2

    exit3
        The module name of the backup user exit that is assigned to the specified TSO exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJCNXCI exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJCNXCI exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJCNXCI exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJCNXCI to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

        rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJCNXCI user exit modules. A good return code allows subsequent IKJCNXCI user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJCNXCI set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

        rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

        NODISABLERC turns off disable return code checking for the exit point.

        rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

        rc   Default return codes values are any numeric value

IKJCNXCT

Exit IKJCNXCT is the CONPROFS termination routine.

OS/EM supplies only basic exit control functions for IKJCNXCT.

```
         OS$CNTL TSO                                                      -
          {NOABendnotify|ABendnotify(                                     -
             0|*|id1 {0|*|id2 {0|*|id3 }})}                               -
          {LIBrary(library.dsn)}                                          -
          {NOIKJCNXCT|IKJCNXCT(                                       -
                {ENable|DISABLE}                                          -
                {NUmber( num1 num2 num3 )}                                -
                {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
                {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})} -
                {NOABendnotify|ABendnotify(                               -
                   (0|*|id1a {0|*|id2a {0|*|id3a }})                      -
                   (0|*|id1b {0|*|id2b {0|*|id3b }})                      -
                   (0|*|id1c {0|*|id2c {0|*|id3c }}) })                   -
                {NOLIMit|LIMit(                                           -
                  (jobmask1,...)|*|0                                      -
                 {(jobmask2,...)|*|0                                      -
                 {(jobmask3,...)|*|0}})}                                  -
                {NOVAlidrc|VAlidrc(rc,...)}                               -
                {NOGoodrc|Goodrc(rc,...)}                                 -
                {NODIsablerc|DISABLERc(rc)}                               -
                {DEFaultrc(rc)}                                           -
                                                       )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJCNXCT exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJCNXCT modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJCNXCT user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJCNXCT   Specifies that the IKJCNXCT exit point is to be activated.

NOIKJCNXCT   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJCNXCT exit point is be passed control for exit module execution.

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DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3
  Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

  If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available.   If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJCNXCT user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJCNXCT user exits be activated. This can be specified at initialization, or later to load and activate IKJCNXCT user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3
  The module name of the user exit that is assigned to the specified IKJCNXCT exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJCNXCT user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJCNXCT user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
  The module name of the backup user exit that is assigned to the specified TSO exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJCNXCT exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJCNXCT exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJCNXCT exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJCNXCT to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

        rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJCNXCT user exit modules. A good return code allows subsequent IKJCNXCT user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJCNXCT set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

        rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
        NODISABLERC turns off disable return code checking for the exit point.

        rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

        rc   Default return codes values are any numeric value

IKJCNXDE

Exit IKJCNXDE is the CONSOLE deactivation routine.

OS/EM supplies only basic exit control functions for IKJCNXDE.

```
OS$CNTL TSO                                                           -
 {NOABendnotify|ABendnotify(                                          -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                    -
 {LIBrary(library.dsn)}                                              -
 {NOIKJCNXDE|IKJCNXDE(                                       -
       {ENable|DISABLE}                                              -
       {NUmber( num1 num2 num3 )}                                    -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})        -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})} -
       {NOABendnotify|ABendnotify(                                    -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                          -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                          -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                       -
       {NOLIMit|LIMit(                                               -
         (jobmask1,...)|*|0                                          -
        {(jobmask2,...)|*|0                                          -
        {(jobmask3,...)|*|0}})}                                      -
       {NOVAlidrc|VAlidrc(rc,...)}                                   -
       {NOGoodrc|Goodrc(rc,...)}                                     -
       {NODIsablerc|DISABLERc(rc)}                                   -
       {DEFaultrc(rc)}                                               -
                                                    )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJCNXDE exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJCNXDE modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJCNXDE user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJCNXDE   Specifies that the IKJCNXDE exit point is to be activated.

NOIKJCNXDE   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJCNXDE exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

          num1, num2, num3

                    Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                    If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available.   If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJCNXDE user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of IKJCNXDE user exits be activated. This can be specified at initialization, or later to load and activate IKJCNXDE user exits that were not activated at initialization. The exits will be called in the order listed.

          exit1

          exit2

          exit3

                    The module name of the user exit that is assigned to the specified IKJCNXDE exit point.

          *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

          0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJCNXDE user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IKJCNXDE user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

          exit1

          exit2

          exit3

                    The module name of the backup user exit that is assigned to the specified TSO exit point.

          *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a IKJCNXDE exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJCNXDE exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of IKJCNXDE exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJCNXDE to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

    rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by IKJCNXDE user exit modules. A good return code allows subsequent IKJCNXDE user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJCNXDE set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

    rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
    NODISABLERC turns off disable return code checking for the exit point.

    rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc   Default return codes values are any numeric value

IKJCNXPP

Exit IKJCNXPP is the CONSOLE pre-parse routine.

OS/EM supplies only basic exit control functions for IKJCNXPP.

```
OS$CNTL TSO                                                        -
 {NOABendnotify|ABendnotify(                                       -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                 -
 {LIBrary(library.dsn)}                                            -
 {NOIKJCNXPP|IKJCNXPP(                                        -
        {ENable|DISABLE}                                          -
        {NUmber( num1 num2 num3 )}                                -
        {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}    -
        {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3})})}} -
        {NOABendnotify|ABendnotify(                               -
           (0|*|id1a {0|*|id2a {0|*|id3a }})                      -
           (0|*|id1b {0|*|id2b {0|*|id3b }})                      -
           (0|*|id1c {0|*|id2c {0|*|id3c }}) })                   -
        {NOLIMit|LIMit(                                           -
          (jobmask1,...)|*|0                                      -
         {(jobmask2,...)|*|0                                      -
         {(jobmask3,...)|*|0}})}                                  -
        {NOVAlidrc|VAlidrc(rc,...)}                               -
        {NOGoodrc|Goodrc(rc,...)}                                 -
        {NODIsablerc|DISABLERc(rc)}                               -
        {DEFaultrc(rc)}                                           -
                                                   )}
```

ABENDNOTIFY

> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY

> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJCNXPP exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJCNXPP modules.

> **library.dsn**
>
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJCNXPP user exit. The library name should be enclosed in single quotes (').
>
> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJCNXPP   Specifies that the IKJCNXPP exit point is to be activated.

NOIKJCNXPP   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJCNXPP exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3
                    Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                    If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJCNXPP user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJCNXPP user exits be activated. This can be specified at initialization, or later to load and activate IKJCNXPP user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3
                    The module name of the user exit that is assigned to the specified IKJCNXPP exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJCNXPP user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJCNXPP user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
                    The module name of the backup user exit that is assigned to the specified TSO exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
      Specifies that when a IKJCNXPP exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJCNXPP exit module has ABENDed.

NOABENDNOTIFY
      The NO option can be used to nullify the option to notify a TSO user of IKJCNXPP exit module ABENDs.

      Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

      (id1a,id1b,id1c)
        The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

      (id2a,id2b,id2c)
        The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

      (id3a,id3b,id3c)
        The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

        Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

      * An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

      0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJCNXPP to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

      jobmask1

      jobmask2

      jobmask3
        The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

      * An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

      0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

    rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by IKJCNXPP user exit modules. A good return code allows subsequent IKJCNXPP user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJCNXPP set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

    rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
    NODISABLERC turns off disable return code checking for the exit point.

    rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc Default return codes values are any numeric value

IKJCNX50

Exit IKJCNX50 is the CONSOLE 80% message capacity routine.

OS/EM supplies only basic exit control functions for IKJCNX50.

```
         OS$CNTL TSO                                                 -
          {NOABendnotify|ABendnotify(                               -
             0|*|id1 {0|*|id2 {0|*|id3 }})}                         -
          {LIBrary(library.dsn)}                                    -
          {NOIKJCNX50|IKJCNX50(                                 -
               {ENable|DISABLE}                                     -
               {NUmber( num1 num2 num3 )}                           -
               {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
               {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3})})}} -
               {NOABendnotify|ABendnotify(                          -
                  (0|*|id1a {0|*|id2a {0|*|id3a }})                 -
                  (0|*|id1b {0|*|id2b {0|*|id3b }})                 -
                  (0|*|id1c {0|*|id2c {0|*|id3c }}) })              -
               {NOLIMit|LIMit(                                      -
                 (jobmask1,...)|*|0                                 -
                {(jobmask2,...)|*|0                                 -
                {(jobmask3,...)|*|0}})}                             -
               {NOVAlidrc|VAlidrc(rc,...)}                          -
               {NOGoodrc|Goodrc(rc,...)}                            -
               {NODIsablerc|DISABLERc(rc)}                          -
               {DEFaultrc(rc)}                                      -
                                                        )}
```

ABENDNOTIFY

> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY

> Specifies that no messages will be sent for TSO exit ABENDs.

> > **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJCNX50 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJCNX50 modules.

> **library.dsn**
> > Specifies the name of a private **authorized** library used to locate and load the TSO IKJCNX50 user exit. The library name should be enclosed in single quotes (').

> > **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJCNX50   Specifies that the IKJCNX50 exit point is to be activated.

NOIKJCNX50   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJCNX50 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

      num1, num2, num3

                Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJCNX50 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJCNX50 user exits be activated. This can be specified at initialization, or later to load and activate IKJCNX50 user exits that were not activated at initialization. The exits will be called in the order listed.

      exit1

      exit2

      exit3
                The module name of the user exit that is assigned to the specified IKJCNX50 exit point.

      *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

      0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJCNX50 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJCNX50 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

      exit1

      exit2

      exit3
                The module name of the backup user exit that is assigned to the specified TSO exit point.

      *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
                Specifies that when a IKJCNX50 exit module ABENDs a TSO NOTIFY message
                should be sent to up to 3 TSO IDs or notify group names indicating that a IKJCNX50
                exit module has ABENDed.

NOABENDNOTIFY
                The NO option can be used to nullify the option to notify a TSO user of IKJCNX50
                exit module ABENDs.

                Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

                (id1a,id1b,id1c)
                    The TSO IDs or notify group names to be notified if the first exit being processed
                    ABENDs.

                (id2a,id2b,id2c)
                    The TSO IDs or notify group names to be notified if the second exit being
                    processed ABENDs.

                (id3a,id3b,id3c)
                    The TSO IDs or notify group names to be notified if the third exit being proc-
                    essed ABENDs.

                    Note: See "NFYGROUPS" on page SYS-1 for more information about notify
                    groups.

                *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this
                    position of the notify TSO user list is not to be changed. As a default, the asterisk
                    would be omitted where it would normally be implied.

                0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJCNX50
                to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

                jobmask1

                jobmask2

                jobmask3
                    The job name mask list for the corresponding user exit module, jobmask1 corre-
                    sponding to the jobmask for the first User exit module specified via the EX-
                    ITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use
                    the same masking characters as volume masks. See "Volume/Jobname Masks"
                    on page C-1 for a detailed discussion of Jobname masking.

                *   An asterisk (*) can be used as a placeholder to indicate that a prior value for this
                    position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a
                    default, the asterisk would be omitted where it would normally be implied.

                0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname
                    masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined
                by IBM exit programming documentation for each exit point. The valid return codes
                for each IBM exit point are built into OS/EM. If anything is specified it completely
                replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

> **rc** Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by IKJCNX50 user exit modules. A good return code allows subsequent IKJCNX50 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJCNX50 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

> **rc** Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
> NODISABLERC turns off disable return code checking for the exit point.

> **rc** Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

> **rc** Default return codes values are any numeric value

IKJCNX64

Exit IKJCNX64 is the CONSOLE 100% message capacity routine.

OS/EM supplies only basic exit control functions for IKJCNX64.

```
OS$CNTL TSO                                                           -
 {NOABendnotify|ABendnotify(                                          -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                    -
 {LIBrary(library.dsn)}                                              -
 {NOIKJCNX64|IKJCNX64(                                           -
       {ENable|DISABLE}                                              -
       {NUmber( num1 num2 num3 )}                                    -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}      -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
       {NOABendnotify|ABendnotify(                                   -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                          -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                          -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                       -
       {NOLIMit|LIMit(                                               -
         (jobmask1,...)|*|0                                          -
        {(jobmask2,...)|*|0                                          -
        {(jobmask3,...)|*|0}})}                                      -
       {NOVAlidrc|VAlidrc(rc,...)}                                   -
       {NOGoodrc|Goodrc(rc,...)}                                     -
       {NODIsablerc|DISABLERc(rc)}                                   -
       {DEFaultrc(rc)}                                               -
                                              )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJCNX64 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJCNX64 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJCNX64 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJCNX64   Specifies that the IKJCNX64 exit point is to be activated.

NOIKJCNX64   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJCNX64 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJCNX64 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJCNX64 user exits be activated. This can be specified at initialization, or later to load and activate IKJCNX64 user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3

The module name of the user exit that is assigned to the specified IKJCNX64 exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJCNX64 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJCNX64 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3

The module name of the backup user exit that is assigned to the specified TSO exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJCNX64 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJCNX64 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJCNX64 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJCNX64 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

  rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by IKJCNX64 user exit modules. A good return code allows subsequent IKJCNX64 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJCNX64 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

  rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
  NODISABLERC turns off disable return code checking for the exit point.

  rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

  rc Default return codes values are any numeric value

IKJCT43I

Exit IKJCT43I is the EXEC initialization routine.

OS/EM supplies only basic exit control functions for IKJCT43I.

```
          OS$CNTL TSO                                                    -
           {NOABendnotify|ABendnotify(                                   -
              0|*|id1 {0|*|id2 {0|*|id3 }})}                             -
           {LIBrary(library.dsn)}                                        -
           {NOIKJCT43I|IKJCT43I(                                       -
                {ENable|DISABLE}                                         -
                {NUmber( num1 num2 num3 )}                               -
                {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}   -
                {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})} -
                {NOABendnotify|ABendnotify(                              -
                   (0|*|id1a {0|*|id2a {0|*|id3a }})                     -
                   (0|*|id1b {0|*|id2b {0|*|id3b }})                     -
                   (0|*|id1c {0|*|id2c {0|*|id3c }}) })                  -
                {NOLIMit|LIMit(                                          -
                  (jobmask1,...)|*|0                                     -
                 {(jobmask2,...)|*|0                                     -
                 {(jobmask3,...)|*|0}})}                                 -
                {NOVAlidrc|VAlidrc(rc,...)}                              -
                {NOGoodrc|Goodrc(rc,...)}                                -
                {NODIsablerc|DISABLERc(rc)}                              -
                {DEFaultrc(rc)}                                          -
                                                     )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJCT43I exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJCT43I modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJCT43I user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJCT43I   Specifies that the IKJCT43I exit point is to be activated.

NOIKJCT43I   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJCT43I exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJCT43I user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJCT43I user exits be activated. This can be specified at initialization, or later to load and activate IKJCT43I user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3
The module name of the user exit that is assigned to the specified IKJCT43I exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJCT43I user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJCT43I user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
The module name of the backup user exit that is assigned to the specified TSO exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a IKJCT43I exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJCT43I exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of IKJCT43I exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJCT43I to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

        rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJCT43I user exit modules. A good return code allows subsequent IKJCT43I user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJCT43I set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

        rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
        NODISABLERC turns off disable return code checking for the exit point.

        rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

        rc   Default return codes values are any numeric value

IKJCT43T

Exit IKJCT43T is the EXEC termination routine.

OS/EM supplies only basic exit control functions for IKJCT43T.

```
OS$CNTL TSO                                                             -
 {NOABendnotify|ABendnotify(                                            -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                      -
 {LIBrary(library.dsn)}                                                 -
 {NOIKJCT43T|IKJCT43T(                                               -
       {ENable|DISABLE}                                                 -
       {NUmber( num1 num2 num3 )}                                       -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}       -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})} -
       {NOABendnotify|ABendnotify(                                      -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                            -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                            -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                         -
       {NOLIMit|LIMit(                                                  -
         (jobmask1,...)|*|0                                            -
        {(jobmask2,...)|*|0                                           -
        {(jobmask3,...)|*|0}})}                                       -
       {NOVAlidrc|VAlidrc(rc,...)}                                      -
       {NOGoodrc|Goodrc(rc,...)}                                        -
       {NODIsablerc|DISABLERc(rc)}                                      -
       {DEFaultrc(rc)}                                                  -
                                                          )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJCT43T exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJCT43T modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJCT43T user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJCT43T   Specifies that the IKJCT43T exit point is to be activated.

NOIKJCT43T   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJCT43T exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJCT43T user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJCT43T user exits be activated. This can be specified at initialization, or later to load and activate IKJCT43T user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3
The module name of the user exit that is assigned to the specified IKJCT43T exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJCT43T user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJCT43T user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
The module name of the backup user exit that is assigned to the specified TSO exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a IKJCT43T exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJCT43T exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of IKJCT43T exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJCT43T to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJCT43T user exit modules. A good return code allows subsequent IKJCT43T user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJCT43T set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
      NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

IKJCT44B

Exit IKJCT44B is used to add installation-written CLIST built-in functions.

OS/EM supplies only basic exit control functions for IKJCT44B.

```
OS$CNTL TSO                                                          -
 {NOABendnotify|ABendnotify(                                         -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                   -
 {LIBrary(library.dsn)}                                             -
 {NOIKJCT44B|IKJCT44B(                                       -
      {ENable|DISABLE}                                              -
      {NUmber( num1 num2 num3 )}                                    -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
      {NOABendnotify|ABendnotify(                                   -
         (0|*|id1a {0|*|id2a {0|*|id3a }})                          -
         (0|*|id1b {0|*|id2b {0|*|id3b }})                          -
         (0|*|id1c {0|*|id2c {0|*|id3c }}) })                       -
      {NOLIMit|LIMit(                                               -
        (jobmask1,...)|*|0                                          -
       {(jobmask2,...)|*|0                                          -
       {(jobmask3,...)|*|0}})}                                      -
      {NOVAlidrc|VAlidrc(rc,...)}                                   -
      {NOGoodrc|Goodrc(rc,...)}                                     -
      {NODIsablerc|DISABLERc(rc)}                                   -
      {DEFaultrc(rc)}                                               -
                                        )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJCT44B exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJCT44B modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJCT44B user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJCT44B   Specifies that the IKJCT44B exit point is to be activated.

NOIKJCT44B   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJCT44B exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

        num1, num2, num3

              Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

              If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJCT44B user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJCT44B user exits be activated. This can be specified at initialization, or later to load and activate IKJCT44B user exits that were not activated at initialization. The exits will be called in the order listed.

        exit1

        exit2

        exit3

              The module name of the user exit that is assigned to the specified IKJCT44B exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJCT44B user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJCT44B user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

        exit1

        exit2

        exit3

              The module name of the backup user exit that is assigned to the specified TSO exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a IKJCT44B exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJCT44B exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of IKJCT44B exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJCT44B to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJCT44B user exit modules. A good return code allows subsequent IKJCT44B user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJCT44B set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

      NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

                TSO Command   TSO-89

IKJCT44S

Exit IKJCT44S is used to add installation-written CLIST statements.

OS/EM supplies only basic exit control functions for IKJCT44S.

```
OS$CNTL TSO                                                              -
 {NOABendnotify|ABendnotify(                                             -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                       -
 {LIBrary(library.dsn)}                                                  -
 {NOIKJCT44S|IKJCT44S(                                                  -
        {ENable|DISABLE}                                                 -
        {NUmber( num1 num2 num3 )}                                       -
        {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}            -
        {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
        {NOABendnotify|ABendnotify(                                      -
           (0|*|id1a {0|*|id2a {0|*|id3a }})                            -
           (0|*|id1b {0|*|id2b {0|*|id3b }})                            -
           (0|*|id1c {0|*|id2c {0|*|id3c }}) })                         -
        {NOLIMit|LIMit(                                                  -
          (jobmask1,...)|*|0                                            -
         {(jobmask2,...)|*|0                                            -
         {(jobmask3,...)|*|0}})}                                        -
        {NOVAlidrc|VAlidrc(rc,...)}                                      -
        {NOGoodrc|Goodrc(rc,...)}                                        -
        {NODIsablerc|DISABLERc(rc)}                                      -
        {DEFaultrc(rc)}                                                  -
                                                   )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a IKJCT44S exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJCT44S modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJCT44S user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJCT44S Specifies that the IKJCT44S exit point is to be activated.

NOIKJCT44S The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named IKJCT44S exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

         num1, num2, num3

                Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJCT44S user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJCT44S user exits be activated. This can be specified at initialization, or later to load and activate IKJCT44S user exits that were not activated at initialization. The exits will be called in the order listed.

         exit1

         exit2

         exit3

                The module name of the user exit that is assigned to the specified IKJCT44S exit point.

         *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

         0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJCT44S user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IKJCT44S user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

         exit1

         exit2

         exit3

                The module name of the backup user exit that is assigned to the specified TSO exit point.

         *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJCT44S exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJCT44S exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJCT44S exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJCT44S to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJCT44S user exit modules. A good return code allows subsequent IKJCT44S user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJCT44S set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
      NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

IKJEESXA

Exit IKJEESXA is the LISTBC failure routine.

OS/EM supplies only basic exit control functions for IKJEESXA.

```
OS$CNTL TSO                                                            -
 {NOABendnotify|ABendnotify(                                           -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                     -
 {LIBrary(library.dsn)}                                                -
 {NOIKJEESXA|IKJEESXA(                                            -
       {ENable|DISABLE}                                               -
       {NUmber( num1 num2 num3 )}                                      -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}     -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})} -
       {NOABendnotify|ABendnotify(                                     -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                           -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                           -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                        -
       {NOLIMit|LIMit(                                                 -
         (jobmask1,...)|*|0                                           -
        {(jobmask2,...)|*|0                                           -
        {(jobmask3,...)|*|0}})}                                       -
       {NOVAlidrc|VAlidrc(rc,...)}                                     -
       {NOGoodrc|Goodrc(rc,...)}                                       -
       {NODIsablerc|DISABLERc(rc)}                                     -
       {DEFaultrc(rc)}                                                 -
                                                      )}
```

ABENDNOTIFY

> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY

> Specifies that no messages will be sent for TSO exit ABENDs.

> > **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEESXA exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEESXA modules.

> **library.dsn**
> > Specifies the name of a private **authorized** library used to locate and load the TSO IKJEESXA user exit. The library name should be enclosed in single quotes (').

> > **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEESXA   Specifies that the IKJEESXA exit point is to be activated.

NOIKJEESXA   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEESXA exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

        num1, num2, num3

                Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEESXA user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEESXA user exits be activated. This can be specified at initialization, or later to load and activate IKJEESXA user exits that were not activated at initialization. The exits will be called in the order listed.

        exit1

        exit2

        exit3
                The module name of the user exit that is assigned to the specified IKJEESXA exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEESXA user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IKJEESXA user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

        exit1

        exit2

        exit3
                The module name of the backup user exit that is assigned to the specified TSO exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a IKJEESXA exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEESXA exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of IKJEESXA exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEESXA to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJEESXA user exit modules. A good return code allows subsequent IKJEESXA user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEESXA set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

      NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

IKJEESXB

Exit IKJEESXB is the LISTBC termination routine.

OS/EM supplies only basic exit control functions for IKJEESXB.

```
OS$CNTL TSO                                                          -
 {NOABendnotify|ABendnotify(                                         -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                   -
 {LIBrary(library.dsn)}                                             -
 {NOIKJEESXB|IKJEESXB(                                               -
       {ENable|DISABLE}                                             -
       {NUmber( num1 num2 num3 )}                                   -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}    -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})} -
       {NOABendnotify|ABendnotify(                                  -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                         -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                         -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                      -
       {NOLIMit|LIMit(                                              -
         (jobmask1,...)|*|0                                         -
        {(jobmask2,...)|*|0                                         -
        {(jobmask3,...)|*|0}})}                                     -
       {NOVAlidrc|VAlidrc(rc,...)}                                  -
       {NOGoodrc|Goodrc(rc,...)}                                    -
       {NODIsablerc|DISABLERc(rc)}                                  -
       {DEFaultrc(rc)}                                              -
                                                 )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEESXB exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEESXB modules.

> **library.dsn**
> > Specifies the name of a private **authorized** library used to locate and load the TSO IKJEESXB user exit. The library name should be enclosed in single quotes (').

> > **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEESXB   Specifies that the IKJEESXB exit point is to be activated.

NOIKJEESXB   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEESXB exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

                num1, num2, num3

                        Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                        If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEESXB user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of IKJEESXB user exits be activated. This can be specified at initialization, or later to load and activate IKJEESXB user exits that were not activated at initialization. The exits will be called in the order listed.

                exit1

                exit2

                exit3
                        The module name of the user exit that is assigned to the specified IKJEESXB exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEESXB user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IKJEESXB user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

                exit1

                exit2

                exit3
                        The module name of the backup user exit that is assigned to the specified TSO exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJEESXB exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEESXB exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJEESXB exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT Specifies that Job name limits are requested, to limit user exit modules for IKJEESXB to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

* An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by IKJEESXB user exit modules. A good return code allows subsequent IKJEESXB user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEESXB set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
      NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

IKJEESX0

Exit IKJEESX0 is the SEND command initialization routine.

OS/EM supplies only basic exit control functions for IKJEESX0.

```
        OS$CNTL TSO                                                     -
         {NOABendnotify|ABendnotify(                                    -
            0|*|id1 {0|*|id2 {0|*|id3 }})}                              -
         {LIBrary(library.dsn)}                                         -
         {NOIKJEESX0|IKJEESX0(                                        -
              {ENable|DISABLE}                                          -
              {NUmber( num1 num2 num3 )}                                -
              {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}    -
              {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}  -
              {NOABendnotify|ABendnotify(                               -
                 (0|*|id1a {0|*|id2a {0|*|id3a }})                      -
                 (0|*|id1b {0|*|id2b {0|*|id3b }})                      -
                 (0|*|id1c {0|*|id2c {0|*|id3c }}) })                   -
              {NOLIMit|LIMit(                                           -
                (jobmask1,...)|*|0                                      -
               {(jobmask2,...)|*|0                                      -
               {(jobmask3,...)|*|0}})}                                  -
              {NOVAlidrc|VAlidrc(rc,...)}                               -
              {NOGoodrc|Goodrc(rc,...)}                                 -
              {NODIsablerc|DISABLERc(rc)}                               -
              {DEFaultrc(rc)}                                           -
                                                        )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEESX0 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEESX0 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJEESX0 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEESX0   Specifies that the IKJEESX0 exit point is to be activated.

NOIKJEESX0   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEESX0 exit point is be passed control for exit module execution.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

> **num1, num2, num3**
>> Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
>>
>> If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS Specifies that any active IKJEESX0 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of IKJEESX0 user exits be activated. This can be specified at initialization, or later to load and activate IKJEESX0 user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the user exit that is assigned to the specified IKJEESX0 exit point.
>
> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0** A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP Specifies that all active backup IKJEESX0 user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IKJEESX0 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the backup user exit that is assigned to the specified TSO exit point.
>
> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a IKJEESX0 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEESX0 exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of IKJEESX0 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEESX0 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by IKJEESX0 user exit modules. A good return code allows subsequent IKJEESX0 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEESX0 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
        NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

IKJEESX1

Exit IKJEESX1 is the SEND command pre-display routine.

OS/EM supplies only basic exit control functions for IKJEESX1.

```
OS$CNTL TSO                                                        -
 {NOABendnotify|ABendnotify(                                       -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                 -
 {LIBrary(library.dsn)}                                            -
 {NOIKJEESX1|IKJEESX1(                                             -
     {ENable|DISABLE}                                             -
     {NUmber( num1 num2 num3 )}                                    -
     {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}       -
     {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
     {NOABendnotify|ABendnotify(                                   -
        (0|*|id1a {0|*|id2a {0|*|id3a }})                          -
        (0|*|id1b {0|*|id2b {0|*|id3b }})                          -
        (0|*|id1c {0|*|id2c {0|*|id3c }}) })                       -
     {NOLIMit|LIMit(                                               -
       (jobmask1,...)|*|0                                          -
      {(jobmask2,...)|*|0                                          -
      {(jobmask3,...)|*|0}})}                                      -
     {NOVAlidrc|VAlidrc(rc,...)}                                   -
     {NOGoodrc|Goodrc(rc,...)}                                     -
     {NODIsablerc|DISABLERc(rc)}                                   -
     {DEFaultrc(rc)}                                               -
                                                      )}
```

ABENDNOTIFY

> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY

> Specifies that no messages will be sent for TSO exit ABENDs.

> > **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEESX1 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEESX1 modules.

> **library.dsn**
>
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJEESX1 user exit. The library name should be enclosed in single quotes (').
>
> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEESX1   Specifies that the IKJEESX1 exit point is to be activated.

NOIKJEESX1   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEESX1 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEESX1 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEESX1 user exits be activated. This can be specified at initialization, or later to load and activate IKJEESX1 user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3
The module name of the user exit that is assigned to the specified IKJEESX1 exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEESX1 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJEESX1 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
The module name of the backup user exit that is assigned to the specified TSO exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a IKJEESX1 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEESX1 exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of IKJEESX1 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEESX1 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

     rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJEESX1 user exit modules. A good return code allows subsequent IKJEESX1 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEESX1 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

     rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
        NODISABLERC turns off disable return code checking for the exit point.

     rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

     rc   Default return codes values are any numeric value

IKJEESX2

Exit IKJEESX2 is the SEND command pre-save routine.

OS/EM supplies only basic exit control functions for IKJEESX2.

```
         OS$CNTL TSO                                                   -
          {NOABendnotify|ABendnotify(                                  -
             0|*|id1 {0|*|id2 {0|*|id3 }})}                            -
          {LIBrary(library.dsn)}                                       -
          {NOIKJEESX2|IKJEESX2(                                    -
                {ENable|DISABLE}                                       -
                {NUmber( num1 num2 num3 )}                             -
                {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
                {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
                {NOABendnotify|ABendnotify(                            -
                   (0|*|id1a {0|*|id2a {0|*|id3a }})                   -
                   (0|*|id1b {0|*|id2b {0|*|id3b }})                   -
                   (0|*|id1c {0|*|id2c {0|*|id3c }}) })                -
                {NOLIMit|LIMit(                                        -
                  (jobmask1,...)|*|0                                   -
                 {(jobmask2,...)|*|0                                   -
                 {(jobmask3,...)|*|0}})}                               -
                {NOVAlidrc|VAlidrc(rc,...)}                            -
                {NOGoodrc|Goodrc(rc,...)}                              -
                {NODIsablerc|DISABLERc(rc)}                            -
                {DEFaultrc(rc)}                                        -
                                                          )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEESX2 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEESX2 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJEESX2 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEESX2   Specifies that the IKJEESX2 exit point is to be activated.

NOIKJEESX2   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEESX2 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

          num1, num2, num3

               Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

               If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEESX2 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEESX2 user exits be activated. This can be specified at initialization, or later to load and activate IKJEESX2 user exits that were not activated at initialization. The exits will be called in the order listed.

          exit1

          exit2

          exit3

               The module name of the user exit that is assigned to the specified IKJEESX2 exit point.

          *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

          0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEESX2 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJEESX2 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

          exit1

          exit2

          exit3

               The module name of the backup user exit that is assigned to the specified TSO exit point.

          *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a IKJEESX2 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEESX2 exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of IKJEESX2 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEESX2 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJEESX2 user exit modules. A good return code allows subsequent IKJEESX2 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEESX2 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
      NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

IKJEESX3

Exit IKJEESX3 is the SEND command failure routine.

OS/EM supplies only basic exit control functions for IKJEESX3.

```
        OS$CNTL TSO                                                    -
         {NOABendnotify|ABendnotify(                                   -
            0|*|id1 {0|*|id2 {0|*|id3 }})}                             -
         {LIBrary(library.dsn)}                                        -
         {NOIKJEESX3|IKJEESX3(                                       -
              {ENable|DISABLE}                                         -
              {NUmber( num1 num2 num3 )}                               -
              {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
              {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}} -
              {NOABendnotify|ABendnotify(                              -
                 (0|*|id1a {0|*|id2a {0|*|id3a }})                     -
                 (0|*|id1b {0|*|id2b {0|*|id3b }})                     -
                 (0|*|id1c {0|*|id2c {0|*|id3c }}) })                  -
              {NOLIMit|LIMit(                                          -
                (jobmask1,...)|*|0                                     -
               {(jobmask2,...)|*|0                                     -
               {(jobmask3,...)|*|0}})}                                 -
              {NOVAlidrc|VAlidrc(rc,...)}                              -
              {NOGoodrc|Goodrc(rc,...)}                                -
              {NODIsablerc|DISABLERc(rc)}                              -
              {DEFaultrc(rc)}                                          -
                                                       )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> > **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEESX3 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEESX3 modules.

> **library.dsn**
> > Specifies the name of a private **authorized** library used to locate and load the TSO IKJEESX3 user exit. The library name should be enclosed in single quotes (').

> > **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEESX3   Specifies that the IKJEESX3 exit point is to be activated.

NOIKJEESX3   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEESX3 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

> **num1, num2, num3**
>> Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
>>
>> If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEESX3 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of IKJEESX3 user exits be activated. This can be specified at initialization, or later to load and activate IKJEESX3 user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the user exit that is assigned to the specified IKJEESX3 exit point.

> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

> **0**   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEESX3 user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IKJEESX3 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the backup user exit that is assigned to the specified TSO exit point.

> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJEESX3 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEESX3 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJEESX3 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEESX3 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

    rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by IKJEESX3 user exit modules. A good return code allows subsequent IKJEESX3 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEESX3 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

    rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
    NODISABLERC turns off disable return code checking for the exit point.

    rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc   Default return codes values are any numeric value

IKJEESX4

Exit IKJEESX4 is the SEND command termination routine.

OS/EM supplies only basic exit control functions for IKJEESX4.

```
        OS$CNTL TSO                                                 -
         {NOABendnotify|ABendnotify(                                -
            0|*|id1 {0|*|id2 {0|*|id3 }})}                          -
         {LIBrary(library.dsn)}                                     -
         {NOIKJEESX4|IKJEESX4(                                    -
               {ENable|DISABLE}                                     -
               {NUmber( num1 num2 num3 )}                           -
               {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
               {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
               {NOABendnotify|ABendnotify(                          -
                  (0|*|id1a {0|*|id2a {0|*|id3a }})                 -
                  (0|*|id1b {0|*|id2b {0|*|id3b }})                 -
                  (0|*|id1c {0|*|id2c {0|*|id3c }}) })              -
               {NOLIMit|LIMit(                                      -
                 (jobmask1,...)|*|0                                 -
                {(jobmask2,...)|*|0                                 -
                {(jobmask3,...)|*|0}})}                             -
               {NOVAlidrc|VAlidrc(rc,...)}                          -
               {NOGoodrc|Goodrc(rc,...)}                            -
               {NODIsablerc|DISABLERc(rc)}                          -
               {DEFaultrc(rc)}                                      -
                                                           )}
```

ABENDNOTIFY
>   Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
>   Specifies that no messages will be sent for TSO exit ABENDs.

>   **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEESX4 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEESX4 modules.

>   **library.dsn**
>   Specifies the name of a private **authorized** library used to locate and load the TSO IKJEESX4 user exit. The library name should be enclosed in single quotes (').

>   **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEESX4   Specifies that the IKJEESX4 exit point is to be activated.

NOIKJEESX4   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEESX4 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

          num1, num2, num3

               Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

               If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEESX4 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEESX4 user exits be activated. This can be specified at initialization, or later to load and activate IKJEESX4 user exits that were not activated at initialization. The exits will be called in the order listed.

          exit1

          exit2

          exit3
               The module name of the user exit that is assigned to the specified IKJEESX4 exit point.

          *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

          0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEESX4 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJEESX4 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

          exit1

          exit2

          exit3
               The module name of the backup user exit that is assigned to the specified TSO exit point.

          *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a IKJEESX4 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEESX4 exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of IKJEESX4 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEESX4 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

     rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by IKJEESX4 user exit modules. A good return code allows subsequent IKJEESX4 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEESX4 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

     rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

          NODISABLERC turns off disable return code checking for the exit point.

     rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

     rc   Default return codes values are any numeric value

IKJEESX5

Exit IKJEESX5 is the LISTBC command initialization routine.

OS/EM supplies only basic exit control functions for IKJEESX5.

```
OS$CNTL TSO                                                       -
 {NOABendnotify|ABendnotify(                                      -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                -
 {LIBrary(library.dsn)}                                          -
 {NOIKJEESX5|IKJEESX5(                                         -
      {ENable|DISABLE}                                           -
      {NUmber( num1 num2 num3 )}                                 -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}    -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
      {NOABendnotify|ABendnotify(                                -
         (0|*|id1a {0|*|id2a {0|*|id3a }})                       -
         (0|*|id1b {0|*|id2b {0|*|id3b }})                       -
         (0|*|id1c {0|*|id2c {0|*|id3c }}) })                    -
      {NOLIMit|LIMit(                                            -
        (jobmask1,...)|*|0                                       -
       {(jobmask2,...)|*|0                                       -
       {(jobmask3,...)|*|0}})}                                   -
      {NOVAlidrc|VAlidrc(rc,...)}                                -
      {NOGoodrc|Goodrc(rc,...)}                                  -
      {NODIsablerc|DISABLERc(rc)}                                -
      {DEFaultrc(rc)}                                            -
                                                          )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEESX5 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEESX5 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJEESX5 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEESX5   Specifies that the IKJEESX5 exit point is to be activated.

NOIKJEESX5   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEESX5 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEESX5 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEESX5 user exits be activated. This can be specified at initialization, or later to load and activate IKJEESX5 user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3

The module name of the user exit that is assigned to the specified IKJEESX5 exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEESX5 user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IKJEESX5 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3

The module name of the backup user exit that is assigned to the specified TSO exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a IKJEESX5 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEESX5 exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of IKJEESX5 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEESX5 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

    rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by IKJEESX5 user exit modules. A good return code allows subsequent IKJEESX5 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEESX5 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

    rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
    NODISABLERC turns off disable return code checking for the exit point.

    rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc   Default return codes values are any numeric value

IKJEESX6

Exit IKJEESX6 is the LISTBC command pre-display routine.

OS/EM supplies only basic exit control functions for IKJEESX6.

```
        OS$CNTL TSO                                                      -
         {NOABendnotify|ABendnotify(                                     -
             0|*|id1 {0|*|id2 {0|*|id3 }})}                              -
         {LIBrary(library.dsn)}                                          -
         {NOIKJEESX6|IKJEESX6(                                        -
                {ENable|DISABLE}                                        -
                {NUmber( num1 num2 num3 )}                              -
                {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}  -
                {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})} -
                {NOABendnotify|ABendnotify(                             -
                    (0|*|id1a {0|*|id2a {0|*|id3a }})                   -
                    (0|*|id1b {0|*|id2b {0|*|id3b }})                   -
                    (0|*|id1c {0|*|id2c {0|*|id3c }}) })                -
                {NOLIMit|LIMit(                                         -
                  (jobmask1,...)|*|0                                    -
                 {(jobmask2,...)|*|0                                    -
                 {(jobmask3,...)|*|0}})}                                -
                {NOVAlidrc|VAlidrc(rc,...)}                             -
                {NOGoodrc|Goodrc(rc,...)}                               -
                {NODIsablerc|DISABLERc(rc)}                             -
                {DEFaultrc(rc)}                                         -
                                                                 )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names
> to be notified in the case of an ABEND. (See "NFYGROUPS" on
> page SYS-1.)

LIBRARY   Specifies the loading of a IKJEESX6 exit module from a private **authorized** library
named library.dsn. If this parameter is omitted then the normal MVS search criteria is
used for IKJEESX6 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the
> TSO IKJEESX6 user exit. The library name should be enclosed in single quotes
> (').

> **Note:** If the program is not found in this library, no other search is performed
> and the user exit is **not** loaded.

IKJEESX6   Specifies that the IKJEESX6 exit point is to be activated.

NOIKJEESX6   The NO option can be used to completely nullify the exit point and disable and reset
any options in effect for it.

ENABLE   Specifies that the named IKJEESX6 exit point is be passed control for exit module
execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

> **num1, num2, num3**
>> Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
>>
>> If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEESX6 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEESX6 user exits be activated. This can be specified at initialization, or later to load and activate IKJEESX6 user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the user exit that is assigned to the specified IKJEESX6 exit point.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0**   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEESX6 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJEESX6 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the backup user exit that is assigned to the specified TSO exit point.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJEESX6 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEESX6 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJEESX6 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEESX6 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

>**rc**   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJEESX6 user exit modules. A good return code allows subsequent IKJEESX6 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEESX6 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

>**rc**   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

>NODISABLERC turns off disable return code checking for the exit point.

>**rc**   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

>**rc**   Default return codes values are any numeric value

IKJEESX7

Exit IKJEESX7 is the LISTBC command pre-list routine.

OS/EM supplies only basic exit control functions for IKJEESX7.

```
OS$CNTL TSO                                                         -
 {NOABendnotify|ABendnotify(                                        -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                  -
 {LIBrary(library.dsn)}                                             -
 {NOIKJEESX7|IKJEESX7(                                          -
       {ENable|DISABLE}                                            -
       {NUmber( num1 num2 num3 )}                                   -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}    -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}  -
       {NOABendnotify|ABendnotify(                                -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                        -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                        -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                     -
       {NOLIMit|LIMit(                                             -
         (jobmask1,...)|*|0                                        -
        {(jobmask2,...)|*|0                                        -
        {(jobmask3,...)|*|0}})}                                    -
       {NOVAlidrc|VAlidrc(rc,...)}                                 -
       {NOGoodrc|Goodrc(rc,...)}                                   -
       {NODIsablerc|DISABLERc(rc)}                                 -
       {DEFaultrc(rc)}                                             -
                                                  )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEESX7 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEESX7 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJEESX7 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEESX7   Specifies that the IKJEESX7 exit point is to be activated.

NOIKJEESX7   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEESX7 exit point is be passed control for exit module execution.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS Specifies that any active IKJEESX7 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of IKJEESX7 user exits be activated. This can be specified at initialization, or later to load and activate IKJEESX7 user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3

The module name of the user exit that is assigned to the specified IKJEESX7 exit point.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP Specifies that all active backup IKJEESX7 user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IKJEESX7 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3

The module name of the backup user exit that is assigned to the specified TSO exit point.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJEESX7 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEESX7 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJEESX7 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEESX7 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJEESX7 user exit modules. A good return code allows subsequent IKJEESX7 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEESX7 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
      NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

IKJEESX8

Exit IKJEESX8 is the LISTBC command pre-read routine.

OS/EM supplies only basic exit control functions for IKJEESX8.

```
OS$CNTL TSO                                                          -
  {NOABendnotify|ABendnotify(                                        -
     0|*|id1 {0|*|id2 {0|*|id3 }})}                                  -
  {LIBrary(library.dsn)}                                            -
  {NOIKJEESX8|IKJEESX8(                                         -
        {ENable|DISABLE}                                          -
        {NUmber( num1 num2 num3 )}                                 -
        {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}    -
        {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}  -
        {NOABendnotify|ABendnotify(                                -
           (0|*|id1a {0|*|id2a {0|*|id3a }})                       -
           (0|*|id1b {0|*|id2b {0|*|id3b }})                       -
           (0|*|id1c {0|*|id2c {0|*|id3c }}) })                    -
        {NOLIMit|LIMit(                                            -
          (jobmask1,...)|*|0                                       -
         {(jobmask2,...)|*|0                                       -
         {(jobmask3,...)|*|0}})}                                   -
        {NOVAlidrc|VAlidrc(rc,...)}                                -
        {NOGoodrc|Goodrc(rc,...)}                                  -
        {NODIsablerc|DISABLERc(rc)}                                -
        {DEFaultrc(rc)}                                            -
                                              )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEESX8 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEESX8 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJEESX8 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEESX8   Specifies that the IKJEESX8 exit point is to be activated.

NOIKJEESX8   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEESX8 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

    num1, num2, num3

        Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

        If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEESX8 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of IKJEESX8 user exits be activated. This can be specified at initialization, or later to load and activate IKJEESX8 user exits that were not activated at initialization. The exits will be called in the order listed.

    exit1

    exit2

    exit3

        The module name of the user exit that is assigned to the specified IKJEESX8 exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEESX8 user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IKJEESX8 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

    exit1

    exit2

    exit3

        The module name of the backup user exit that is assigned to the specified TSO exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJEESX8 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEESX8 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJEESX8 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEESX8 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJEESX8 user exit modules. A good return code allows subsequent IKJEESX8 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEESX8 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
      NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

IKJEESX9

Exit IKJEESX9 is the LISTBC command pre-allocate routine.

OS/EM supplies only basic exit control functions for IKJEESX9.

```
OS$CNTL TSO                                                        -
 {NOABendnotify|ABendnotify(                                       -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                 -
 {LIBrary(library.dsn)}                                            -
 {NOIKJEESX9|IKJEESX9(                                             -
       {ENable|DISABLE}                                            -
       {NUmber( num1 num2 num3 )}                                  -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}        -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}}     -
       {NOABendnotify|ABendnotify(                                 -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                        -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                        -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                     -
       {NOLIMit|LIMit(                                             -
         (jobmask1,...)|*|0                                        -
        {(jobmask2,...)|*|0                                        -
        {(jobmask3,...)|*|0}})}                                    -
       {NOVAlidrc|VAlidrc(rc,...)}                                 -
       {NOGoodrc|Goodrc(rc,...)}                                   -
       {NODIsablerc|DISABLERc(rc)}                                 -
       {DEFaultrc(rc)}                                             -
                                                    )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEESX9 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEESX9 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJEESX9 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEESX9   Specifies that the IKJEESX9 exit point is to be activated.

NOIKJEESX9   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEESX9 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

       num1, num2, num3

           Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

           If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available.   If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEESX9 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEESX9 user exits be activated. This can be specified at initialization, or later to load and activate IKJEESX9 user exits that were not activated at initialization. The exits will be called in the order listed.

       exit1

       exit2

       exit3

           The module name of the user exit that is assigned to the specified IKJEESX9 exit point.

       *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

       0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEESX9 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJEESX9 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

       exit1

       exit2

       exit3

           The module name of the backup user exit that is assigned to the specified TSO exit point.

       *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJEESX9 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEESX9 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJEESX9 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT Specifies that Job name limits are requested, to limit user exit modules for IKJEESX9 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

* An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

        rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJEESX9 user exit modules. A good return code allows subsequent IKJEESX9 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEESX9 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

        rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

        NODISABLERC turns off disable return code checking for the exit point.

        rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

        rc   Default return codes values are any numeric value

IKJEFD21

The TSO FREE command initialization exit IKJEFD21 allows you to check and change the command users issue or provide pseudo-operands.

OS/EM supplies only basic exit control functions for IKJEFD21.

```
        OS$CNTL TSO                                                  -
         {NOABendnotify|ABendnotify(                                 -
            0|*|id1 {0|*|id2 {0|*|id3 }})}                           -
         {LIBrary(library.dsn)}                                      -
         {NOIKJEFD21|IKJEFD21(                                      -
              {ENable|DISABLE}                                       -
              {NUmber( num1 num2 num3 )}                             -
              {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
              {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
              {NOABendnotify|ABendnotify(                            -
                 (0|*|id1a {0|*|id2a {0|*|id3a }})                   -
                 (0|*|id1b {0|*|id2b {0|*|id3b }})                   -
                 (0|*|id1c {0|*|id2c {0|*|id3c }}) )                 -
              {NOLIMit|LIMit(                                        -
                (jobmask1,...)|*|0                                   -
               {(jobmask2,...)|*|0                                   -
               {(jobmask3,...)|*|0}})}                               -
              {NOVAlidrc|VAlidrc(rc,...)}                            -
              {NOGoodrc|Goodrc(rc,...)}                              -
              {NODIsablerc|DISABLERc(rc)}                            -
              {DEFaultrc(rc)}                                        -
                                                    )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEFD21 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEFD21 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJEFD21 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEFD21   Specifies that the IKJEFD21 exit point is to be activated.

NOIKJEFD21   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEFD21 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

> **num1, num2, num3**
>> Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
>>
>> If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available.   If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEFD21 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEFD21 user exits be activated. This can be specified at initialization, or later to load and activate IKJEFD21 user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the user exit that is assigned to the specified IKJEFD21 exit point.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0**   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEFD21 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJEFD21 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the backup user exit that is assigned to the specified TSO exit point.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJEFD21 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEFD21 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJEFD21 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEFD21 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

        rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJEFD21 user exit modules. A good return code allows subsequent IKJEFD21 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEFD21 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

        rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

        NODISABLERC turns off disable return code checking for the exit point.

        rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

        rc   Default return codes values are any numeric value

IKJEFD22

The TSO FREE command termination exit IKJEFD22 allows you to perform clean-up processing.

OS/EM supplies only basic exit control functions for IKJEFD22.

```
OS$CNTL TSO                                                        -
  {NOABendnotify|ABendnotify(                                      -
     0|*|id1 {0|*|id2 {0|*|id3 }})}                                -
  {LIBrary(library.dsn)}                                           -
  {NOIKJEFD22|IKJEFD22(                                          -
        {ENable|DISABLE}                                          -
        {NUmber( num1 num2 num3 )}                                -
        {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}     -
        {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
        {NOABendnotify|ABendnotify(                               -
           (0|*|id1a {0|*|id2a {0|*|id3a }})                      -
           (0|*|id1b {0|*|id2b {0|*|id3b }})                      -
           (0|*|id1c {0|*|id2c {0|*|id3c }}) })                   -
        {NOLIMit|LIMit(                                           -
          (jobmask1,...)|*|0                                      -
         {(jobmask2,...)|*|0                                      -
         {(jobmask3,...)|*|0}})}                                  -
        {NOVAlidrc|VAlidrc(rc,...)}                               -
        {NOGoodrc|Goodrc(rc,...)}                                 -
        {NODIsablerc|DISABLERc(rc)}                               -
        {DEFaultrc(rc)}                                           -
                                                      )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEFD22 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEFD22 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJEFD22 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEFD22   Specifies that the IKJEFD22 exit point is to be activated.

NOIKJEFD22   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEFD22 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

       num1, num2, num3

              Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

              If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEFD22 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEFD22 user exits be activated. This can be specified at initialization, or later to load and activate IKJEFD22 user exits that were not activated at initialization. The exits will be called in the order listed.

       exit1

       exit2

       exit3

              The module name of the user exit that is assigned to the specified IKJEFD22 exit point.

       *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

       0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEFD22 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJEFD22 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

       exit1

       exit2

       exit3

              The module name of the backup user exit that is assigned to the specified TSO exit point.

       *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a IKJEFD22 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEFD22 exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of IKJEFD22 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEFD22 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJEFD22 user exit modules. A good return code allows subsequent IKJEFD22 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEFD22 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
      NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

IKJEFD47

The TSO ALLOCATE command initialization exit IKJEFD47 allows you to check and change the command users issue or provide pseudo-operands.

OS/EM supplies only basic exit control functions for IKJEFD47.

```
OS$CNTL TSO                                                      -
 {NOABendnotify|ABendnotify(                                     -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                               -
 {LIBrary(library.dsn)}                                          -
 {NOIKJEFD47|IKJEFD47(                                          -
      {ENable|DISABLE}                                           -
      {NUmber( num1 num2 num3 )}                                 -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}    -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})} -
      {NOABendnotify|ABendnotify(                                -
         (0|*|id1a {0|*|id2a {0|*|id3a }})                       -
         (0|*|id1b {0|*|id2b {0|*|id3b }})                       -
         (0|*|id1c {0|*|id2c {0|*|id3c }}) })                    -
      {NOLIMit|LIMit(                                            -
        (jobmask1,...)|*|0                                       -
       {(jobmask2,...)|*|0                                       -
       {(jobmask3,...)|*|0}})}                                   -
      {NOVAlidrc|VAlidrc(rc,...)}                                -
      {NOGoodrc|Goodrc(rc,...)}                                  -
      {NODIsablerc|DISABLERc(rc)}                                -
      {DEFaultrc(rc)}                                            -
                                                      )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEFD47 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEFD47 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJEFD47 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEFD47   Specifies that the IKJEFD47 exit point is to be activated.

NOIKJEFD47   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEFD47 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

        num1, num2, num3

                Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEFD47 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEFD47 user exits be activated. This can be specified at initialization, or later to load and activate IKJEFD47 user exits that were not activated at initialization. The exits will be called in the order listed.

        exit1

        exit2

        exit3

                The module name of the user exit that is assigned to the specified IKJEFD47 exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEFD47 user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IKJEFD47 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

        exit1

        exit2

        exit3

                The module name of the backup user exit that is assigned to the specified TSO exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJEFD47 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEFD47 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJEFD47 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEFD47 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

        rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJEFD47 user exit modules. A good return code allows subsequent IKJEFD47 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEFD47 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

        rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

        NODISABLERC turns off disable return code checking for the exit point.

        rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

        rc   Default return codes values are any numeric value

IKJEFD49

The TSO ALLOCATE command termination exit IKJEFD49 allows you to perform clean-up processing. Specify an alternative return code.

OS/EM supplies only basic exit control functions for IKJEFD49.

```
OS$CNTL TSO                                                        -
 {NOABendnotify|ABendnotify(                                       -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                 -
 {LIBrary(library.dsn)}                                            -
 {NOIKJEFD49|IKJEFD49(                                            -
      {ENable|DISABLE}                                             -
      {NUmber( num1 num2 num3 )}                                   -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}         -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}       -
      {NOABendnotify|ABendnotify(                                  -
         (0|*|id1a {0|*|id2a {0|*|id3a }})                         -
         (0|*|id1b {0|*|id2b {0|*|id3b }})                         -
         (0|*|id1c {0|*|id2c {0|*|id3c }}) })                      -
      {NOLIMit|LIMit(                                              -
        (jobmask1,...)|*|0                                         -
       {(jobmask2,...)|*|0                                         -
       {(jobmask3,...)|*|0}})}                                     -
      {NOVAlidrc|VAlidrc(rc,...)}                                  -
      {NOGoodrc|Goodrc(rc,...)}                                    -
      {NODIsablerc|DISABLERc(rc)}                                  -
      {DEFaultrc(rc)}                                              -
                                                     )}
```

ABENDNOTIFY
Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEFD49 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEFD49 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJEFD49 user exit. The library name should be enclosed in single quotes (').
>
> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEFD49   Specifies that the IKJEFD49 exit point is to be activated.

NOIKJEFD49   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEFD49 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3
                        Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                        If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEFD49 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of IKJEFD49 user exits be activated. This can be specified at initialization, or later to load and activate IKJEFD49 user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3
                        The module name of the user exit that is assigned to the specified IKJEFD49 exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEFD49 user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IKJEFD49 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
                        The module name of the backup user exit that is assigned to the specified TSO exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a IKJEFD49 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEFD49 exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of IKJEFD49 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEFD49 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

    rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJEFD49 user exit modules. A good return code allows subsequent IKJEFD49 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEFD49 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

    rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

    NODISABLERC turns off disable return code checking for the exit point.

    rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc   Default return codes values are any numeric value

IKJEFF10

The TSO SUBMIT command exit (IKJEFF10) may be used to check submitted JCL statements and accept, reject, or modify them.

OS/EM provides the following optional control functions:

- Reformat the job card accounting information

- Verify that the user is authorized to submit a job in the class specified

- Verify that the user is defined to your security system

- Verify that the user is authorized to submit jobs that contain operating system commands. The user can be limited to only specified commands, all commands, or can be precluded from submitting jobs with any operating system commands.

- Verify that the user is authorized to submit jobs that contain JES2 commands. The user can be limited to only specified commands, all commands, or can be precluded from submitting jobs with any JES2 commands.

- Verify that the first characters of the jobname matches the USERID. The USERJOBNAME check can be limited to certain execution classes by specifying a jobclass list. Otherwise, the option is universal.

- Insert a NOTIFY parameter if missing. The NOTIFY check can be limited to certain execution classes by specifying a jobclass list. Otherwise, the option is universal.

```
OS$CNTL TSO                                                    -
 {NOABendnotify|ABendnotify(                                   -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                             -
 {LIBrary(library.dsn)}                                        -
 {NOIKJEFF10|IKJEFF10(                                         -
      {ENable|DISABLE}                                         -
      {NUmber( num1 num2 num3 )}                               -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}     -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
      {NOABendnotify|ABendnotify(                              -
         (0|*|id1a {0|*|id2a {0|*|id3a }})                     -
         (0|*|id1b {0|*|id2b {0|*|id3b }})                     -
         (0|*|id1c {0|*|id2c {0|*|id3c }}) })                  -
      {NOLIMit|LIMit(                                          -
        (jobmask1,...)|*|0                                     -
       {(jobmask2,...)|*|0                                     -
       {(jobmask3,...)|*|0}})}                                 -
      {NOVAlidrc|VAlidrc(rc,...)}                              -
      {NOGoodrc|Goodrc(rc,...)}                                -
      {NODIsablerc|DISABLERc(rc)}                              -
      {DEFaultrc(rc)}                                          -
      {NOOPTions|OPTions(                                      -
              {NOABendnotify|ABendnotify(id)}                  -
              {FIRST|Last}                                     -
              {Warn|NOWarn}                                    -
              {Trace|NOTrace}                                  -
              {NOREformatacct|REformatacct}                    -
              {NOJObclasscheck|                                -
                 JObclasscheck{(NOLOG|LOG)}}                   -
              {NORAcfcheck|RAcfcheck}                          -
              {NOCommandcheck|                                 -
                 Commandcheck{(NOLOG|LOG)}}                    -
```

```
                  {NOJEs2commandcheck|                                          –
                     JEs2commandcheck{(NOLOG|LOG)}}                              –
                  {NOUserjobname|Userjobname                                     –
                    {(class{:class},...                               –
                      {NOREsourcename|                                           –
                        REsourcename(resrce {NOLOG|LOG})} )}           _
                  {NONotify|NOTify                                               –
                    {(class{:class},...)}}      )}   )}
```

ABENDNOTIFY

Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY

Specifies that no messages will be sent for TSO exit ABENDs.

id1, id2, id3   You may specify up to three TSO IDs or notification group names
to be notified in the case of an ABEND. (See "NFYGROUPS" on
page SYS-1.)

LIBRARY   Specifies the loading of a IKJEFF10 exit module from a private **authorized** library
named library.dsn. If this parameter is omitted then the normal MVS search criteria is
used for IKJEFF10 modules.

library.dsn
Specifies the name of a private **authorized** library used to locate and load the
TSO IKJEFF10 user exit. The library name should be enclosed in single quotes
(').

Note: If the program is not found in this library, no other search is performed
and the user exit is **not** loaded.

IKJEFF10   Specifies that the IKJEFF10 exit point is to be activated.

NOIKJEFF10   The NO option can be used to completely nullify the exit point and disable and reset
any options in effect for it.

ENABLE   Specifies that the named IKJEFF10 exit point is be passed control for exit module ex-
ecution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily
disable an exit point, but all the options that were specified previously are retained and
will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255
user exits per exit point at least one number should be specified here.

num1, num2, num3
Specify at least **num1** when entering user exit information. OS/EM
will process up to three user exits per OS$CNTL command based
on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM
will store the exit information in the corresponding slots of the pos-
sible 255 slots available. If only one number is entered, i.e.
NUMBER(7) OS/EM will process the user exits sequentially so the
exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEFF10 user exits are to be disabled. This is only effective
after initialization.

EXITS(...)   Specifies that the list of IKJEFF10 user exits be activated. This can be specified at initialization, or later to load and activate IKJEFF10 user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**
>
> **exit2**
>
> **exit3**
> > The module name of the user exit that is assigned to the specified IKJEFF10 exit point.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0**   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEFF10 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJEFF10 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**
>
> **exit2**
>
> **exit3**
> > The module name of the backup user exit that is assigned to the specified TSO exit point.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0**   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
> Specifies that when a IKJEFF10 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEFF10 exit module has ABENDed.

NOABENDNOTIFY
> The NO option can be used to nullify the option to notify a TSO user of IKJEFF10 exit module ABENDs.
>
> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
> The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
> The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
> The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

> **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT Specifies that Job name limits are requested, to limit user exit modules for IKJEFF10 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT The NO option can be used to nullify the option for Job name limits.

> **jobmask1**

> **jobmask2**

> **jobmask3**
> The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

* An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by IKJEFF10 user exit modules. A good return code allows subsequent IKJEFF10 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEFF10 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
                   NODISABLERC turns off disable return code checking for the exit point.

    rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc   Default return codes values are any numeric value

IKJEFF10 Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for IKJEFF10

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for IKJEFF10.

                   Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

ABENDNOTIFY
                   Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY
                   The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

                   Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

    id1 id2 id3
                   The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

    '*'   An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

FIRST

LAST   Specifies whether the optional OS/EM JCL Standards functions for IKJEFF10 will be applied before or after the user exits are invoked.

                   Note: OS/EM control functions are invoked FIRST by default.

WARN   Specifies whether ICQAMFX1 will be activated in WARN mode. The warn option specifies that OS/EM will simulate the activation of ICQAMFX1 functions, and issue messages if the request would cause the function to fail for the ICQAMFX1 function.

NOWARN   NOWARN is the default, and specifies that OS/EM will perform the ICQAMFX1 functions as specified by the options selected for the ICQAMFX1 function.

TRACE   Write GTF Trace records for critical control blocks, used in Problem Determination for OS/EM Optional functions in conjunction with OS/EM support.

NOTRACE   Disables GTF trace records (This is the default)

REFORMATACCT

For first statement of job statement sequence, convert account numbers of the format (XX-YY), 'XX-YY', and XX-YY to (XX,YY). That is, remove surrounding apostrophes or replace with parentheses if none are present, and convert dashes to commas. This can be useful since the TSO ACCOUNT command cannot handle (XX-YY) account numbers but will process (XX,YY).

NOREFORMATACCT

Specify NOREFORMATACCT to disable this option.

JOBCLASSCHECK

Checks that the user is authorized to submit a job in the class specified on their Jobcard.

Note: This check is done using the classname "FACILITY" (classname "IBMFAC" for CA-TOPSECRET) and "JOBCLASS.x" (where x is the desired jobclass) as the resource name; therefore, each named jobclass must be properly defined to your security system. If the jobclass is not properly defined, the submission will be allowed.

LOG

NOLOG
Specifies whether RACF logging should take place.

NOJOBCLASSCHECK

Specify NOJOBCLASSCHECK to disable this option.

RACFCHECK   Check that the user is defined to your security system (RACF, CA-TOPSECRET, or CA-ACF2). Others are not allowed to submit jobs.

NORACFCHECK

Specify NORACFCHECK to disable this option.

COMMANDCHECK

Check that the user is authorized to submit jobs that contain operating system commands. The user can be limited to only specified commands, all commands, or can be precluded from submitting jobs with any operating system commands.

Note: The command authorization is done via using the classname "FACILITY" (classname "IBMFAC" for CA-TOPSECRET) and "COMMAND.cmd" (where cmd is the desired command) as the resource name; therefore, each command must be properly defined to your security system.

MVS commands present in the Job stream before a Jobcard will not be checked.

Each defined command must be in its long form; that is, VARY, not V. Thus, the proper resource definition would be COMMAND.VARY.

To permit the user to issue any operating system command, define the resource as COMMAND.* and permit the user to this resource.

If the user is not permitted to any COMMAND. resources, he/she will not be permitted to include operating system commands in any submitted jobs.

LOG

NOLOG
>> Specifies whether RACF logging should take place.

NOCOMMANDCHECK
>> Specify NOCOMMANDCHECK to disable this option.

JES2COMMANDCHECK
>> Check that the user is authorized to submit jobs that contain JES2 commands. The user can be limited to only specified commands, all commands, or can be precluded from submitting jobs with any JES2 commands.

>> **Note:** The command authorization is done using the classname "FACILITY" (classname IBMFAC for CA-TOPSECRET) and JES2.$cmd (where cmd is the desired command) as the resource name; therefore, each command must be properly defined to your security system.

>> JES2 commands present in the Job stream before a Jobcard will not be checked.

>> The commands $VS, $ADD and $TRACE must be fully designated; all other commands must be a single letter. The proper resource designation for $A for example would be JES2.$A, a generic resource for JES2 commands would be JES2.$*, this covers all JES2 commands.

>> To permit the user to issue any JES2 command, define the resource as JES2.* and permit the user to this resource. Read authority is sufficient.

>> If the user is not permitted to any JES2 resources, he/she will not be permitted to include JES2 commands in any submitted jobs.

>> **LOG**

>> **NOLOG**
>>> Specifies whether RACF logging should take place.

NOJES2COMMANDCHECK
>> Specify NOJES2COMMANDCHECK to disable this option.

USERJOBNAME
>> Check that the first characters of the jobname matches the USERID. The USERJOBNAME check can be limited to certain execution classes by specifying a jobclass list. Otherwise, the option is universal.

NOUSERJOBNAME
>> Specify NOUSERJOBNAME to disable this option.

>> **jobclass**
>>> Used to limit the USERJOBNAME options to specified job classes.

>>> **Note:** A colon (:) may be used to specify an inclusive range of classes. For example, A:Z may be entered to specify classes A through Z.

>>> **RESOURCENAME**
>>>> Specify the name of the RACF FACILITY class resource which contains USERID's that are allowed to override this control.

>>> **LOG**

>>> **NOLOG**
>>>> Specifies whether RACF logging should take place.

NORESOURCENAME
> Specify NORESOURCENAME to nullify this option.

NOTIFY   Insert a NOTIFY parameter if missing. The NOTIFY check can be limited to certain execution classes by specifying a jobclass list. Otherwise, the option is universal.

NONOTIFY   Specify NONOTIFY to disable this option.

> **jobclass**
>> Used to limit the NOTIFY option to specified job classes.
>
>> **Note:** A colon (:) may be used to specify an inclusive range of classes. For example, A:Z may be entered to specify classes A through Z.

Example Exit Activation

This command will activate TSO exit IKJEFF10 with user exit JOBCARD as the only active exit module. No LIMIT checking will be done:

```
OS$CNTL TSO IKJEFF10(EXITS(JOBCARD))
```

Example Exit with LIMIT

This example activates exits USREXIT1 and USREXIT2. USREXIT2 will apply only to jobname BISP000. Note the asterisk that was entered as the first list for positioning so that BISP000 will apply to USREXIT2.

```
OS$CNTL TSO IKJEFF10(EXITS(USREXIT1 USREXIT2) -
   LIMITS((*)(BISP000)))
```

IKJEFF53

The TSO exit for OUTPUT, STATUS, and CANCEL commands allow you to tailor the way users can handle the processing of batch jobs and their output.

OS/EM provides only basic exit control functions for IKJEFF53.

```
OS$CNTL TSO                                                         -
 {NOABendnotify|ABendnotify(                                        -
    0|*|id1 {0|*|id2 {0|*|id3 }})})}                                -
 {LIBrary(library.dsn)}                                             -
 {NOIKJEFF53|IKJEFF53(                                          -
       {ENable|DISABLE}                                            -
       {NUmber( num1 num2 num3 )}                                  -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}    -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})} -
       {NOABendnotify|ABendnotify(                                -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                        -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                        -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                     -
       {NOLIMit|LIMit(                                            -
         (jobmask1,...)|*|0                                        -
        {(jobmask2,...)|*|0                                        -
        {(jobmask3,...)|*|0}})}                                    -
       {NOVAlidrc|VAlidrc(rc,...)}                                 -
       {NOGoodrc|Goodrc(rc,...)}                                   -
       {NODIsablerc|DISABLERc(rc)}                                 -
       {DEFaultrc(rc)}                                             -
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEFF53 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEFF53 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJEFF53 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEFF53   Specifies that the IKJEFF53 exit point is to be activated.

NOIKJEFF53   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEFF53 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

    num1, num2, num3

        Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

        If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEFF53 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEFF53 user exits be activated. This can be specified at initialization, or later to load and activate IKJEFF53 user exits that were not activated at initialization. The exits will be called in the order listed.

    exit1

    exit2

    exit3

        The module name of the user exit that is assigned to the specified IKJEFF53 exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEFF53 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJEFF53 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

    exit1

    exit2

    exit3

        The module name of the backup user exit that is assigned to the specified TSO exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJEFF53 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEFF53 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJEFF53 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEFF53 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

        rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJEFF53 user exit modules. A good return code allows subsequent IKJEFF53 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEFF53 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

        rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
        NODISABLERC turns off disable return code checking for the exit point.

        rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

        rc   Default return codes values are any numeric value

IKJEFLD1

The TSO logon pre-prompt exit allows you to verify, change, or supply logon parameters and system characteristics, cancel logon requests, provide your own JCL statements, or display your own full-screen logon panel.

It also performs the following authorized functions: specify the first TSO/E command, return job and SYSOUT classes, bypass RACF, return the relative block address (RBA), pass data to the logoff exit, specify security label of current logon session, and specify languages to be used for displaying translated information.

OS/EM provides the following optional functions:

*   Have TSO insert the RACF password into the TSB

*   Force a TSO user to receive broadcast messages at logon

```
          OS$CNTL TSO                                               -
           {NOABendnotify|ABendnotify(                              -
              0|*|id1 {0|*|id2 {0|*|id3 }})}                        -
           {LIBrary(library.dsn)}                                   -
           {NOIKJEFLD1|IKJEFLD1(                                 -
                {ENable|DISABLE}                                    -
                {NUmber( num1 num2 num3 )}                          -
                {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}   -
                {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})} -
                {NOABendnotify|ABendnotify(                         -
                   (0|*|id1a {0|*|id2a {0|*|id3a }})                -
                   (0|*|id1b {0|*|id2b {0|*|id3b }})                -
                   (0|*|id1c {0|*|id2c {0|*|id3c }}) })             -
                {NOLIMit|LIMit(                                     -
                  (jobmask1,...)|*|0                                -
                 {(jobmask2,...)|*|0                                -
                 {(jobmask3,...)|*|0}})}                            -
                {NOVAlidrc|VAlidrc(rc,...)}                         -
                {NOGoodrc|Goodrc(rc,...)}                           -
                {NODIsablerc|DISABLERc(rc)}                         -
                {DEFaultrc(rc)}                                     -
                {NOOPTions|OPTions(                                 -
                        {NOABendnotify|ABendnotify(id)}             -
                        {First|Last}                                -
                        {TRace|NOTRace}                             -
                        {NOMail|Mail}                               -
                        {NONotices|Notices}                         -
                        {NOTSbpassword|TSbpassword}  )}  )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEFLD1 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEFLD1 modules.

library.dsn
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJEFLD1 user exit. The library name should be enclosed in single quotes (').
>
> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEFLD1   Specifies that the IKJEFLD1 exit point is to be activated.

NOIKJEFLD1 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEFLD1 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

> **num1, num2, num3**
>> Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
>>
>> If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEFLD1 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of IKJEFLD1 user exits be activated. This can be specified at initialization, or later to load and activate IKJEFLD1 user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the user exit that is assigned to the specified IKJEFLD1 exit point.

> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

> **0**   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEFLD1 user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IKJEFLD1 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that

were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
>The module name of the backup user exit that is assigned to the specified TSO exit point.

*
>An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
>A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
>Specifies that when a IKJEFLD1 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEFLD1 exit module has ABENDed.

NOABENDNOTIFY
>The NO option can be used to nullify the option to notify a TSO user of IKJEFLD1 exit module ABENDs.
>
>**Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
>The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
>The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
>The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.
>
>**Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*
>An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0
>A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEFLD1 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

> The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*

> An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0

> A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

> **rc**   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJEFLD1 user exit modules. A good return code allows subsequent IKJEFLD1 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEFLD1 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

> **rc**   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

> NODISABLERC turns off disable return code checking for the exit point.

> **rc**   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

> **rc**   Default return codes values are any numeric value

IKJEFLD1 Options

OPTIONS   Specifies that an optional OS/EM control function is to be enabled for IKJEFLD1

NOOPTIONS   The NOOPTIONS parameter will totally disable the optional OS/EM control function for IKJEFLD1.

Note: The optional OS/EM JCL Standards control functions must be installed for this parameter to have any effect.

ABENDNOTIFY

Specifies that when an OS/EM exit module ABENDs a TSO NOTIFY should be sent to up to 3 TSO IDs or notify group names indicating that an OS/EM exit module has ABENDED.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO USERID of OS/EM exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

id1 id2 id3

The TSO IDs or notify group names that are to be notified if the optional OS/EM exit ABENDs.

'*'

An asterisk (*) can be used as a placeholder to indicate that a prior value in this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0

A zero (0) can be used to negate a previous entry of the notify TSO user list.

FIRST

LAST

Specifies whether the optional OS/EM JCL Standards functions for IKJEFLD1 will be applied before or after the user exits are invoked.

Note: OS/EM control functions are invoked FIRST by default.

TRACE   Write GTF Trace records for critical control blocks

NOTRACE   Disables GTF trace records (This is the default)

TSBPASSWORD

Turn on bit to have TSO insert RACF password into the TSB, required if using options to add TSO passwords to the Jobcard.

NOTSBPASSWORD

Disables the insertion of the TSO password into the Jobcard

MAIL   Turns on a bit, so that a TSO user will receive BRODCAST messages that are directed specifically at them during TSO logon, (i.e. NOTIFY= on a Jobcard)

NOMAIL   Turns on a bit, so that a TSO user will not receive BRODCAST messages that are directed specifically at them during TSO logon, (i.e. NOTIFY= on a Jobcard)

NOTICES   Turns on a bit, so that TSO users will receive BRODCAST messages that are directed to all users during TSO logon, (i.e. SEND command from the Console Operator to all TSO users specifying the LOGON parameter)

NONOTICES   Turns on a bit, so that TSO users will not receive BRODCAST messages that are directed to all users during TSO logon, (i.e. SEND command from the Console Operator to all TSO users specifying the LOGON parameter)

Example Exit Activation

This command will activate TSO exit IKJEFLD1 with user exit LOGONEX as the only active exit module. No LIMIT checking will be done:

```
OS$CNTL TSO IKJEFF10(EXITS(LOGONEX))
```

Example Exit with LIMIT

This example activates exits LOGONEX1 and LOGONEX2. LOGONEX2 will apply only to TSO user SPGTIH. Note the asterisk that was entered as the first list for positioning so that BISP000 will apply to LOGONEX2.

```
OS$CNTL TSO IKJEFLD1(EXITS(LOGONEX1 LOGONEX2) -
    LIMITS((*)(SPGTIH)))
```

IKJEFLD2

The TSO logoff exit IKJEFLD2 allows you to tailor the TSO/E logoff process, gather accounting information, control UADS and RACF data base updates, and control re-logons.

OS/EM supplies only basic exit control functions for IKJEFLD2.

```
OS$CNTL TSO                                                          -
 {NOABendnotify|ABendnotify(                                         -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                   -
 {LIBrary(library.dsn)}                                             -
 {NOIKJEFLD2|IKJEFLD2(                                        -
       {ENable|DISABLE}                                             -
       {NUmber( num1 num2 num3 )}                                    -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}    -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3})})}} -
       {NOABendnotify|ABendnotify(                                   -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                          -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                          -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                       -
       {NOLIMit|LIMit(                                               -
         (jobmask1,...)|*|0                                          -
        {(jobmask2,...)|*|0                                          -
        {(jobmask3,...)|*|0}})}                                      -
       {NOVAlidrc|VAlidrc(rc,...)}                                   -
       {NOGoodrc|Goodrc(rc,...)}                                     -
       {NODIsablerc|DISABLERc(rc)}                                   -
       {DEFaultrc(rc)}                                               -
                                                    )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a IKJEFLD2 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEFLD2 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJEFLD2 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEFLD2 Specifies that the IKJEFLD2 exit point is to be activated.

NOIKJEFLD2 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named IKJEFLD2 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

> **num1, num2, num3**
> > Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
> >
> > If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEFLD2 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEFLD2 user exits be activated. This can be specified at initialization, or later to load and activate IKJEFLD2 user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**
>
> **exit2**
>
> **exit3**
> > The module name of the user exit that is assigned to the specified IKJEFLD2 exit point.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0**   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEFLD2 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJEFLD2 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**
>
> **exit2**
>
> **exit3**
> > The module name of the backup user exit that is assigned to the specified TSO exit point.
>
> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJEFLD2 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEFLD2 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJEFLD2 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEFLD2 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

         rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJEFLD2 user exit modules. A good return code allows subsequent IKJEFLD2 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEFLD2 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

         rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
         NODISABLERC turns off disable return code checking for the exit point.

         rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

         rc   Default return codes values are any numeric value

IKJEFLD3

The TSO logon post-prompt exit allows you to examine, modify, and add JCL statements associated with the logon process.

OS/EM supplies only basic exit control functions for IKJEFLD3.

```
        OS$CNTL TSO                                                     -
         {NOABendnotify|ABendnotify(                                    -
            0|*|id1 {0|*|id2 {0|*|id3 }})}                              -
         {LIBrary(library.dsn)}                                         -
         {NOIKJEFLD3|IKJEFLD3(                                        -
              {ENable|DISABLE}                                          -
              {NUmber( num1 num2 num3 )}                                -
              {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}    -
              {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
              {NOABendnotify|ABendnotify(                               -
                 (0|*|id1a {0|*|id2a {0|*|id3a }})                      -
                 (0|*|id1b {0|*|id2b {0|*|id3b }})                      -
                 (0|*|id1c {0|*|id2c {0|*|id3c }}) })                   -
              {NOLIMit|LIMit(                                           -
                (jobmask1,...)|*|0                                      -
               {(jobmask2,...)|*|0                                      -
               {(jobmask3,...)|*|0}})}                                  -
              {NOVAlidrc|VAlidrc(rc,...)}                               -
              {NOGoodrc|Goodrc(rc,...)}                                 -
              {NODIsablerc|DISABLERc(rc)}                               -
              {DEFaultrc(rc)}                                           -
                                                    )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a IKJEFLD3 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEFLD3 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJEFLD3 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEFLD3 Specifies that the IKJEFLD3 exit point is to be activated.

NOIKJEFLD3 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named IKJEFLD3 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

        num1, num2, num3

                Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEFLD3 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEFLD3 user exits be activated. This can be specified at initialization, or later to load and activate IKJEFLD3 user exits that were not activated at initialization. The exits will be called in the order listed.

        exit1

        exit2

        exit3

                The module name of the user exit that is assigned to the specified IKJEFLD3 exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEFLD3 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJEFLD3 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

        exit1

        exit2

        exit3

                The module name of the backup user exit that is assigned to the specified TSO exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJEFLD3 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEFLD3 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJEFLD3 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEFLD3 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

    rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by IKJEFLD3 user exit modules. A good return code allows subsequent IKJEFLD3 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEFLD3 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

    rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
         NODISABLERC turns off disable return code checking for the exit point.

    rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc   Default return codes values are any numeric value

IKJEFLN1

The TSO logon pre-display exit IKJEFLN1 allows you to update information on the logon panel and process installation-defined fields on the logon panel.

OS/EM supplies only basic exit control functions for IKJEFLN1.

```
OS$CNTL TSO                                                             -
 {NOABendnotify|ABendnotify(                                            -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                      -
 {LIBrary(library.dsn)}                                                 -
 {NOIKJEFLN1|IKJEFLN1(                                                 -
       {ENable|DISABLE}                                                 -
       {NUmber( num1 num2 num3 )}                                       -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}            -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}          -
       {NOABendnotify|ABendnotify(                                      -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                            -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                            -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                         -
       {NOLIMit|LIMit(                                                  -
         (jobmask1,...)|*|0                                             -
        {(jobmask2,...)|*|0                                             -
        {(jobmask3,...)|*|0}})}                                         -
       {NOVAlidrc|VAlidrc(rc,...)}                                      -
       {NOGoodrc|Goodrc(rc,...)}                                        -
       {NODIsablerc|DISABLERc(rc)}                                      -
       {DEFaultrc(rc)}                                                  -
                                                         )}
```

ABENDNOTIFY
Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
Specifies that no messages will be sent for TSO exit ABENDs.

    id1, id2, id3   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEFLN1 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEFLN1 modules.

    library.dsn
Specifies the name of a private **authorized** library used to locate and load the TSO IKJEFLN1 user exit. The library name should be enclosed in single quotes (').

    Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEFLN1   Specifies that the IKJEFLN1 exit point is to be activated.

NOIKJEFLN1   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEFLN1 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEFLN1 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEFLN1 user exits be activated. This can be specified at initialization, or later to load and activate IKJEFLN1 user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3

The module name of the user exit that is assigned to the specified IKJEFLN1 exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEFLN1 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJEFLN1 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3

The module name of the backup user exit that is assigned to the specified TSO exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a IKJEFLN1 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEFLN1 exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of IKJEFLN1 exit module ABENDs.

> **Note:** See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

> **Note:** See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEFLN1 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

    rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJEFLN1 user exit modules. A good return code allows subsequent IKJEFLN1 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEFLN1 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

    rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
    NODISABLERC turns off disable return code checking for the exit point.

    rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc   Default return codes values are any numeric value

IKJEFLN2

The TSO logon post-display exit IKJEFLN2 allows you to validate and process fields on the logon panel, re-prompt the user for information, and also request display of help screens.

OS/EM supplies only basic exit control functions for IKJEFLN2.

```
OS$CNTL TSO                                                            -
 {NOABendnotify|ABendnotify(                                           -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                     -
 {LIBrary(library.dsn)}                                               -
 {NOIKJEFLN2|IKJEFLN2(                                              -
      {ENable|DISABLE}                                               -
      {NUmber( num1 num2 num3 )}                                     -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}           -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}        -
      {NOABendnotify|ABendnotify(                                     -
         (0|*|id1a {0|*|id2a {0|*|id3a }})                           -
         (0|*|id1b {0|*|id2b {0|*|id3b }})                           -
         (0|*|id1c {0|*|id2c {0|*|id3c }}) })                        -
      {NOLIMit|LIMit(                                                 -
        (jobmask1,...)|*|0                                           -
       {(jobmask2,...)|*|0                                           -
       {(jobmask3,...)|*|0}})}                                       -
      {NOVAlidrc|VAlidrc(rc,...)}                                     -
      {NOGoodrc|Goodrc(rc,...)}                                       -
      {NODIsablerc|DISABLERc(rc)}                                     -
      {DEFaultrc(rc)}                                                 -
                                                      )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEFLN2 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEFLN2 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJEFLN2 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEFLN2   Specifies that the IKJEFLN2 exit point is to be activated.

NOIKJEFLN2   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEFLN2 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

    num1, num2, num3
Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEFLN2 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEFLN2 user exits be activated. This can be specified at initialization, or later to load and activate IKJEFLN2 user exits that were not activated at initialization. The exits will be called in the order listed.

    exit1

    exit2

    exit3
The module name of the user exit that is assigned to the specified IKJEFLN2 exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEFLN2 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJEFLN2 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

    exit1

    exit2

    exit3
The module name of the backup user exit that is assigned to the specified TSO exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJEFLN2 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEFLN2 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJEFLN2 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEFLN2 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

        rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJEFLN2 user exit modules. A good return code allows subsequent IKJEFLN2 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEFLN2 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

        rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
        NODISABLERC turns off disable return code checking for the exit point.

        rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

        rc   Default return codes values are any numeric value

IKJEFXG1

The IKJEFXG1 exit allows you to tailor PUTGET and GETLINE processing.

OS/EM supplies only basic exit control functions for IKJEFXG1.

```
OS$CNTL TSO                                                        -
 {NOABendnotify|ABendnotify(                                       -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                 -
 {LIBrary(library.dsn)}                                            -
 {NOIKJEFXG1|IKJEFXG1(                                         -
      {ENable|DISABLE}                                             -
      {NUmber( num1 num2 num3 )}                                   -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3})})}} -
      {NOABendnotify|ABendnotify(                                  -
         (0|*|id1a {0|*|id2a {0|*|id3a }})                         -
         (0|*|id1b {0|*|id2b {0|*|id3b }})                         -
         (0|*|id1c {0|*|id2c {0|*|id3c }}) })                      -
      {NOLIMit|LIMit(                                              -
        (jobmask1,...)|*|0                                         -
       {(jobmask2,...)|*|0                                         -
       {(jobmask3,...)|*|0}})}                                     -
      {NOVAlidrc|VAlidrc(rc,...)}                                  -
      {NOGoodrc|Goodrc(rc,...)}                                    -
      {NODIsablerc|DISABLERc(rc)}                                  -
      {DEFaultrc(rc)}                                              -
                                                    )}
```

ABENDNOTIFY

>   Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY

>   Specifies that no messages will be sent for TSO exit ABENDs.

>   **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEFXG1 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEFXG1 modules.

>   **library.dsn**
>   Specifies the name of a private **authorized** library used to locate and load the TSO IKJEFXG1 user exit. The library name should be enclosed in single quotes (').

>   **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEFXG1   Specifies that the IKJEFXG1 exit point is to be activated.

NOIKJEFXG1   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEFXG1 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

   num1, num2, num3

   Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

   If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEFXG1 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEFXG1 user exits be activated. This can be specified at initialization, or later to load and activate IKJEFXG1 user exits that were not activated at initialization. The exits will be called in the order listed.

   exit1

   exit2

   exit3

   The module name of the user exit that is assigned to the specified IKJEFXG1 exit point.

   *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

   0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEFXG1 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJEFXG1 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

   exit1

   exit2

   exit3

   The module name of the backup user exit that is assigned to the specified TSO exit point.

   *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a IKJEFXG1 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEFXG1 exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of IKJEFXG1 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT Specifies that Job name limits are requested, to limit user exit modules for IKJEFXG1 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

* An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

> **rc**   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJEFXG1 user exit modules. A good return code allows subsequent IKJEFXG1 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEFXG1 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

> **rc**   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
> NODISABLERC turns off disable return code checking for the exit point.

> **rc**   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

> **rc**   Default return codes values are any numeric value

IKJEFY11

The IKJEFY11 exit is the OUTDES initialization routine.

OS/EM supplies only basic exit control functions for IKJEFY11.

```
OS$CNTL TSO                                                        -
 {NOABendnotify|ABendnotify(                                       -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                 -
 {LIBrary(library.dsn)}                                            -
 {NOIKJEFY11|IKJEFY11(                                         -
       {ENable|DISABLE}                                           -
       {NUmber( num1 num2 num3 )}                                 -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3})})} -
       {NOABendnotify|ABendnotify(                               -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                       -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                       -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                    -
       {NOLIMit|LIMit(                                            -
         (jobmask1,...)|*|0                                       -
        {(jobmask2,...)|*|0                                       -
        {(jobmask3,...)|*|0}})}                                   -
       {NOVAlidrc|VAlidrc(rc,...)}                                -
       {NOGoodrc|Goodrc(rc,...)}                                  -
       {NODIsablerc|DISABLERc(rc)}                                -
       {DEFaultrc(rc)}                                            -
                                                    )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a IKJEFY11 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEFY11 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJEFY11 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEFY11 Specifies that the IKJEFY11 exit point is to be activated.

NOIKJEFY11 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named IKJEFY11 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

   num1, num2, num3
               Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

               If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEFY11 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEFY11 user exits be activated. This can be specified at initialization, or later to load and activate IKJEFY11 user exits that were not activated at initialization. The exits will be called in the order listed.

   exit1

   exit2

   exit3
               The module name of the user exit that is assigned to the specified IKJEFY11 exit point.

   *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

   0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEFY11 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJEFY11 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

   exit1

   exit2

   exit3
               The module name of the backup user exit that is assigned to the specified TSO exit point.

   *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJEFY11 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEFY11 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJEFY11 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEFY11 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

    rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJEFY11 user exit modules. A good return code allows subsequent IKJEFY11 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEFY11 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

    rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
    NODISABLERC turns off disable return code checking for the exit point.

    rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc   Default return codes values are any numeric value

IKJEFY12

The IKJEFY12 exit is the OUTDES termination routine.

OS/EM supplies only basic exit control functions for IKJEFY12.

```
OS$CNTL TSO                                                          -
 {NOABendnotify|ABendnotify(                                         -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                   -
 {LIBrary(library.dsn)}                                              -
 {NOIKJEFY12|IKJEFY12(                                          -
       {ENable|DISABLE}                                             -
       {NUmber( num1 num2 num3 )}                                   -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3})})}} -
       {NOABendnotify|ABendnotify(                                   -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                          -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                          -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                      -
       {NOLIMit|LIMit(                                               -
         (jobmask1,...)|*|0                                          -
        {(jobmask2,...)|*|0                                          -
        {(jobmask3,...)|*|0}})}                                      -
       {NOVAlidrc|VAlidrc(rc,...)}                                   -
       {NOGoodrc|Goodrc(rc,...)}                                     -
       {NODIsablerc|DISABLERc(rc)}                                   -
       {DEFaultrc(rc)}                                               -
                                                      )}
```

ABENDNOTIFY

Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY

Specifies that no messages will be sent for TSO exit ABENDs.

id1, id2, id3 You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a IKJEFY12 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEFY12 modules.

library.dsn
Specifies the name of a private **authorized** library used to locate and load the TSO IKJEFY12 user exit. The library name should be enclosed in single quotes (').

Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEFY12 Specifies that the IKJEFY12 exit point is to be activated.

NOIKJEFY12 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named IKJEFY12 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

        num1, num2, num3

                Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEFY12 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEFY12 user exits be activated. This can be specified at initialization, or later to load and activate IKJEFY12 user exits that were not activated at initialization. The exits will be called in the order listed.

        exit1

        exit2

        exit3

                The module name of the user exit that is assigned to the specified IKJEFY12 exit point.

        *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEFY12 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJEFY12 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

        exit1

        exit2

        exit3

                The module name of the backup user exit that is assigned to the specified TSO exit point.

        *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJEFY12 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEFY12 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJEFY12 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEFY12 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

     rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJEFY12 user exit modules. A good return code allows subsequent IKJEFY12 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEFY12 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

     rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
    NODISABLERC turns off disable return code checking for the exit point.

     rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

     rc   Default return codes values are any numeric value

IKJEFY60

The IKJEFY60 exit is the PRINTDS command initialization routine.

OS/EM supplies only basic exit control functions for IKJEFY60.

```
OS$CNTL TSO                                                         -
  {NOABendnotify|ABendnotify(                                       -
     0|*|id1 {0|*|id2 {0|*|id3 }})}                                 -
  {LIBrary(library.dsn)}                                            -
  {NOIKJEFY60|IKJEFY60(                                         -
        {ENable|DISABLE}                                           -
        {NUmber( num1 num2 num3 )}                                 -
        {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
        {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
        {NOABendnotify|ABendnotify(                               -
           (0|*|id1a {0|*|id2a {0|*|id3a }})                      -
           (0|*|id1b {0|*|id2b {0|*|id3b }})                      -
           (0|*|id1c {0|*|id2c {0|*|id3c }}) })                   -
        {NOLIMit|LIMit(                                            -
          (jobmask1,...)|*|0                                       -
         {(jobmask2,...)|*|0                                       -
         {(jobmask3,...)|*|0}})}                                   -
        {NOVAlidrc|VAlidrc(rc,...)}                                -
        {NOGoodrc|Goodrc(rc,...)}                                  -
        {NODIsablerc|DISABLERc(rc)}                                -
        {DEFaultrc(rc)}                                            -
                                                   )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> > **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEFY60 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEFY60 modules.

> **library.dsn**
> > Specifies the name of a private **authorized** library used to locate and load the TSO IKJEFY60 user exit. The library name should be enclosed in single quotes (').

> > **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEFY60   Specifies that the IKJEFY60 exit point is to be activated.

NOIKJEFY60   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEFY60 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

    num1, num2, num3

        Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

        If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEFY60 user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEFY60 user exits be activated. This can be specified at initialization, or later to load and activate IKJEFY60 user exits that were not activated at initialization. The exits will be called in the order listed.

    exit1

    exit2

    exit3

        The module name of the user exit that is assigned to the specified IKJEFY60 exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEFY60 user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJEFY60 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

    exit1

    exit2

    exit3

        The module name of the backup user exit that is assigned to the specified TSO exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJEFY60 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEFY60 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJEFY60 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEFY60 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

    rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by IKJEFY60 user exit modules. A good return code allows subsequent IKJEFY60 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEFY60 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

    rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

    NODISABLERC turns off disable return code checking for the exit point.

    rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc   Default return codes values are any numeric value

IKJEFY64

The IKJEFY64 exit is the PRINTDS command termination routine.

OS/EM supplies only basic exit control functions for IKJEFY64.

```
        OS$CNTL TSO                                                        -
         {NOABendnotify|ABendnotify(                                       -
            0|*|id1 {0|*|id2 {0|*|id3 }})}                                 -
         {LIBrary(library.dsn)}                                            -
         {NOIKJEFY64|IKJEFY64(                                            -
              {ENable|DISABLE}                                             -
              {NUmber( num1 num2 num3 )}                                   -
              {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}        -
              {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}      -
              {NOABendnotify|ABendnotify(                                  -
                 (0|*|id1a {0|*|id2a {0|*|id3a }})                         -
                 (0|*|id1b {0|*|id2b {0|*|id3b }})                         -
                 (0|*|id1c {0|*|id2c {0|*|id3c }}) })                      -
              {NOLIMit|LIMit(                                              -
                (jobmask1,...)|*|0                                         -
               {(jobmask2,...)|*|0                                         -
               {(jobmask3,...)|*|0}})}                                     -
              {NOVAlidrc|VAlidrc(rc,...)}                                  -
              {NOGoodrc|Goodrc(rc,...)}                                    -
              {NODIsablerc|DISABLERc(rc)}                                  -
              {DEFaultrc(rc)}                                              -
                                                      )}
```

ABENDNOTIFY

        Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY

        Specifies that no messages will be sent for TSO exit ABENDs.

        id1, id2, id3   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEFY64 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEFY64 modules.

        library.dsn

        Specifies the name of a private **authorized** library used to locate and load the TSO IKJEFY64 user exit. The library name should be enclosed in single quotes (').

        Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEFY64   Specifies that the IKJEFY64 exit point is to be activated.

NOIKJEFY64   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEFY64 exit point is be passed control for exit module execution.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

> **num1, num2, num3**
>> Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
>>
>> If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS Specifies that any active IKJEFY64 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of IKJEFY64 user exits be activated. This can be specified at initialization, or later to load and activate IKJEFY64 user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the user exit that is assigned to the specified IKJEFY64 exit point.
>
> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.
>
> **0** A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP Specifies that all active backup IKJEFY64 user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IKJEFY64 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the backup user exit that is assigned to the specified TSO exit point.
>
> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJEFY64 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEFY64 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJEFY64 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEFY64 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

        rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJEFY64 user exit modules. A good return code allows subsequent IKJEFY64 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEFY64 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

        rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
        NODISABLERC turns off disable return code checking for the exit point.

        rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

        rc   Default return codes values are any numeric value

IKJEGASI

The IKJEGASI exit is the TESTAUTH subcommand initialization routine.

OS/EM supplies only basic exit control functions for IKJEGASI.

```
OS$CNTL TSO                                                          -
 {NOABendnotify|ABendnotify(                                         -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                   -
 {LIBrary(library.dsn)}                                             -
 {NOIKJEGASI|IKJEGASI(                                         -
       {ENable|DISABLE}                                             -
       {NUmber( num1 num2 num3 )}                                   -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
       {NOABendnotify|ABendnotify(                                  -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                         -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                         -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                      -
       {NOLIMit|LIMit(                                              -
         (jobmask1,...)|*|0                                         -
        {(jobmask2,...)|*|0                                         -
        {(jobmask3,...)|*|0}})}                                     -
       {NOVAlidrc|VAlidrc(rc,...)}                                  -
       {NOGoodrc|Goodrc(rc,...)}                                    -
       {NODIsablerc|DISABLERc(rc)}                                  -
       {DEFaultrc(rc)}                                              -
                                                    )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEGASI exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEGASI modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJEGASI user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEGASI   Specifies that the IKJEGASI exit point is to be activated.

NOIKJEGASI   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEGASI exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3
                 Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                 If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available.   If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEGASI user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEGASI user exits be activated. This can be specified at initialization, or later to load and activate IKJEGASI user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3
                 The module name of the user exit that is assigned to the specified IKJEGASI exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEGASI user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJEGASI user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
                 The module name of the backup user exit that is assigned to the specified TSO exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

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0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
           Specifies that when a IKJEGASI exit module ABENDs a TSO NOTIFY message
           should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEGASI
           exit module has ABENDed.

NOABENDNOTIFY
           The NO option can be used to nullify the option to notify a TSO user of IKJEGASI
           exit module ABENDs.

           Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

           (id1a,id1b,id1c)
                The TSO IDs or notify group names to be notified if the first exit being processed
                ABENDs.

           (id2a,id2b,id2c)
                The TSO IDs or notify group names to be notified if the second exit being
                processed ABENDs.

           (id3a,id3b,id3c)
                The TSO IDs or notify group names to be notified if the third exit being proc-
                essed ABENDs.

                Note: See "NFYGROUPS" on page SYS-1 for more information about notify
                groups.

           *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this
                position of the notify TSO user list is not to be changed. As a default, the asterisk
                would be omitted where it would normally be implied.

           0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEGASI
           to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

           jobmask1

           jobmask2

           jobmask3
                The job name mask list for the corresponding user exit module, jobmask1 corre-
                sponding to the jobmask for the first User exit module specified via the EX-
                ITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use
                the same masking characters as volume masks. See "Volume/Jobname Masks"
                on page C-1 for a detailed discussion of Jobname masking.

           *   An asterisk (*) can be used as a placeholder to indicate that a prior value for this
                position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a
                default, the asterisk would be omitted where it would normally be implied.

           0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname
                masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined
           by IBM exit programming documentation for each exit point. The valid return codes
           for each IBM exit point are built into OS/EM. If anything is specified it completely
           replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJEGASI user exit modules. A good return code allows subsequent IKJEGASI user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEGASI set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
      NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

IKJEGAST

The IKJEGAST exit is the TESTAUTH subcommand termination routine.

OS/EM supplies only basic exit control functions for IKJEGAST.

```
OS$CNTL TSO                                                          -
  {NOABendnotify|ABendnotify(                                        -
     0|*|id1 {0|*|id2 {0|*|id3 }})}                                  -
  {LIBrary(library.dsn)}                                             -
  {NOIKJEGAST|IKJEGAST(                                         -
        {ENable|DISABLE}                                            -
        {NUmber( num1 num2 num3 )}                                  -
        {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}    -
        {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
        {NOABendnotify|ABendnotify(                                 -
           (0|*|id1a {0|*|id2a {0|*|id3a }})                        -
           (0|*|id1b {0|*|id2b {0|*|id3b }})                        -
           (0|*|id1c {0|*|id2c {0|*|id3c }}) })                     -
        {NOLIMit|LIMit(                                             -
          (jobmask1,...)|*|0                                        -
         {(jobmask2,...)|*|0                                        -
         {(jobmask3,...)|*|0}})}                                    -
        {NOVAlidrc|VAlidrc(rc,...)}                                 -
        {NOGoodrc|Goodrc(rc,...)}                                   -
        {NODIsablerc|DISABLERc(rc)}                                 -
        {DEFaultrc(rc)}                                             -
                                            )}
```

ABENDNOTIFY
>   Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
>   Specifies that no messages will be sent for TSO exit ABENDs.

>   **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEGAST exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEGAST modules.

>   **library.dsn**
>   Specifies the name of a private **authorized** library used to locate and load the TSO IKJEGAST user exit. The library name should be enclosed in single quotes (').

>   **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEGAST   Specifies that the IKJEGAST exit point is to be activated.

NOIKJEGAST   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEGAST exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

        num1, num2, num3

                Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEGAST user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEGAST user exits be activated. This can be specified at initialization, or later to load and activate IKJEGAST user exits that were not activated at initialization. The exits will be called in the order listed.

        exit1

        exit2

        exit3

                The module name of the user exit that is assigned to the specified IKJEGAST exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEGAST user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJEGAST user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

        exit1

        exit2

        exit3

                The module name of the backup user exit that is assigned to the specified TSO exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJEGAST exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEGAST exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJEGAST exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEGAST to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

    rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJEGAST user exit modules. A good return code allows subsequent IKJEGAST user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEGAST set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

    rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

    NODISABLERC turns off disable return code checking for the exit point.

    rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc   Default return codes values are any numeric value

IKJEGAUI

The IKJEGAUI exit is the TESTAUTH command initialization routine.

OS/EM supplies only basic exit control functions for IKJEGAUI.

```
OS$CNTL TSO                                                          -
  {NOABendnotify|ABendnotify(                                        -
     0|*|id1 {0|*|id2 {0|*|id3 }})}                                  -
  {LIBrary(library.dsn)}                                            -
  {NOIKJEGAUI|IKJEGAUI(                                             -
       {ENable|DISABLE}                                            -
       {NUmber( num1 num2 num3 )}                                  -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}        -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
       {NOABendnotify|ABendnotify(                                 -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                        -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                        -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                     -
       {NOLIMit|LIMit(                                             -
         (jobmask1,...)|*|0                                        -
        {(jobmask2,...)|*|0                                        -
        {(jobmask3,...)|*|0}})}                                    -
       {NOVAlidrc|VAlidrc(rc,...)}                                 -
       {NOGoodrc|Goodrc(rc,...)}                                   -
       {NODIsablerc|DISABLERc(rc)}                                 -
       {DEFaultrc(rc)}                                             -
                                                      )}
```

ABENDNOTIFY
>> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
>> Specifies that no messages will be sent for TSO exit ABENDs.

>> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a IKJEGAUI exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEGAUI modules.

>> **library.dsn**
>> Specifies the name of a private **authorized** library used to locate and load the TSO IKJEGAUI user exit. The library name should be enclosed in single quotes (').

>> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEGAUI Specifies that the IKJEGAUI exit point is to be activated.

NOIKJEGAUI The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named IKJEGAUI exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3
Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEGAUI user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEGAUI user exits be activated. This can be specified at initialization, or later to load and activate IKJEGAUI user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3
The module name of the user exit that is assigned to the specified IKJEGAUI exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEGAUI user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJEGAUI user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
The module name of the backup user exit that is assigned to the specified TSO exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a IKJEGAUI exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEGAUI exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of IKJEGAUI exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEGAUI to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by IKJEGAUI user exit modules. A good return code allows subsequent IKJEGAUI user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEGAUI set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
          NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

IKJEGAUT

The IKJEGAUT exit is the TESTAUTH command termination routine.

OS/EM supplies only basic exit control functions for IKJEGAUT.

```
OS$CNTL TSO                                                           -
  {NOABendnotify|ABendnotify(                                         -
     0|*|id1 {0|*|id2 {0|*|id3 }})}                                   -
  {LIBrary(library.dsn)}                                              -
  {NOIKJEGAUT|IKJEGAUT(                                             -
       {ENable|DISABLE}                                              -
       {NUmber( num1 num2 num3 )}                                    -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}          -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}       -
       {NOABendnotify|ABendnotify(                                   -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                          -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                          -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                       -
       {NOLIMit|LIMit(                                               -
         (jobmask1,...)|*|0                                          -
        {(jobmask2,...)|*|0                                          -
        {(jobmask3,...)|*|0}})}                                      -
       {NOVAlidrc|VAlidrc(rc,...)}                                   -
       {NOGoodrc|Goodrc(rc,...)}                                     -
       {NODIsablerc|DISABLERc(rc)}                                   -
       {DEFaultrc(rc)}                                               -
                                                      )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> > **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEGAUT exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEGAUT modules.

> **library.dsn**
> > Specifies the name of a private **authorized** library used to locate and load the TSO IKJEGAUT user exit. The library name should be enclosed in single quotes (').

> > **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEGAUT   Specifies that the IKJEGAUT exit point is to be activated.

NOIKJEGAUT   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEGAUT exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

           num1, num2, num3

                Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available.   If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEGAUT user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEGAUT user exits be activated. This can be specified at initialization, or later to load and activate IKJEGAUT user exits that were not activated at initialization. The exits will be called in the order listed.

           exit1

           exit2

           exit3
                The module name of the user exit that is assigned to the specified IKJEGAUT exit point.

           *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

           0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEGAUT user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJEGAUT user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

           exit1

           exit2

           exit3
                The module name of the backup user exit that is assigned to the specified TSO exit point.

           *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJEGAUT exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEGAUT exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJEGAUT exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEGAUT to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

    rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJEGAUT user exit modules. A good return code allows subsequent IKJEGAUT user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEGAUT set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

    rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
    NODISABLERC turns off disable return code checking for the exit point.

    rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc   Default return codes values are any numeric value

IKJEGCIE

The IKJEGCIE exit is the TEST subcommand initialization routine.

OS/EM supplies only basic exit control functions for IKJEGCIE.

```
OS$CNTL TSO                                                              -
 {NOABendnotify|ABendnotify(                                             -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                       -
 {LIBrary(library.dsn)}                                                  -
 {NOIKJEGCIE|IKJEGCIE(                                                  -
      {ENable|DISABLE}                                                   -
      {NUmber( num1 num2 num3 )}                                         -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}            -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
      {NOABendnotify|ABendnotify(                                        -
         (0|*|id1a {0|*|id2a {0|*|id3a }})                              -
         (0|*|id1b {0|*|id2b {0|*|id3b }})                              -
         (0|*|id1c {0|*|id2c {0|*|id3c }}) })                           -
      {NOLIMit|LIMit(                                                    -
        (jobmask1,...)|*|0                                              -
       {(jobmask2,...)|*|0                                              -
       {(jobmask3,...)|*|0}})}                                          -
      {NOVAlidrc|VAlidrc(rc,...)}                                        -
      {NOGoodrc|Goodrc(rc,...)}                                          -
      {NODIsablerc|DISABLERc(rc)}                                        -
      {DEFaultrc(rc)}                                                    -
                                                    )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEGCIE exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEGCIE modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJEGCIE user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEGCIE   Specifies that the IKJEGCIE exit point is to be activated.

NOIKJEGCIE   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEGCIE exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEGCIE user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEGCIE user exits be activated. This can be specified at initialization, or later to load and activate IKJEGCIE user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3

The module name of the user exit that is assigned to the specified IKJEGCIE exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEGCIE user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJEGCIE user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3

The module name of the backup user exit that is assigned to the specified TSO exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJEGCIE exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEGCIE exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJEGCIE exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEGCIE to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

    rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJEGCIE user exit modules. A good return code allows subsequent IKJEGCIE user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEGCIE set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

    rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
    NODISABLERC turns off disable return code checking for the exit point.

    rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc   Default return codes values are any numeric value

IKJEGCTE

The IKJEGCTE exit is the TEST subcommand termination routine.

OS/EM supplies only basic exit control functions for IKJEGCTE.

```
OS$CNTL TSO                                                         -
 {NOABendnotify|ABendnotify(                                        -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                  -
 {LIBrary(library.dsn)}                                            -
 {NOIKJEGCTE|IKJEGCTE(                                          -
      {ENable|DISABLE}                                             -
      {NUmber( num1 num2 num3 )}                                   -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}    -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
      {NOABendnotify|ABendnotify(                                  -
         (0|*|id1a {0|*|id2a {0|*|id3a }})                         -
         (0|*|id1b {0|*|id2b {0|*|id3b }})                         -
         (0|*|id1c {0|*|id2c {0|*|id3c }}) })                      -
      {NOLIMit|LIMit(                                              -
        (jobmask1,...)|*|0                                         -
       {(jobmask2,...)|*|0                                         -
       {(jobmask3,...)|*|0}})}                                     -
      {NOVAlidrc|VAlidrc(rc,...)}                                  -
      {NOGoodrc|Goodrc(rc,...)}                                    -
      {NODIsablerc|DISABLERc(rc)}                                  -
      {DEFaultrc(rc)}                                              -
                                                    )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEGCTE exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEGCTE modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJEGCTE user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEGCTE   Specifies that the IKJEGCTE exit point is to be activated.

NOIKJEGCTE   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEGCTE exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

        num1, num2, num3

            Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

            If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEGCTE user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEGCTE user exits be activated. This can be specified at initialization, or later to load and activate IKJEGCTE user exits that were not activated at initialization. The exits will be called in the order listed.

        exit1

        exit2

        exit3

            The module name of the user exit that is assigned to the specified IKJEGCTE exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEGCTE user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJEGCTE user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

        exit1

        exit2

        exit3

            The module name of the backup user exit that is assigned to the specified TSO exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJEGCTE exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEGCTE exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJEGCTE exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT Specifies that Job name limits are requested, to limit user exit modules for IKJEGCTE to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

* An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

        rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJEGCTE user exit modules. A good return code allows subsequent IKJEGCTE user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEGCTE set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

        rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
        NODISABLERC turns off disable return code checking for the exit point.

        rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

        rc   Default return codes values are any numeric value

IKJEGMIE

The IKJEGMIE exit is the TEST command initialization routine.

OS/EM supplies only basic exit control functions for IKJEGMIE.

```
OS$CNTL TSO                                                          -
  {NOABendnotify|ABendnotify(                                        -
     0|*|id1 {0|*|id2 {0|*|id3 }})}                                  -
  {LIBrary(library.dsn)}                                            -
  {NOIKJEGMIE|IKJEGMIE(                                         -
        {ENable|DISABLE}                                            -
        {NUmber( num1 num2 num3 )}                                  -
        {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}     -
        {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
        {NOABendnotify|ABendnotify(                                 -
           (0|*|id1a {0|*|id2a {0|*|id3a }})                        -
           (0|*|id1b {0|*|id2b {0|*|id3b }})                        -
           (0|*|id1c {0|*|id2c {0|*|id3c }}) })                     -
        {NOLIMit|LIMit(                                             -
          (jobmask1,...)|*|0                                        -
         {(jobmask2,...)|*|0                                        -
         {(jobmask3,...)|*|0}})}                                    -
        {NOVAlidrc|VAlidrc(rc,...)}                                 -
        {NOGoodrc|Goodrc(rc,...)}                                   -
        {NODIsablerc|DISABLERc(rc)}                                 -
        {DEFaultrc(rc)}                                             -
                                                          )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEGMIE exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEGMIE modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJEGMIE user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEGMIE   Specifies that the IKJEGMIE exit point is to be activated.

NOIKJEGMIE   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEGMIE exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

     num1, num2, num3

          Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

          If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEGMIE user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEGMIE user exits be activated. This can be specified at initialization, or later to load and activate IKJEGMIE user exits that were not activated at initialization. The exits will be called in the order listed.

     exit1

     exit2

     exit3

          The module name of the user exit that is assigned to the specified IKJEGMIE exit point.

     *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

     0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEGMIE user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJEGMIE user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

     exit1

     exit2

     exit3

          The module name of the backup user exit that is assigned to the specified TSO exit point.

     *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a IKJEGMIE exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEGMIE exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of IKJEGMIE exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEGMIE to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

        rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJEGMIE user exit modules. A good return code allows subsequent IKJEGMIE user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEGMIE set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

        rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
        NODISABLERC turns off disable return code checking for the exit point.

        rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

        rc   Default return codes values are any numeric value

IKJEGMTE

The IKJEGMTE exit is the TEST command termination routine.

OS/EM supplies only basic exit control functions for IKJEGMTE.

```
OS$CNTL TSO                                                          -
 {NOABendnotify|ABendnotify(                                         -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                   -
 {LIBrary(library.dsn)}                                             -
 {NOIKJEGMTE|IKJEGMTE(                                       -
      {ENable|DISABLE}                                              -
      {NUmber( num1 num2 num3 )}                                    -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
      {NOABendnotify|ABendnotify(                                   -
         (0|*|id1a {0|*|id2a {0|*|id3a }})                          -
         (0|*|id1b {0|*|id2b {0|*|id3b }})                          -
         (0|*|id1c {0|*|id2c {0|*|id3c }}) })                       -
      {NOLIMit|LIMit(                                               -
        (jobmask1,...)|*|0                                          -
       {(jobmask2,...)|*|0                                          -
       {(jobmask3,...)|*|0}})}                                      -
      {NOVAlidrc|VAlidrc(rc,...)}                                   -
      {NOGoodrc|Goodrc(rc,...)}                                     -
      {NODIsablerc|DISABLERc(rc)}                                   -
      {DEFaultrc(rc)}                                               -
                                                        )}
```

ABENDNOTIFY

    Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY

    Specifies that no messages will be sent for TSO exit ABENDs.

    id1, id2, id3   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IKJEGMTE exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJEGMTE modules.

    library.dsn

    Specifies the name of a private **authorized** library used to locate and load the TSO IKJEGMTE user exit. The library name should be enclosed in single quotes (').

    Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJEGMTE   Specifies that the IKJEGMTE exit point is to be activated.

NOIKJEGMTE   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IKJEGMTE exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

   num1, num2, num3

   Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

   If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJEGMTE user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IKJEGMTE user exits be activated. This can be specified at initialization, or later to load and activate IKJEGMTE user exits that were not activated at initialization. The exits will be called in the order listed.

   exit1

   exit2

   exit3
   The module name of the user exit that is assigned to the specified IKJEGMTE exit point.

   *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

   0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJEGMTE user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IKJEGMTE user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

   exit1

   exit2

   exit3
   The module name of the backup user exit that is assigned to the specified TSO exit point.

   *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a IKJEGMTE exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJEGMTE exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of IKJEGMTE exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJEGMTE to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

    rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by IKJEGMTE user exit modules. A good return code allows subsequent IKJEGMTE user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJEGMTE set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

    rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
    NODISABLERC turns off disable return code checking for the exit point.

    rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc Default return codes values are any numeric value

IKJPRMX1

The IKJPRMX1 exit is the PARMLIB initialization routine.

OS/EM supplies only basic exit control functions for IKJPRMX1.

```
OS$CNTL TSO                                                          -
 {NOABendnotify|ABendnotify(                                         -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                   -
 {LIBrary(library.dsn)}                                              -
 {NOIKJPRMX1|IKJPRMX1(                                             -
      {ENable|DISABLE}                                               -
      {NUmber( num1 num2 num3 )}                                     -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}          -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}        -
      {NOABendnotify|ABendnotify(                                    -
         (0|*|id1a {0|*|id2a {0|*|id3a }})                          -
         (0|*|id1b {0|*|id2b {0|*|id3b }})                          -
         (0|*|id1c {0|*|id2c {0|*|id3c }}) })                       -
      {NOLIMit|LIMit(                                                -
        (jobmask1,...)|*|0                                          -
       {(jobmask2,...)|*|0                                          -
       {(jobmask3,...)|*|0}})}                                      -
      {NOVAlidrc|VAlidrc(rc,...)}                                    -
      {NOGoodrc|Goodrc(rc,...)}                                      -
      {NODIsablerc|DISABLERc(rc)}                                    -
      {DEFaultrc(rc)}                                                -
                                                   )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a IKJPRMX1 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJPRMX1 modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IKJPRMX1 user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJPRMX1 Specifies that the IKJPRMX1 exit point is to be activated.

NOIKJPRMX1 The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named IKJPRMX1 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

   num1, num2, num3

   Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

   If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJPRMX1 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of IKJPRMX1 user exits be activated. This can be specified at initialization, or later to load and activate IKJPRMX1 user exits that were not activated at initialization. The exits will be called in the order listed.

   exit1

   exit2

   exit3
   The module name of the user exit that is assigned to the specified IKJPRMX1 exit point.

   *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

   0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJPRMX1 user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IKJPRMX1 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

   exit1

   exit2

   exit3
   The module name of the backup user exit that is assigned to the specified TSO exit point.

   *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IKJPRMX1 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJPRMX1 exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IKJPRMX1 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJPRMX1 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

        rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJPRMX1 user exit modules. A good return code allows subsequent IKJPRMX1 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJPRMX1 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

        rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
        NODISABLERC turns off disable return code checking for the exit point.

        rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

        rc   Default return codes values are any numeric value

IKJPRMX2

The IKJPRMX2 exit is the PARMLIB termination routine.

OS/EM supplies only basic exit control functions for IKJPRMX2.

```
OS$CNTL TSO                                                         -
 {NOABendnotify|ABendnotify(                                        -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                  -
 {LIBrary(library.dsn)}                                             -
 {NOIKJPRMX2|IKJPRMX2(                                              -
       {ENable|DISABLE}                                            -
       {NUmber( num1 num2 num3 )}                                   -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}      -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}    -
       {NOABendnotify|ABendnotify(                                  -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                        -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                        -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                     -
       {NOLIMit|LIMit(                                              -
         (jobmask1,...)|*|0                                        -
        {(jobmask2,...)|*|0                                        -
        {(jobmask3,...)|*|0}})}                                    -
       {NOVAlidrc|VAlidrc(rc,...)}                                  -
       {NOGoodrc|Goodrc(rc,...)}                                    -
       {NODIsablerc|DISABLERc(rc)}                                  -
       {DEFaultrc(rc)}                                              -
                                                      )}
```

ABENDNOTIFY

Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY

Specifies that no messages will be sent for TSO exit ABENDs.

id1, id2, id3　　You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY　　Specifies the loading of a IKJPRMX2 exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IKJPRMX2 modules.

library.dsn

Specifies the name of a private **authorized** library used to locate and load the TSO IKJPRMX2 user exit. The library name should be enclosed in single quotes (').

Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IKJPRMX2　　Specifies that the IKJPRMX2 exit point is to be activated.

NOIKJPRMX2　　The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE　　Specifies that the named IKJPRMX2 exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

    num1, num2, num3

        Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

        If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IKJPRMX2 user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of IKJPRMX2 user exits be activated. This can be specified at initialization, or later to load and activate IKJPRMX2 user exits that were not activated at initialization. The exits will be called in the order listed.

    exit1

    exit2

    exit3

        The module name of the user exit that is assigned to the specified IKJPRMX2 exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IKJPRMX2 user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IKJPRMX2 user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

    exit1

    exit2

    exit3

        The module name of the backup user exit that is assigned to the specified TSO exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a IKJPRMX2 exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IKJPRMX2 exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of IKJPRMX2 exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IKJPRMX2 to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

        rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IKJPRMX2 user exit modules. A good return code allows subsequent IKJPRMX2 user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IKJPRMX2 set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

        rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

    NODISABLERC turns off disable return code checking for the exit point.

        rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

        rc   Default return codes values are any numeric value

INMCZ21R

Exit INMCZ21R is the TSO TRANSMIT command names dataset pre-allocation exit.

OS/EM supplies only basic exit control functions for INMCZ21R.

```
OS$CNTL TSO                                                         -
  {NOABendnotify|ABendnotify(                                       -
     0|*|id1 {0|*|id2 {0|*|id3 }})}                                 -
  {LIBrary(library.dsn)}                                            -
  {NOINMCZ21R|INMCZ21R(                                             -
       {ENable|DISABLE}                                             -
       {NUmber( num1 num2 num3 )}                                   -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}         -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}       -
       {NOABendnotify|ABendnotify(                                  -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                         -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                         -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                      -
       {NOLIMit|LIMit(                                              -
         (jobmask1,...)|*|0                                         -
        {(jobmask2,...)|*|0                                         -
        {(jobmask3,...)|*|0}})}                                     -
       {NOVAlidrc|VAlidrc(rc,...)}                                  -
       {NOGoodrc|Goodrc(rc,...)}                                    -
       {NODIsablerc|DISABLERc(rc)}                                  -
       {DEFaultrc(rc)}                                              -
                                                  )}
```

ABENDNOTIFY

Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY

Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a INMCZ21R exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for INMCZ21R modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO INMCZ21R user exit. The library name should be enclosed in single quotes (').
>
> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

INMCZ21R   Specifies that the INMCZ21R exit point is to be activated.

NOINMCZ21R   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named INMCZ21R exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

> **num1, num2, num3**
>> Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
>>
>> If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active INMCZ21R user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of INMCZ21R user exits be activated. This can be specified at initialization, or later to load and activate INMCZ21R user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the user exit that is assigned to the specified INMCZ21R exit point.

> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

> **0**   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup INMCZ21R user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup INMCZ21R user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the backup user exit that is assigned to the specified TSO exit point.

> *****   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a INMCZ21R exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a INMCZ21R exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of INMCZ21R exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT Specifies that Job name limits are requested, to limit user exit modules for INMCZ21R to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

* An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

       rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by INMCZ21R user exit modules. A good return code allows subsequent INMCZ21R user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for INMCZ21R set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

       rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
          NODISABLERC turns off disable return code checking for the exit point.

       rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

       rc   Default return codes values are any numeric value

INMRZ01R

Exit INMRZ01R is the TSO RECEIVE command initialization routine.

OS/EM supplies only basic exit control functions for INMRZ01R.

```
        OS$CNTL TSO                                                    -
         {NOABendnotify|ABendnotify(                                   -
            0|*|id1 {0|*|id2 {0|*|id3 }})}                             -
         {LIBrary(library.dsn)}                                        -
         {NOINMRZ01R|INMRZ01R(                                         -
             {ENable|DISABLE}                                          -
             {NUmber( num1 num2 num3 )}                                -
             {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}      -
             {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}    -
             {NOABendnotify|ABendnotify(                               -
                (0|*|id1a {0|*|id2a {0|*|id3a }})                      -
                (0|*|id1b {0|*|id2b {0|*|id3b }})                      -
                (0|*|id1c {0|*|id2c {0|*|id3c }}) })                   -
             {NOLIMit|LIMit(                                           -
               (jobmask1,...)|*|0                                      -
              {(jobmask2,...)|*|0                                      -
              {(jobmask3,...)|*|0}})}                                  -
             {NOVAlidrc|VAlidrc(rc,...)}                               -
             {NOGoodrc|Goodrc(rc,...)}                                 -
             {NODIsablerc|DISABLERc(rc)}                               -
             {DEFaultrc(rc)}                                           -
                                                                     )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> > **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a INMRZ01R exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for INMRZ01R modules.

> **library.dsn**
> > Specifies the name of a private **authorized** library used to locate and load the TSO INMRZ01R user exit. The library name should be enclosed in single quotes (').

> > **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

INMRZ01R   Specifies that the INMRZ01R exit point is to be activated.

NOINMRZ01R   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named INMRZ01R exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

   num1, num2, num3
                Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available.   If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active INMRZ01R user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of INMRZ01R user exits be activated. This can be specified at initialization, or later to load and activate INMRZ01R user exits that were not activated at initialization. The exits will be called in the order listed.

   exit1

   exit2

   exit3
                The module name of the user exit that is assigned to the specified INMRZ01R exit point.

   *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

   0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup INMRZ01R user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup INMRZ01R user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

   exit1

   exit2

   exit3
                The module name of the backup user exit that is assigned to the specified TSO exit point.

   *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
            Specifies that when a INMRZ01R exit module ABENDs a TSO NOTIFY message
            should be sent to up to 3 TSO IDs or notify group names indicating that a INMRZ01R
            exit module has ABENDed.

NOABENDNOTIFY
            The NO option can be used to nullify the option to notify a TSO user of INMRZ01R
            exit module ABENDs.

            Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

            (id1a,id1b,id1c)
                The TSO IDs or notify group names to be notified if the first exit being processed
                ABENDs.

            (id2a,id2b,id2c)
                The TSO IDs or notify group names to be notified if the second exit being
                processed ABENDs.

            (id3a,id3b,id3c)
                The TSO IDs or notify group names to be notified if the third exit being proc-
                essed ABENDs.

                Note: See "NFYGROUPS" on page SYS-1 for more information about notify
                groups.

            *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this
                position of the notify TSO user list is not to be changed. As a default, the asterisk
                would be omitted where it would normally be implied.

            0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for INMRZ01R
            to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

            jobmask1

            jobmask2

            jobmask3
                The job name mask list for the corresponding user exit module, jobmask1 corre-
                sponding to the jobmask for the first User exit module specified via the EX-
                ITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use
                the same masking characters as volume masks. See "Volume/Jobname Masks"
                on page C-1 for a detailed discussion of Jobname masking.

            *   An asterisk (*) can be used as a placeholder to indicate that a prior value for this
                position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a
                default, the asterisk would be omitted where it would normally be implied.

            0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname
                masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined
            by IBM exit programming documentation for each exit point. The valid return codes
            for each IBM exit point are built into OS/EM. If anything is specified it completely
            replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

    rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by INMRZ01R user exit modules. A good return code allows subsequent INMRZ01R user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for INMRZ01R set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

    rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
    NODISABLERC turns off disable return code checking for the exit point.

    rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc   Default return codes values are any numeric value

INMRZ02R

Exit INMRZ02R is the TSO RECEIVE command termination routine.

OS/EM supplies only basic exit control functions for INMRZ02R.

```
OS$CNTL TSO                                                      -
 {NOABendnotify|ABendnotify(                                     -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                               -
 {LIBrary(library.dsn)}                                          -
 {NOINMRZ02R|INMRZ02R(                                           -
      {ENable|DISABLE}                                           -
      {NUmber( num1 num2 num3 )}                                 -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}       -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}     -
      {NOABendnotify|ABendnotify(                                -
         (0|*|id1a {0|*|id2a {0|*|id3a }})                       -
         (0|*|id1b {0|*|id2b {0|*|id3b }})                       -
         (0|*|id1c {0|*|id2c {0|*|id3c }}) })                    -
      {NOLIMit|LIMit(                                            -
        (jobmask1,...)|*|0                                       -
       {(jobmask2,...)|*|0                                       -
       {(jobmask3,...)|*|0}})}                                   -
      {NOVAlidrc|VAlidrc(rc,...)}                                -
      {NOGoodrc|Goodrc(rc,...)}                                  -
      {NODIsablerc|DISABLERc(rc)}                                -
      {DEFaultrc(rc)}                                            -
                                                   )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a INMRZ02R exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for INMRZ02R modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO INMRZ02R user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

INMRZ02R   Specifies that the INMRZ02R exit point is to be activated.

NOINMRZ02R The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named INMRZ02R exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

        num1, num2, num3

                Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active INMRZ02R user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of INMRZ02R user exits be activated. This can be specified at initialization, or later to load and activate INMRZ02R user exits that were not activated at initialization. The exits will be called in the order listed.

        exit1

        exit2

        exit3
                The module name of the user exit that is assigned to the specified INMRZ02R exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup INMRZ02R user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup INMRZ02R user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

        exit1

        exit2

        exit3
                The module name of the backup user exit that is assigned to the specified TSO exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a INMRZ02R exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a INMRZ02R exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of INMRZ02R exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for INMRZ02R to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

        rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by INMRZ02R user exit modules. A good return code allows subsequent INMRZ02R user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for INMRZ02R set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

        rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
        NODISABLERC turns off disable return code checking for the exit point.

        rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

        rc   Default return codes values are any numeric value

INMRZ04R

Exit INMRZ04R is the TSO RECEIVE command notification routine.

OS/EM supplies only basic exit control functions for INMRZ04R.

```
OS$CNTL TSO                                                         -
 {NOABendnotify|ABendnotify(                                        -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                  -
 {LIBrary(library.dsn)}                                             -
 {NOINMRZ04R|INMRZ04R(                                             -
      {ENable|DISABLE}                                             -
      {NUmber( num1 num2 num3 )}                                   -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}       -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}     -
      {NOABendnotify|ABendnotify(                                  -
         (0|*|id1a {0|*|id2a {0|*|id3a }})                         -
         (0|*|id1b {0|*|id2b {0|*|id3b }})                         -
         (0|*|id1c {0|*|id2c {0|*|id3c }}) })                      -
      {NOLIMit|LIMit(                                              -
        (jobmask1,...)|*|0                                         -
       {(jobmask2,...)|*|0                                         -
       {(jobmask3,...)|*|0}})}                                     -
      {NOVAlidrc|VAlidrc(rc,...)}                                  -
      {NOGoodrc|Goodrc(rc,...)}                                    -
      {NODIsablerc|DISABLERc(rc)}                                  -
      {DEFaultrc(rc)}                                              -
                                              )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a INMRZ04R exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for INMRZ04R modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO INMRZ04R user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

INMRZ04R   Specifies that the INMRZ04R exit point is to be activated.

NOINMRZ04R   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named INMRZ04R exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

       num1, num2, num3
           Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

           If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active INMRZ04R user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of INMRZ04R user exits be activated. This can be specified at initialization, or later to load and activate INMRZ04R user exits that were not activated at initialization. The exits will be called in the order listed.

       exit1

       exit2

       exit3
           The module name of the user exit that is assigned to the specified INMRZ04R exit point.

       *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

       0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup INMRZ04R user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup INMRZ04R user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

       exit1

       exit2

       exit3
           The module name of the backup user exit that is assigned to the specified TSO exit point.

       *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a INMRZ04R exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a INMRZ04R exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of INMRZ04R exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for INMRZ04R to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by INMRZ04R user exit modules. A good return code allows subsequent INMRZ04R user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for INMRZ04R set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
      NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

INMRZ05R

The INMRZ05R exit is the TSO RECEIVE command acknowledgment notification routine.

OS/EM supplies only basic exit control functions for INMRZ05R.

```
OS$CNTL TSO                                                             -
 {NOABendnotify|ABendnotify(                                            -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                      -
 {LIBrary(library.dsn)}                                                 -
 {NOINMRZ05R|INMRZ05R(                                               -
      {ENable|DISABLE}                                                  -
      {NUmber( num1 num2 num3 )}                                        -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3})})}} -
      {NOABendnotify|ABendnotify(                                       -
        (0|*|id1a {0|*|id2a {0|*|id3a }})                              -
        (0|*|id1b {0|*|id2b {0|*|id3b }})                              -
        (0|*|id1c {0|*|id2c {0|*|id3c }}) })                           -
      {NOLIMit|LIMit(                                                   -
        (jobmask1,...)|*|0                                             -
       {(jobmask2,...)|*|0                                             -
       {(jobmask3,...)|*|0}})}                                         -
      {NOVAlidrc|VAlidrc(rc,...)}                                      -
      {NOGoodrc|Goodrc(rc,...)}                                        -
      {NODIsablerc|DISABLERc(rc)}                                      -
      {DEFaultrc(rc)}                                                   -
                                              )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a INMRZ05R exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for INMRZ05R modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO INMRZ05R user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

INMRZ05R Specifies that the INMRZ05R exit point is to be activated.

NOINMRZ05R The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named INMRZ05R exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available.   If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active INMRZ05R user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of INMRZ05R user exits be activated. This can be specified at initialization, or later to load and activate INMRZ05R user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3

The module name of the user exit that is assigned to the specified INMRZ05R exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup INMRZ05R user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup INMRZ05R user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3

The module name of the backup user exit that is assigned to the specified TSO exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a INMRZ05R exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a INMRZ05R exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of INMRZ05R exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for INMRZ05R to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by INMRZ05R user exit modules. A good return code allows subsequent INMRZ05R user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for INMRZ05R set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
      NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

INMRZ06R

The INMRZ06R exit is the TSO RECEIVE command pre-acknowledgment notification routine.

OS/EM supplies only basic exit control functions for INMRZ06R.

```
OS$CNTL TSO                                                          -
  {NOABendnotify|ABendnotify(                                        -
      0|*|id1 {0|*|id2 {0|*|id3 }})}                                 -
  {LIBrary(library.dsn)}                                             -
  {NOINMRZ06R|INMRZ06R(                                              -
        {ENable|DISABLE}                                            -
        {NUmber( num1 num2 num3 )}                                   -
        {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}      -
        {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}  -
        {NOABendnotify|ABendnotify(                                  -
           (0|*|id1a {0|*|id2a {0|*|id3a }})                        -
           (0|*|id1b {0|*|id2b {0|*|id3b }})                        -
           (0|*|id1c {0|*|id2c {0|*|id3c }}) })                     -
        {NOLIMit|LIMit(                                              -
          (jobmask1,...)|*|0                                        -
         {(jobmask2,...)|*|0                                        -
         {(jobmask3,...)|*|0}})}                                     -
        {NOVAlidrc|VAlidrc(rc,...)}                                  -
        {NOGoodrc|Goodrc(rc,...)}                                    -
        {NODIsablerc|DISABLERc(rc)}                                  -
        {DEFaultrc(rc)}                                              -
                                                     )}
```

ABENDNOTIFY

> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY

> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a INMRZ06R exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for INMRZ06R modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO INMRZ06R user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

INMRZ06R   Specifies that the INMRZ06R exit point is to be activated.

NOINMRZ06R   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named INMRZ06R exit point is be passed control for exit module execution.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

        num1, num2, num3

                Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS Specifies that any active INMRZ06R user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of INMRZ06R user exits be activated. This can be specified at initialization, or later to load and activate INMRZ06R user exits that were not activated at initialization. The exits will be called in the order listed.

        exit1

        exit2

        exit3

                The module name of the user exit that is assigned to the specified INMRZ06R exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP Specifies that all active backup INMRZ06R user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup INMRZ06R user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

        exit1

        exit2

        exit3

                The module name of the backup user exit that is assigned to the specified TSO exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a INMRZ06R exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a INMRZ06R exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of INMRZ06R exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for INMRZ06R to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by INMRZ06R user exit modules. A good return code allows subsequent INMRZ06R user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for INMRZ06R set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
      NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

INMRZ11R

The INMRZ11R exit is the TSO RECEIVE command data set pre-processing routine.

OS/EM supplies only basic exit control functions for INMRZ11R.

```
        OS$CNTL TSO                                                       -
         {NOABendnotify|ABendnotify(                                      -
            0|*|id1 {0|*|id2 {0|*|id3 }})}                                -
         {LIBrary(library.dsn)}                                           -
         {NOINMRZ11R|INMRZ11R(                                            -
              {ENable|DISABLE}                                            -
              {NUmber( num1 num2 num3 )}                                  -
              {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}        -
              {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}    -
              {NOABendnotify|ABendnotify(                                 -
                 (0|*|id1a {0|*|id2a {0|*|id3a }})                        -
                 (0|*|id1b {0|*|id2b {0|*|id3b }})                        -
                 (0|*|id1c {0|*|id2c {0|*|id3c }}) })                     -
              {NOLIMit|LIMit(                                             -
                (jobmask1,...)|*|0                                        -
               {(jobmask2,...)|*|0                                        -
               {(jobmask3,...)|*|0}})}                                    -
              {NOVAlidrc|VAlidrc(rc,...)}                                 -
              {NOGoodrc|Goodrc(rc,...)}                                   -
              {NODIsablerc|DISABLERc(rc)}                                 -
              {DEFaultrc(rc)}                                             -
                                                        )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a INMRZ11R exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for INMRZ11R modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO INMRZ11R user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

INMRZ11R Specifies that the INMRZ11R exit point is to be activated.

NOINMRZ11R The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named INMRZ11R exit point is be passed control for exit module execution.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS Specifies that any active INMRZ11R user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of INMRZ11R user exits be activated. This can be specified at initialization, or later to load and activate INMRZ11R user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3

The module name of the user exit that is assigned to the specified INMRZ11R exit point.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP Specifies that all active backup INMRZ11R user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup INMRZ11R user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3

The module name of the backup user exit that is assigned to the specified TSO exit point.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a INMRZ11R exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a INMRZ11R exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of INMRZ11R exit module ABENDS.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for INMRZ11R to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

        rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by INMRZ11R user exit modules. A good return code allows subsequent INMRZ11R user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for INMRZ11R set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

        rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
        NODISABLERC turns off disable return code checking for the exit point.

        rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

        rc   Default return codes values are any numeric value

INMRZ12R

The INMRZ12R exit is the TSO RECEIVE command data set post-processing routine.

OS/EM supplies only basic exit control functions for INMRZ12R.

```
OS$CNTL TSO                                                              -
  {NOABendnotify|ABendnotify(                                           -
     0|*|id1 {0|*|id2 {0|*|id3 }})}                                     -
  {LIBrary(library.dsn)}                                               -
  {NOINMRZ12R|INMRZ12R(                                                -
        {ENable|DISABLE}                                               -
        {NUmber( num1 num2 num3 )}                                     -
        {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}          -
        {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}       -
        {NOABendnotify|ABendnotify(                                    -
           (0|*|id1a {0|*|id2a {0|*|id3a }})                           -
           (0|*|id1b {0|*|id2b {0|*|id3b }})                           -
           (0|*|id1c {0|*|id2c {0|*|id3c }}) })                        -
        {NOLIMit|LIMit(                                                -
          (jobmask1,...)|*|0                                           -
         {(jobmask2,...)|*|0                                           -
         {(jobmask3,...)|*|0}})}                                       -
        {NOVAlidrc|VAlidrc(rc,...)}                                    -
        {NOGoodrc|Goodrc(rc,...)}                                      -
        {NODIsablerc|DISABLERc(rc)}                                    -
        {DEFaultrc(rc)}                                                -
                                                          )}
```

ABENDNOTIFY

> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY

> Specifies that no messages will be sent for TSO exit ABENDs.

> > **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a INMRZ12R exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for INMRZ12R modules.

> **library.dsn**
> > Specifies the name of a private **authorized** library used to locate and load the TSO INMRZ12R user exit. The library name should be enclosed in single quotes (').

> > **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

INMRZ12R   Specifies that the INMRZ12R exit point is to be activated.

NOINMRZ12R   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named INMRZ12R exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active INMRZ12R user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of INMRZ12R user exits be activated. This can be specified at initialization, or later to load and activate INMRZ12R user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3

The module name of the user exit that is assigned to the specified INMRZ12R exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup INMRZ12R user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup INMRZ12R user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3

The module name of the backup user exit that is assigned to the specified TSO exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a INMRZ12R exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a INMRZ12R exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of INMRZ12R exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for INMRZ12R to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

        rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by INMRZ12R user exit modules. A good return code allows subsequent INMRZ12R user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for INMRZ12R set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

        rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
        NODISABLERC turns off disable return code checking for the exit point.

        rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

        rc   Default return codes values are any numeric value

INMRZ13R

The INMRZ13R exit is the TSO RECEIVE command data set encryption routine.

OS/EM supplies only basic exit control functions for INMRZ13R.

```
OS$CNTL TSO                                                          -
  {NOABendnotify|ABendnotify(                                        -
     0|*|id1 {0|*|id2 {0|*|id3 }})}                                  -
  {LIBrary(library.dsn)}                                             -
  {NOINMRZ13R|INMRZ13R(                                             -
        {ENable|DISABLE}                                            -
        {NUmber( num1 num2 num3 )}                                  -
        {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}        -
        {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}     -
        {NOABendnotify|ABendnotify(                                 -
           (0|*|id1a {0|*|id2a {0|*|id3a }})                        -
           (0|*|id1b {0|*|id2b {0|*|id3b }})                        -
           (0|*|id1c {0|*|id2c {0|*|id3c }}) })                     -
        {NOLIMit|LIMit(                                             -
          (jobmask1,...)|*|0                                        -
         {(jobmask2,...)|*|0                                        -
         {(jobmask3,...)|*|0}})}                                    -
        {NOVAlidrc|VAlidrc(rc,...)}                                 -
        {NOGoodrc|Goodrc(rc,...)}                                   -
        {NODIsablerc|DISABLERc(rc)}                                 -
        {DEFaultrc(rc)}                                             -
                                                   )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a INMRZ13R exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for INMRZ13R modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO INMRZ13R user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

INMRZ13R   Specifies that the INMRZ13R exit point is to be activated.

NOINMRZ13R   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named INMRZ13R exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active INMRZ13R user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of INMRZ13R user exits be activated. This can be specified at initialization, or later to load and activate INMRZ13R user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3

The module name of the user exit that is assigned to the specified INMRZ13R exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup INMRZ13R user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup INMRZ13R user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3

The module name of the backup user exit that is assigned to the specified TSO exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a INMRZ13R exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a INMRZ13R exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of INMRZ13R exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for INMRZ13R to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

    rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by INMRZ13R user exit modules. A good return code allows subsequent INMRZ13R user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for INMRZ13R set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

    rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

    NODISABLERC turns off disable return code checking for the exit point.

    rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc Default return codes values are any numeric value

INMRZ15R

The INMRZ15R exit is the TSO RECEIVE command post-prompt routine.

OS/EM supplies only basic exit control functions for INMRZ15R.

```
OS$CNTL TSO                                                          -
 {NOABendnotify|ABendnotify(                                         -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                   -
 {LIBrary(library.dsn)}                                              -
 {NOINMRZ15R|INMRZ15R(                                               -
       {ENable|DISABLE}                                             -
       {NUmber( num1 num2 num3 )}                                   -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})        -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})})}     -
       {NOABendnotify|ABendnotify(                                  -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                          -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                          -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                       -
       {NOLIMit|LIMit(                                               -
         (jobmask1,...)|*|0                                          -
        {(jobmask2,...)|*|0                                          -
        {(jobmask3,...)|*|0}})}                                      -
       {NOVAlidrc|VAlidrc(rc,...)}                                   -
       {NOGoodrc|Goodrc(rc,...)}                                     -
       {NODIsablerc|DISABLERc(rc)}                                   -
       {DEFaultrc(rc)}                                               -
                                                     )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a INMRZ15R exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for INMRZ15R modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO INMRZ15R user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

INMRZ15R   Specifies that the INMRZ15R exit point is to be activated.

NOINMRZ15R   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named INMRZ15R exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

               num1, num2, num3

                    Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                    If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active INMRZ15R user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of INMRZ15R user exits be activated. This can be specified at initialization, or later to load and activate INMRZ15R user exits that were not activated at initialization. The exits will be called in the order listed.

               exit1

               exit2

               exit3
                    The module name of the user exit that is assigned to the specified INMRZ15R exit point.

            *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

            0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup INMRZ15R user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup INMRZ15R user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

               exit1

               exit2

               exit3
                    The module name of the backup user exit that is assigned to the specified TSO exit point.

            *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a INMRZ15R exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a INMRZ15R exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of INMRZ15R exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for INMRZ15R to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

  rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by INMRZ15R user exit modules. A good return code allows subsequent INMRZ15R user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for INMRZ15R set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

  rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
                 NODISABLERC turns off disable return code checking for the exit point.

  rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

  rc   Default return codes values are any numeric value

INMRZ21R

The INMRZ21R exit is the TSO RECEIVE command log data set pre-allocation routine.

OS/EM supplies only basic exit control functions for INMRZ21R.

```
OS$CNTL TSO                                                         -
  {NOABendnotify|ABendnotify(                                       -
     0|*|id1 {0|*|id2 {0|*|id3 }})}                                 -
  {LIBrary(library.dsn)}                                            -
  {NOINMRZ21R|INMRZ21R(                                             -
       {ENable|DISABLE}                                            -
       {NUmber( num1 num2 num3 )}                                  -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}        -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}      -
       {NOABendnotify|ABendnotify(                                 -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                        -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                        -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                     -
       {NOLIMit|LIMit(                                             -
         (jobmask1,...)|*|0                                        -
        {(jobmask2,...)|*|0                                        -
        {(jobmask3,...)|*|0}})}                                    -
       {NOVAlidrc|VAlidrc(rc,...)}                                 -
       {NOGoodrc|Goodrc(rc,...)}                                   -
       {NODIsablerc|DISABLERc(rc)}                                 -
       {DEFaultrc(rc)}                                             -
                                                          )}
```

ABENDNOTIFY

> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY

> Specifies that no messages will be sent for TSO exit ABENDs.

> > **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a INMRZ21R exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for INMRZ21R modules.

> **library.dsn**
> > Specifies the name of a private **authorized** library used to locate and load the TSO INMRZ21R user exit. The library name should be enclosed in single quotes (').

> > **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

INMRZ21R   Specifies that the INMRZ21R exit point is to be activated.

NOINMRZ21R   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named INMRZ21R exit point is be passed control for exit module execution.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

> **num1, num2, num3**
>> Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.
>>
>> If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS Specifies that any active INMRZ21R user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of INMRZ21R user exits be activated. This can be specified at initialization, or later to load and activate INMRZ21R user exits that were not activated at initialization. The exits will be called in the order listed.

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the user exit that is assigned to the specified INMRZ21R exit point.

> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

> **0** A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP Specifies that all active backup INMRZ21R user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup INMRZ21R user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

> **exit1**
>
> **exit2**
>
> **exit3**
>> The module name of the backup user exit that is assigned to the specified TSO exit point.

> ***** An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY
Specifies that when a INMRZ21R exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a INMRZ21R exit module has ABENDed.

NOABENDNOTIFY
The NO option can be used to nullify the option to notify a TSO user of INMRZ21R exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)
The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)
The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)
The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for INMRZ21R to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3
The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

      rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by INMRZ21R user exit modules. A good return code allows subsequent INMRZ21R user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for INMRZ21R set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

      rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

      NODISABLERC turns off disable return code checking for the exit point.

      rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

      rc   Default return codes values are any numeric value

INMXZ01R

Exit INMXZ01R is the TSO TRANSMIT command startup exit.

OS/EM supplies only basic exit control functions for INMXZ01R.

```
OS$CNTL TSO                                                        -
 {NOABendnotify|ABendnotify(                                       -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                 -
 {LIBrary(library.dsn)}                                            -
 {NOINMXZ01R|INMXZ01R(                                        -
       {ENable|DISABLE}                                           -
       {NUmber( num1 num2 num3 )}                                 -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}    -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}  -
       {NOABendnotify|ABendnotify(                               -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                      -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                      -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                   -
       {NOLIMit|LIMit(                                           -
         (jobmask1,...)|*|0                                      -
        {(jobmask2,...)|*|0                                      -
        {(jobmask3,...)|*|0}})}                                  -
       {NOVAlidrc|VAlidrc(rc,...)}                               -
       {NOGoodrc|Goodrc(rc,...)}                                 -
       {NODIsablerc|DISABLERc(rc)}                               -
       {DEFaultrc(rc)}                                           -
                                                      )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a INMXZ01R exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for INMXZ01R modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO INMXZ01R user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

INMXZ01R   Specifies that the INMXZ01R exit point is to be activated.

NOINMXZ01R The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named INMXZ01R exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3

Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active INMXZ01R user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of INMXZ01R user exits be activated. This can be specified at initialization, or later to load and activate INMXZ01R user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3

The module name of the user exit that is assigned to the specified INMXZ01R exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup INMXZ01R user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup INMXZ01R user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3

The module name of the backup user exit that is assigned to the specified TSO exit point.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a INMXZ01R exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a INMXZ01R exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of INMXZ01R exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for INMXZ01R to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

        rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by INMXZ01R user exit modules. A good return code allows subsequent INMXZ01R user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for INMXZ01R set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

        rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

        NODISABLERC turns off disable return code checking for the exit point.

        rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

        rc   Default return codes values are any numeric value

INMXZ02R

Exit INMXZ02R is the TSO TRANSMIT command termination routine.

OS/EM supplies only basic exit control functions for INMXZ02R.

```
        OS$CNTL TSO                                                     -
         {NOABendnotify|ABendnotify(                                    -
            0|*|id1 {0|*|id2 {0|*|id3 }})}                              -
         {LIBrary(library.dsn)}                                         -
         {NOINMXZ02R|INMXZ02R(                                          -
               {ENable|DISABLE}                                         -
               {NUmber( num1 num2 num3 )}                               -
               {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}     -
               {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
               {NOABendnotify|ABendnotify(                              -
                  (0|*|id1a {0|*|id2a {0|*|id3a }})                     -
                  (0|*|id1b {0|*|id2b {0|*|id3b }})                     -
                  (0|*|id1c {0|*|id2c {0|*|id3c }}) })                  -
               {NOLIMit|LIMit(                                          -
                 (jobmask1,...)|*|0                                     -
                {(jobmask2,...)|*|0                                     -
                {(jobmask3,...)|*|0}})}                                 -
               {NOVAlidrc|VAlidrc(rc,...)}                              -
               {NOGoodrc|Goodrc(rc,...)}                                -
               {NODIsablerc|DISABLERc(rc)}                              -
               {DEFaultrc(rc)}                                          -
                                                    )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a INMXZ02R exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for INMXZ02R modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO INMXZ02R user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

INMXZ02R   Specifies that the INMXZ02R exit point is to be activated.

NOINMXZ02R   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named INMXZ02R exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

                num1, num2, num3
                        Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                        If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active INMXZ02R user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of INMXZ02R user exits be activated. This can be specified at initialization, or later to load and activate INMXZ02R user exits that were not activated at initialization. The exits will be called in the order listed.

                exit1

                exit2

                exit3
                        The module name of the user exit that is assigned to the specified INMXZ02R exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup INMXZ02R user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup INMXZ02R user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

                exit1

                exit2

                exit3
                        The module name of the backup user exit that is assigned to the specified TSO exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a INMXZ02R exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a INMXZ02R exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of INMXZ02R exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for INMXZ02R to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

   rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by INMXZ02R user exit modules. A good return code allows subsequent INMXZ02R user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for INMXZ02R set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

   rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

   NODISABLERC turns off disable return code checking for the exit point.

   rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

   rc Default return codes values are any numeric value

INMXZ03R

Exit INMXZ03R is the TSO TRANSMIT command encryption exit.

OS/EM supplies only basic exit control functions for INMXZ03R.

```
OS$CNTL TSO                                                        -
 {NOABendnotify|ABendnotify(                                       -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                 -
 {LIBrary(library.dsn)}                                            -
 {NOINMXZ03R|INMXZ03R(                                             -
        {ENable|DISABLE}                                          -
        {NUmber( num1 num2 num3 )}                                -
        {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}      -
        {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}    -
        {NOABendnotify|ABendnotify(                               -
           (0|*|id1a {0|*|id2a {0|*|id3a }})                      -
           (0|*|id1b {0|*|id2b {0|*|id3b }})                      -
           (0|*|id1c {0|*|id2c {0|*|id3c }}) })                   -
        {NOLIMit|LIMit(                                           -
          (jobmask1,...)|*|0                                      -
         {(jobmask2,...)|*|0                                      -
         {(jobmask3,...)|*|0}})}                                  -
        {NOVAlidrc|VAlidrc(rc,...)}                               -
        {NOGoodrc|Goodrc(rc,...)}                                 -
        {NODIsablerc|DISABLERc(rc)}                               -
        {DEFaultrc(rc)}                                           -
                                                        )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a INMXZ03R exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for INMXZ03R modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO INMXZ03R user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

INMXZ03R   Specifies that the INMXZ03R exit point is to be activated.

NOINMXZ03R   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named INMXZ03R exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

                num1, num2, num3

                        Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                        If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active INMXZ03R user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of INMXZ03R user exits be activated. This can be specified at initialization, or later to load and activate INMXZ03R user exits that were not activated at initialization. The exits will be called in the order listed.

        exit1

        exit2

        exit3
                The module name of the user exit that is assigned to the specified INMXZ03R exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup INMXZ03R user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup INMXZ03R user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

        exit1

        exit2

        exit3
                The module name of the backup user exit that is assigned to the specified TSO exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a INMXZ03R exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a INMXZ03R exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of INMXZ03R exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for INMXZ03R to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

    rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by INMXZ03R user exit modules. A good return code allows subsequent INMXZ03R user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for INMXZ03R set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

    rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
    NODISABLERC turns off disable return code checking for the exit point.

    rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc   Default return codes values are any numeric value

INMXZ21R

Exit INMXZ21R is the TSO TRANSMIT command log data set pre-allocation routine.

OS/EM supplies only basic exit control functions for INMXZ21R.

```
OS$CNTL TSO                                                            -
 {NOABendnotify|ABendnotify(                                           -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                     -
 {LIBrary(library.dsn)}                                                -
 {NOINMXZ21R|INMXZ21R(                                                -
       {ENable|DISABLE}                                               -
       {NUmber( num1 num2 num3 )}                                     -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}           -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
       {NOABendnotify|ABendnotify(                                    -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                           -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                           -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                        -
       {NOLIMit|LIMit(                                                -
         (jobmask1,...)|*|0                                           -
        {(jobmask2,...)|*|0                                           -
        {(jobmask3,...)|*|0}})}                                       -
       {NOVAlidrc|VAlidrc(rc,...)}                                    -
       {NOGoodrc|Goodrc(rc,...)}                                      -
       {NODIsablerc|DISABLERc(rc)}                                    -
       {DEFaultrc(rc)}                                                -
                                                   )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3** You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY Specifies the loading of a INMXZ21R exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for INMXZ21R modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO INMXZ21R user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

INMXZ21R Specifies that the INMXZ21R exit point is to be activated.

NOINMXZ21R The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE Specifies that the named INMXZ21R exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

        num1, num2, num3
                Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active INMXZ21R user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of INMXZ21R user exits be activated. This can be specified at initialization, or later to load and activate INMXZ21R user exits that were not activated at initialization. The exits will be called in the order listed.

        exit1

        exit2

        exit3
                The module name of the user exit that is assigned to the specified INMXZ21R exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup INMXZ21R user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup INMXZ21R user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

        exit1

        exit2

        exit3
                The module name of the backup user exit that is assigned to the specified TSO exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a INMXZ21R exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a INMXZ21R exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of INMXZ21R exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for INMXZ21R to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

> **rc**   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by INMXZ21R user exit modules. A good return code allows subsequent INMXZ21R user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for INMXZ21R set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

> **rc**   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

   NODISABLERC turns off disable return code checking for the exit point.

> **rc**   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

> **rc**   Default return codes values are any numeric value

IRXINITX

Exit IRXINITX is the REXX pre-environment initialization routine.

OS/EM supplies only basic exit control functions for IRXINITX.

```
OS$CNTL TSO                                                       -
 {NOABendnotify|ABendnotify(                                      -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                -
 {LIBrary(library.dsn)}                                           -
 {NOIRXINITX|IRXINITX(                                        -
       {ENable|DISABLE}                                          -
       {NUmber( num1 num2 num3 )}                                -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}    -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
       {NOABendnotify|ABendnotify(                               -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                      -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                      -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                   -
       {NOLIMit|LIMit(                                           -
         (jobmask1,...)|*|0                                      -
        {(jobmask2,...)|*|0                                      -
        {(jobmask3,...)|*|0}})}                                  -
       {NOVAlidrc|VAlidrc(rc,...)}                               -
       {NOGoodrc|Goodrc(rc,...)}                                 -
       {NODIsablerc|DISABLERc(rc)}                               -
       {DEFaultrc(rc)}                                           -
                                                      )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IRXINITX exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IRXINITX modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IRXINITX user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IRXINITX   Specifies that the IRXINITX exit point is to be activated.

NOIRXINITX   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IRXINITX exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

        num1, num2, num3
                Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IRXINITX user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IRXINITX user exits be activated. This can be specified at initialization, or later to load and activate IRXINITX user exits that were not activated at initialization. The exits will be called in the order listed.

        exit1

        exit2

        exit3
                The module name of the user exit that is assigned to the specified IRXINITX exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

        0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IRXINITX user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IRXINITX user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

        exit1

        exit2

        exit3
                The module name of the backup user exit that is assigned to the specified TSO exit point.

        *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IRXINITX exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IRXINITX exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IRXINITX exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IRXINITX to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC   NOVALIDRC turns off return code checking for user exit modules

    rc   Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC   Check for good return codes (register 15) being issued by IRXINITX user exit modules. A good return code allows subsequent IRXINITX user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IRXINITX set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC   NOGOODRC turns off good code checking for user exit modules

    rc   Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC   Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

    NODISABLERC turns off disable return code checking for the exit point.

    rc   Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC   The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc   Default return codes values are any numeric value

IRXITMV

Exit IRXITMV is the REXX post-environment initialization routine.

OS/EM supplies only basic exit control functions for IRXITMV.

```
OS$CNTL TSO                                                         -
 {NOABendnotify|ABendnotify(                                        -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                  -
 {LIBrary(library.dsn)}                                            -
 {NOIRXITMV|IRXITMV(                                                -
      {ENable|DISABLE}                                             -
      {NUmber( num1 num2 num3 )}                                   -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}         -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
      {NOABendnotify|ABendnotify(                                  -
         (0|*|id1a {0|*|id2a {0|*|id3a }})                         -
         (0|*|id1b {0|*|id2b {0|*|id3b }})                         -
         (0|*|id1c {0|*|id2c {0|*|id3c }}) })                      -
      {NOLIMit|LIMit(                                              -
        (jobmask1,...)|*|0                                         -
       {(jobmask2,...)|*|0                                         -
       {(jobmask3,...)|*|0}})}                                     -
      {NOVAlidrc|VAlidrc(rc,...)}                                  -
      {NOGoodrc|Goodrc(rc,...)}                                    -
      {NODIsablerc|DISABLERc(rc)}                                  -
      {DEFaultrc(rc)}                                              -
                                                    )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> > **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IRXITMV exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IRXITMV modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IRXITMV user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IRXITMV   Specifies that the IRXITMV exit point is to be activated.

NOIRXITMV   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IRXITMV exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

           num1, num2, num3

                Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

                If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IRXITMV user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IRXITMV user exits be activated. This can be specified at initialization, or later to load and activate IRXITMV user exits that were not activated at initialization. The exits will be called in the order listed.

           exit1

           exit2

           exit3

                The module name of the user exit that is assigned to the specified IRXITMV exit point.

           *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

           0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IRXITMV user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IRXITMV user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

           exit1

           exit2

           exit3

                The module name of the backup user exit that is assigned to the specified TSO exit point.

           *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IRXITMV exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IRXITMV exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IRXITMV exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IRXITMV to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

  rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by IRXITMV user exit modules. A good return code allows subsequent IRXITMV user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IRXITMV set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

  rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
  NODISABLERC turns off disable return code checking for the exit point.

  rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

  rc Default return codes values are any numeric value

IRXITTS

Exit IRXITTS is the REXX post-environment initialization routine.

OS/EM supplies only basic exit control functions for IRXITTS.

```
OS$CNTL TSO                                                        -
 {NOABendnotify|ABendnotify(                                       -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                 -
 {LIBrary(library.dsn)}                                            -
 {NOIRXITTS|IRXITTS(                                          -
      {ENable|DISABLE}                                            -
      {NUmber( num1 num2 num3 )}                                  -
      {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}   -
      {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
      {NOABendnotify|ABendnotify(                                 -
         (0|*|id1a {0|*|id2a {0|*|id3a }})                        -
         (0|*|id1b {0|*|id2b {0|*|id3b }})                        -
         (0|*|id1c {0|*|id2c {0|*|id3c }}) })                     -
      {NOLIMit|LIMit(                                             -
        (jobmask1,...)|*|0                                        -
       {(jobmask2,...)|*|0                                        -
       {(jobmask3,...)|*|0}})}                                    -
      {NOVAlidrc|VAlidrc(rc,...)}                                 -
      {NOGoodrc|Goodrc(rc,...)}                                   -
      {NODIsablerc|DISABLERc(rc)}                                 -
      {DEFaultrc(rc)}                                             -
                                                 )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**   You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY   Specifies the loading of a IRXITTS exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IRXITTS modules.

> **library.dsn**
> Specifies the name of a private **authorized** library used to locate and load the TSO IRXITTS user exit. The library name should be enclosed in single quotes (').

> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IRXITTS   Specifies that the IRXITTS exit point is to be activated.

NOIRXITTS   The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE   Specifies that the named IRXITTS exit point is be passed control for exit module execution.

DISABLE   The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER   You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

    num1, num2, num3

        Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

        If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS   Specifies that any active IRXITTS user exits are to be disabled. This is only effective after initialization.

EXITS(...)   Specifies that the list of IRXITTS user exits be activated. This can be specified at initialization, or later to load and activate IRXITTS user exits that were not activated at initialization. The exits will be called in the order listed.

    exit1

    exit2

    exit3

        The module name of the user exit that is assigned to the specified IRXITTS exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

    0   A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP   Specifies that all active backup IRXITTS user exits are to be disabled. This is only effective after initialization.

BACKUP(...)   Specifies that the list of backup IRXITTS user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

    exit1

    exit2

    exit3

        The module name of the backup user exit that is assigned to the specified TSO exit point.

    *   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IRXITTS exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IRXITTS exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IRXITTS exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IRXITTS to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

> **rc** Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by IRXITTS user exit modules. A good return code allows subsequent IRXITTS user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IRXITTS set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

> **rc** Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC

NODISABLERC turns off disable return code checking for the exit point.

> **rc** Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

> **rc** Default return codes values are any numeric value

IRXTERMX

Exit IRXTERMX is the REXX environment termination routine.

OS/EM supplies only basic exit control functions for IRXTERMX.

```
OS$CNTL TSO                                                       -
 {NOABendnotify|ABendnotify(                                      -
    0|*|id1 {0|*|id2 {0|*|id3 }})}                                -
 {LIBrary(library.dsn)}                                           -
 {NOIRXTERMX|IRXTERMX(                                       -
       {ENable|DISABLE}                                           -
       {NUmber( num1 num2 num3 )}                                 -
       {NOExits|Exits(0|*|exit1 {0|*|exit2 {0|*|exit3}})})}    -
       {NOBAckup|BAckup(0|*|exit1 {0|*|exit2 {0|*|exit3}})})} -
       {NOABendnotify|ABendnotify(                               -
          (0|*|id1a {0|*|id2a {0|*|id3a }})                      -
          (0|*|id1b {0|*|id2b {0|*|id3b }})                      -
          (0|*|id1c {0|*|id2c {0|*|id3c }}) })                   -
       {NOLIMit|LIMit(                                            -
         (jobmask1,...)|*|0                                       -
        {(jobmask2,...)|*|0                                       -
        {(jobmask3,...)|*|0}})}                                   -
       {NOVAlidrc|VAlidrc(rc,...)}                                -
       {NOGoodrc|Goodrc(rc,...)}                                  -
       {NODIsablerc|DISABLERc(rc)}                                -
       {DEFaultrc(rc)}                                            -
                                                          )}
```

ABENDNOTIFY
> Specifies that a TSO message will be sent if any TSO exit ABENDs.

NOABENDNOTIFY
> Specifies that no messages will be sent for TSO exit ABENDs.

> **id1, id2, id3**　You may specify up to three TSO IDs or notification group names to be notified in the case of an ABEND. (See "NFYGROUPS" on page SYS-1.)

LIBRARY　Specifies the loading of a IRXTERMX exit module from a private **authorized** library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for IRXTERMX modules.

> **library.dsn**
> > Specifies the name of a private **authorized** library used to locate and load the TSO IRXTERMX user exit. The library name should be enclosed in single quotes (').

> > **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

IRXTERMX　Specifies that the IRXTERMX exit point is to be activated.

NOIRXTERMX
> The NO option can be used to completely nullify the exit point and disable and reset any options in effect for it.

ENABLE　Specifies that the named IRXTERMX exit point is be passed control for exit module execution.

DISABLE The DISABLE option can be used to take an exit point out of service, or temporarily disable an exit point, but all the options that were specified previously are retained and will not have to be re-specified if the exit is enabled again.

NUMBER You may specify up to 3 user exits per OS$CNTL command. As OS/EM supports 255 user exits per exit point at least one number should be specified here.

num1, num2, num3
Specify at least **num1** when entering user exit information. OS/EM will process up to three user exits per OS$CNTL command based on this number.

If you are processing 3 user exits and code **NUMBER(1 3 5)**, OS/EM will store the exit information in the corresponding slots of the possible 255 slots available. If only one number is entered, i.e. **NUMBER(7)** OS/EM will process the user exits sequentially so the exit information would be stored in slots 7, 8 and 9.

NOEXITS Specifies that any active IRXTERMX user exits are to be disabled. This is only effective after initialization.

EXITS(...) Specifies that the list of IRXTERMX user exits be activated. This can be specified at initialization, or later to load and activate IRXTERMX user exits that were not activated at initialization. The exits will be called in the order listed.

exit1

exit2

exit3
The module name of the user exit that is assigned to the specified IRXTERMX exit point.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0 A zero (0) can be used to negate a previous entry of the user exit list.

NOBACKUP Specifies that all active backup IRXTERMX user exits are to be disabled. This is only effective after initialization.

BACKUP(...) Specifies that the list of backup IRXTERMX user exits are to be activated. Backup exits are only called if the primary exit is not present, usually due to a primary exit failure. This can be specified at initialization, or later to load and activate backup user exits that were not activated at initialization. (The backup User exit modules will be called in the order listed).

exit1

exit2

exit3
The module name of the backup user exit that is assigned to the specified TSO exit point.

* An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the backup TSO user exit list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the backup user exit list.

ABENDNOTIFY

Specifies that when a IRXTERMX exit module ABENDs a TSO NOTIFY message should be sent to up to 3 TSO IDs or notify group names indicating that a IRXTERMX exit module has ABENDed.

NOABENDNOTIFY

The NO option can be used to nullify the option to notify a TSO user of IRXTERMX exit module ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for information about notify group names.

(id1a,id1b,id1c)

The TSO IDs or notify group names to be notified if the first exit being processed ABENDs.

(id2a,id2b,id2c)

The TSO IDs or notify group names to be notified if the second exit being processed ABENDs.

(id3a,id3b,id3c)

The TSO IDs or notify group names to be notified if the third exit being processed ABENDs.

Note: See "NFYGROUPS" on page SYS-1 for more information about notify groups.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value of this position of the notify TSO user list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the notify TSO user list.

LIMIT   Specifies that Job name limits are requested, to limit user exit modules for IRXTERMX to a specific Jobname(s) or a Jobname mask(s).

NOLIMIT   The NO option can be used to nullify the option for Job name limits.

jobmask1

jobmask2

jobmask3

The job name mask list for the corresponding user exit module, jobmask1 corresponding to the jobmask for the first User exit module specified via the EXITS(...) parameter, jobmask2 for the second User exit module, etc. Jobmasks use the same masking characters as volume masks. See "Volume/Jobname Masks" on page C-1 for a detailed discussion of Jobname masking.

*   An asterisk (*) can be used as a placeholder to indicate that a prior value for this position of the Jobname(s) or Jobname mask(s) list is not to be changed. As a default, the asterisk would be omitted where it would normally be implied.

0   A zero (0) can be used to negate a previous entry of the Jobname(s) or Jobname masks(s) list.

VALIDRC   Checks for valid return codes (register 15) being issued by user exit modules as defined by IBM exit programming documentation for each exit point. The valid return codes for each IBM exit point are built into OS/EM. If anything is specified it completely replaces the IBM list. **Use this option with extreme caution.**

NOVALIDRC NOVALIDRC turns off return code checking for user exit modules

    rc Valid return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

GOODRC Check for good return codes (register 15) being issued by IRXTERMX user exit modules. A good return code allows subsequent IRXTERMX user exit modules to be called. OS/EM provides a default list. For example, if a TSO user exit for IRXTERMX set the return code to zero (Indicates the Job processing is to be cancelled), then no other User exit modules would be called, including the optional features if they were to be called last. Check the IBM exit programming documentation to determine which return codes are valid for good return codes.

NOGOODRC NOGOODRC turns off good code checking for user exit modules

    rc Good return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DISABLERC Check for a return code (register 15) being issued by user exit modules that disables that user exit module from being executed again. This option is provided for JES3 support, but could be used for one time loading of tables, etc.

NODISABLERC
    NODISABLERC turns off disable return code checking for the exit point.

    rc Disable return codes values are 04, 08, 12, 16, 20, 24, 28, 32, 36, 40, 44, LT255, GE255, NZERO, ANY

DEFAULTRC The return code (register 15) passed by the exit interface if no User exit modules are present, if exit module controller module is not loaded, or some other internal error has occurred. There is a default return code provided by the exit interface module for each exit point that is managed. **Use this option with extreme caution.**

    rc Default return codes values are any numeric value

QUERY Command

This subcommand lists all information about the exits. The information is normally directed to your screen, but may be directed to a file by specifying the DDNAME parameter.

```
OS$CNTL QUERY {ALL|ACTIVE| -
    {ALLOC{(exit,,,)}} -
    {DASD{(exit,,,)}}  -
    {HSM{(exit,,,)}}   -
    {ISPF{(exit,,,)}}  -
    {JES2{(exit,,,)}}  -
    {JES3{(exit,,,)}}  -
    {MISC{(exit,,,)}}  -
    {POOL}             -
    {RACF{(exit,,,)}}  -
    {SAF{(exit,,,)}}   -
    {SMF{(exit,,,)}}   -
    {TSO{(exit,,,)}}   -
    {SYSTEM}           -
    {JESNAME(jes)}     -
    {DDNAME(name)}
```

ALL

ACTIVE   ALL lists the status of all the user exits; module names associated with each user exit; and LIMIT checking rules in effect for each exit.

If the OS/EM optional functions are installed, the list includes the options in effect for the appropriate exits; the jobs, started tasks, and userids for which password processing is in effect; and the current DASD allocation rules.

ACTIVE shows the same information as ALL but limited to ACTIVE exits.

ACTIVE is the default.

ALLOC   Lists the status of the Allocation user exits; the module name(s) associated with each; and, if the optional OS/EM control functions are installed, status of the OS/EM tape control and NOT CATALOGED 2 options.

If an allocation exit list is named, the list will pertain to those exits only.

DASD   Lists the status of the DASD user exits; the module name(s) associated with each; and, if the optional OS/EM control functions are installed, the status of the OS/EM DADSM exits and the current DASD allocation rules.

If a DADSM exit list is named, the list will pertain to those exits only.

HSM   Lists the status of the DFHSM user exits; the module name(s) associated with each; and, if the optional OS/EM control functions are installed, then of the OS/EM options:

- Delete-by-Age (DBA)

- Delete-if-Backed-up (DBU)

- Backup

- Reblock

- Migration

- Migration Level-1 to Migration Level-2

- Defragmentation

- Reblock

- Directed recall

If a DFHSM exit list is named, the list will pertain to those exits only.

ISPF   Lists the status of the ISPF user exits; the module name(s) associated with each; and, if the optional OS/EM control functions are installed, then of the OS/EM options:

- List Dataset Prefix

- Log Dataset Prefix

- Temporary File Dataset Prefix

If an ISPF exit list is named, the list will pertain to those exits only.

JES2   Lists the status of the JES2 user exits; the module name(s) and entries associated with each; and, if the optional OS/EM control functions are installed, the status of the OS/EM functions:

- Jobclass controls

- Thru-put controls

- Validate JCL parameters

- Job time controls

- Job Limits controls

- Enhanced $HASP165 message

- Job Start message

- Job Routing controls

If a JES2 exit list is named, the list will pertain to those exits only.

JES3   Lists the status of the JES3 user exits; the entries associated with each exit list.

If a JES3 exit list is named, the list will pertain to those exits only.

MISC   Lists the status of the MISC user exits; the entries associated with each exit list.

If a MISC exit list is named, the list will pertain to those exits only.

POOL   Lists the definitions of QUICKPOOL options selected including volume groups, dataset name groups, and the volume pool/dataset name group relationships.

RACF   Lists the status of the user RACF exits; and if the optional OS/EM control functions are installed, the status of:

- Discrete profiles

If a RACF exit list is named, the list will pertain to those exits only.

SAF   Lists the status of the user SAF exits.

If a SAF exit list is named, the list will pertain to those exits only.

SMF   Lists the status of the user SMF exits; module name(s) associated with each; and, if the optional OS/EM control functions are installed, the OS/EM options:

- Extend job and TSO wait time

- Extend job, step, and CPU execution time

- Allow sysout extensions

- Add step and job end statistics

- Verify that users are authorized to submit jobs in selected classes

- Verify that job names match the TSO user ID of the person submitting the job

- Update the TMC with MVS job accounting information

- Controls region size parameters

If a SMF exit list is named, the list will pertain to those exits only.

TSO   Lists the status of the user TSO exits; module names associated with each user exit; and, if the optional OS/EM control functions are installed, the OS/EM options:

- Reformat job statement accounting information

- Verify user is authorized to specified job classes

- Verify user is defined to RACF

- Verify user may submit jobs with operating system commands

- Verify user may submit jobs with JES2 commands

- Verify job name matches USERID

- Insert missing NOTIFY parameter

- Have TSO insert RACF password into the TSB, required if using options to add TSO passwords to the job card

- Have TSO deliver broadcast messages during logon

If a TSO exit list is named, the list will pertain to those exits only.

SYSTEM   Lists the status of the OS/EM control modules. This option will note the status of the OS/EM control functions.

Note: The ISPF interface for this command allocates a file for SYSTSPRT for you in BROWSE to view the output of the QUERY command.

JESNAME   The query display may be limited to a single JES2 subsystem name.

      jes   The name of the JES2 subsystem

DDNAME   The output from the query command may be directed to a file by preallocating the file to the specified DDNAME.   The file should have the attributes: RECFM=VB,LRECL=125,BLKSIZE=8192,DSORG=PS.

      name   The name of the DD which has been preallocated for the query report.

The following is a representative example of what you would see as a result of a OS$CNTL QUERY
ACTIVE command at your terminal, either at the TSO READY or on the ISPF Option 6 panel.

```
OS/EM VER: 6.0.1 TIME: 12:49:34 DATE:  7/05/2004 SYSPLEX: ADCDPL   SID: P390


 SYSTEM DATA

  OS$ALCCN ADDR: 0B602C80 EP: 8B602C80 - VERSION 6.0.1 2004-06-24 19:06:43
       LNKLIB: SYS1.OSEM.LOAD1
  OS$ASYNC ADDR: 0B611508 EP: 8B611508 - VERSION 6.0.1 2004-06-24 19:19:31
       LNKLIB: SYS1.OSEM.LOAD1
  OS$COMM  ADDR: 0B60C330 EP: 8B60C330 - VERSION 6.0.1 2004-07-03 14:59:49
       LNKLIB: SYS1.OSEM.LOAD1
  OS$DADCN ADDR: 0B600B40 EP: 8B600B40 - VERSION 6.01 2004-06-24 19:32:40
       LNKLIB: SYS1.OSEM.LOAD1
  OS$DEL   ADDR: 0B6392C0 EP: 8B6392C0 - VERSION 6.0.1 2004-07-03 14:34:04
       LNKLIB: SYS1.OSEM.LOAD1
  OS$EOM   ADDR: 0B61E8F0 EP: 8B61E8F0 - VERSION 6.0.1 2004-06-28 19:37:39
       LNKLIB: SYS1.OSEM.LOAD1
  OS$EOT   ADDR: 0B61E2A0 EP: 8B61E2A0 - VERSION 6.0.1 2004-06-24 19:53:22
       LNKLIB: SYS1.OSEM.LOAD1
  OS$ECALL ADDR: 0B65C118 EP: 8B65C118 - VERSION 6.0.1 2004-07-03 14:41:23
       LNKLIB: SYS1.OSEM.LOAD1
  OS$ESTAE ADDR: 0B611090 EP: 8B611090 - VERSION 6.0.1 2004-06-24 19:54:44
       LNKLIB: SYS1.OSEM.LOAD1
  OS$EXRTN ADDR: 0B6078A8 EP: 8B6078A8 - VERSION 6.0.1 2004-06-24 19:55:52
       LNKLIB: SYS1.OSEM.LOAD1
  OS$FRR   ADDR: 0B657968 EP: 8B657968 - VERSION 6.0.1 2004-06-24 18:59:10
       LNKLIB: SYS1.OSEM.LOAD1
  OS$FRRTN ADDR: 0B605C00 EP: 8B605C00 - VERSION 6.0.1 2004-06-24 19:00:23
       LNKLIB: SYS1.OSEM.LOAD1
  OS$GDGUY ADDR: 0B6374F8 EP: 8B6374F8 - VERSION 6.0.1 2004-06-24 19:58:18
       LNKLIB: SYS1.OSEM.LOAD1
  OS$GETWI ADDR: 0B60B028 EP: 8B60B028 - VERSION 6.0.1 2004-06-24 19:58:51
       LNKLIB: SYS1.OSEM.LOAD1
  OS$GETWK ADDR: 0B609EE8 EP: 8B609EE8 - VERSION 6.0.1 2004-06-24 19:59:53
       LNKLIB: SYS1.OSEM.LOAD1
  OS$HSMCN ADDR: 0B5FEB60 EP: 8B5FEB60 - VERSION 6.0.1 2004-06-24 20:09:35
       LNKLIB: SYS1.OSEM.LOAD1
  OS$INTF  ADDR: 0B64E0F0 EP: 8B64E0F0 - VERSION 6.0.1 2004-06-24 20:13:58
       LNKLIB: SYS1.OSEM.LOAD1
  OS$ISPCN ADDR: 0B5FCB48 EP: 8B5FCB48 - VERSION 6.0.1 2004-06-24 20:33:17
       LNKLIB: SYS1.OSEM.LOAD1
  OS$JSCBA ADDR: 0B671938 EP: 8B671938 - VERSION 6.0.1 2004-06-24 23:32:16
       LNKLIB: SYS1.OSEM.LOAD1
  OS$J2PST ADDR: 0B7790E0 EP: 8B7790E0 - VERSION 6.0.1 2004-06-28 22:08:43
       LNKLIB: SYS1.OSEM.LOAD1
  OS$LIMIT ADDR: 0B66C1B0 EP: 8B66C1B0 - VERSION 6.0.1 2004-06-24 20:40:05
       LNKLIB: SYS1.OSEM.LOAD1
  OS$LOAD  ADDR: 0B614E10 EP: 8B614E10 - VERSION 6.0.1 2004-07-04 19:15:45
       LNKLIB: SYS1.OSEM.LOAD1
  OS$LOCAT ADDR: 0B6121F8 EP: 8B6121F8 - VERSION 6.0.1 2004-07-03 17:07:08
       LNKLIB: SYS1.OSEM.LOAD1
  OS$LOCK  ADDR: 0B612DA8 EP: 8B612DA8 - VERSION 6.0.1 2004-07-03 15:08:24
       LNKLIB: SYS1.OSEM.LOAD1
  OS$NOTFY ADDR: 0B610948 EP: 8B610948 - VERSION 6.0.1 2004-06-24 20:49:35
       LNKLIB: SYS1.OSEM.LOAD1
  OS$QMSG  ADDR: 0B610400 EP: 8B610400 - VERSION 6.0.1 2004-06-24 20:55:00
       LNKLIB: SYS1.OSEM.LOAD1
  OS$RACCN ADDR: 0B5FA9E0 EP: 8B5FA9E0 - VERSION 6.0.1 2004-06-24 21:04:28
       LNKLIB: SYS1.OSEM.LOAD1
  OS$RCSTK ADDR: 0B6302E8 EP: 8B6302E8 - VERSION 6.0.1 2004-07-03 15:20:59
       LNKLIB: SYS1.OSEM.LOAD1
  OS$SAFCN ADDR: 0B5F8BA0 EP: 8B5F8BA0 - VERSION 6.0.1 2004-06-24 21:52:27
       LNKLIB: SYS1.OSEM.LOAD1
  OS$SECHK ADDR: 0B6719F8 EP: 8B6719F8 - VERSION 6.0.1 2004-06-24 22:04:00
       LNKLIB: SYS1.OSEM.LOAD1
  OS$SMFCN ADDR: 0B5F6AE0 EP: 8B5F6AE0 - VERSION 6.0.1 2004-06-24 22:34:14
       LNKLIB: SYS1.OSEM.LOAD1
  OS$STATE ADDR: 0B6390A0 EP: 8B6390A0 - VERSION 6.0.1 2004-06-24 22:36:49
       LNKLIB: SYS1.OSEM.LOAD1
  OS$SVCCN ADDR: 0B604640 EP: 8B604640 - VERSION 6.0.1 2004-06-24 22:38:29
```

```
       LNKLIB: SYS1.OSEM.LOAD1
  OS$SVCEX ADDR: 00CDA618 EP: 80CDA618 - VERSION 6.0.1 2004-06-24 22:39:48
       LNKLIB: SYS1.OSEM.LOAD1
  OS$SVCIF ADDR: 0B61D050 EP: 8B61D050 - VERSION 6.0.1 2004-06-24 22:40:19
       LNKLIB: SYS1.OSEM.LOAD1
  OS$SVC34 ADDR: 00CDA770 EP: 80CDA770 - VERSION 6.0.1 2004-06-24 22:42:08
       LNKLIB: SYS1.OSEM.LOAD1
  OS$THRDI ADDR: 0B6570E0 EP: 8B6570E0 - VERSION 6.0.1 2004-06-28 21:19:24
       LNKLIB: SYS1.OSEM.LOAD1
  OS$THRDT ADDR: 0B64E760 EP: 8B64E760 - VERSION 6.0.1 2004-06-28 21:20:45
       LNKLIB: SYS1.OSEM.LOAD1
  OS$TSOCN ADDR: 0B5F3ED0 EP: 8B5F3ED0 - VERSION 6.0.1 2004-06-24 22:51:41
       LNKLIB: SYS1.OSEM.LOAD1
  OS$TSSRB ADDR: 0B779190 EP: 8B7791A0 - VERSION 6.0.1 2004-05-19 19:46:22
       LNKLIB: SYS1.OSEM.LOAD1
  OS$WTO   ADDR: 0B618100 EP: 8B618100 - VERSION 6.0.1 2004-06-24 23:02:01
       LNKLIB: SYS1.OSEM.LOAD1
JES2 CONTROLLERS
  OS$J2MC  ADDR: 00CAE3C8 EP: 80CAE510 - VERSION 6.0.1 2004-06-28 21:36:59
       LNKLIB: SYS1.OSEM.LOAD1
  OS$J2SC  ADDR: 00CAC5A0 EP: 80CAC6E0 - VERSION 6.0.1 2004-06-28 22:26:00
       LNKLIB: SYS1.OSEM.LOAD1
  OS$J2OF  ADDR: 00CB0738 EP: 80CB07F0 - VERSION 6.0.1 2004-07-05 09:05:40
       LNKLIB: SYS1.OSEM.LOAD1
  OS$XIT0  ADDR: 00CA7870 EP: 80CA7870 - VERSION 6.0.1 2004-06-28 23:18:52
       LNKLIB: SYS1.OSEM.LOAD1
  OS$J2IT  ADDR: 00C97490 EP: 80C97490 - VERSION 6.0.1 2004-06-28 21:13:35
  OS$J2ES  ADDR: 0B5EDC98 EP: 8B5EDDC0 - VERSION 6.0.1 2004-06-28 20:02:41
       LNKLIB: SYS1.OSEM.LOAD1
  OS$J2ER  ADDR: 0B578E98 EP: 8B578FC0 - VERSION 6.0.1 2004-06-27 14:55:10
       LNKLIB: SYS1.OSEM.LOAD1
  OS$J2JC  ADDR: 00CAB578 EP: 80CAB6A8 - VERSION 6.0.1 2004-07-03 14:16:52
       LNKLIB: SYS1.OSEM.LOAD1
  OS$J2TP  ADDR: 0B574558 EP: 8B574680 - VERSION 6.0.1 2004-07-05 11:37:25
       LNKLIB: SYS1.OSEM.LOAD1
  OS$J2CW  ADDR: 0B4E7088 EP: 8B4E71C0 - VERSION 6.0.1 2004-06-28 19:36:30
       LNKLIB: SYS1.OSEM.LOAD1
  OS$J2DJ  ADDR: 0B4BF120 EP: 8B4BF250 - VERSION 6.0.1 2004-06-28 19:39:41
       LNKLIB: SYS1.OSEM.LOAD1
  OS$J2QM  ADDR: 0B4C6510 EP: 8B4C6648 - VERSION 6.0.1 2004-06-28 22:21:57
       LNKLIB: SYS1.OSEM.LOAD1
  OS$J2QG  ADDR: 0B4E00E0 EP: 8B4E0208 - VERSION 6.0.1 2004-06-28 22:20:35
       LNKLIB: SYS1.OSEM.LOAD1
  OS$J2GM  ADDR: 0B4A7820 EP: 8B4A7950 - VERSION 6.0.1 2004-06-28 20:09:43
       LNKLIB: SYS1.OSEM.LOAD1
  OS$J2G2  ADDR: 00CAA270 EP: 80CAA270 - VERSION 6.0.1 2004-06-28 20:24:16
       LNKLIB: SYS1.OSEM.LOAD1
  OS$J2G3  ADDR: 0B56E618 EP: 8B56E618 - VERSION 6.0.1 2004-06-29 12:55:45
       LNKLIB: SYS1.OSEM.LOAD1
  OS$J2G4  ADDR: 0B56CC10 EP: 8B56CC10 - VERSION 6.0.1 2004-06-28 20:54:15
       LNKLIB: SYS1.OSEM.LOAD1
  OS$J2P0  ADDR: 00CB0160 EP: 80CB0290 - VERSION 6.0.1 2004-06-28 22:09:16
       LNKLIB: SYS1.OSEM.LOAD1
  OS$J2P1  ADDR: 00CAE048 EP: 80CAE178 - VERSION 6.0.1 2004-06-28 22:11:41
       LNKLIB: SYS1.OSEM.LOAD1
  OS$J2P2  ADDR: 00CDA0F8 EP: 80CDA220 - VERSION 6.0.1 2004-06-28 22:12:53
       LNKLIB: SYS1.OSEM.LOAD1
  OS$J2P3  ADDR: 0B5ED928 EP: 8B5EDA58 - VERSION 6.0.1 2004-06-28 22:14:11
       LNKLIB: SYS1.OSEM.LOAD1
  OS$J2P4  ADDR: 0B5E12D8 EP: 8B5E1400 - VERSION 6.0.1 2004-06-28 22:15:23
       LNKLIB: SYS1.OSEM.LOAD1
  OS$J2P5  ADDR: 0B5ED5B0 EP: 8B5ED6C8 - VERSION 6.0.1 2004-06-28 22:16:53
       LNKLIB: SYS1.OSEM.LOAD1
  OS$J2P6  ADDR: 0B5ED180 EP: 8B5ED290 - VERSION 6.0.1 2004-06-28 22:18:04
       LNKLIB: SYS1.OSEM.LOAD1
  OS$J2P7  ADDR: 0B5EB560 EP: 8B5EB688 - VERSION 6.0.1 2004-06-28 22:19:20
       LNKLIB: SYS1.OSEM.LOAD1
  OS$J2S0  ADDR: 00CA86A8 EP: 80CA87D8 - VERSION 6.0.1 2004-06-28 22:29:21
       LNKLIB: SYS1.OSEM.LOAD1


SMF RECORDING TYPE 222 RECORDS


OS/EM EXPIRATION WARNING ACTIVE
```

```
  OSEM NOTIFY: <NONE>
  USER NOTIFY: <NONE>

NO NOTIFY GROUPS

  DIAGNOSTIC SWITCHES:  14

  EVENT FLAGS:  9 11 12 13 14

 AUTHORIZATION DATA

  OS/EM WILL EXPIRE 2004.365
  JES3 OPTION IS ENABLED
  HSM OPTIMIZER OPTION IS ENABLED
  QUIKPOOL OPTION IS ENABLED
  JCL STANDARDS OPTION IS ENABLED
  HSM REPORTS OPTION IS ENABLED

 ALLOCATION DATA
  NOTIFY: <NONE>

  IEFW21SD – EXIT IS ENABLED
   EXIT ENTRIES: 144 OVERHEAD: 2.91734 AVERAGE: 0.02025 PER HOUR: 0
   VALID RETURN CODES: (DEFAULT) ANY
   GOOD RETURN CODES: (DEFAULT) ANY
   DISABLING RETURN CODES: (DEFAULT) NONE
   DEFAULT RETURN CODE: (DEFAULT) 0
   USER EXIT 1 – NOTIFY: <NONE>
    PRIMARY EXIT (IEFW21SD) ADDR: 047A9000 EP: 847C1790 – SOURCE: OS$IPL
      LPALIB: SYS1.LPALIB
    MODULE ENTRIES: 144 CPU: 16.8 AVERAGE: 4.63618
   OS/EM EXIT – CALLED LAST – NOTIFY: <NONE>
    EXIT (OS$W21SD) – VERSION 6.0.1 2004-06-28 21:34:48
     ADDR: 0B5F16B8 EP: 8B5F16B8 – SOURCE: OS$IPL
       LNKLIB: SYS1.OSEM.LOAD1
    MODULE ENTRIES: 144 CPU: 0.10993 AVERAGE: 0.00076
    STEPLIB OPTION IS NOT ACTIVE

  IEFDB401 – EXIT IS ENABLED
   EXIT ENTRIES: 826 OVERHEAD: 4.559 AVERAGE: 0.05518 PER HOUR: 0
   VALID RETURN CODES: (DEFAULT) ANY
   GOOD RETURN CODES: (DEFAULT) 0
   DISABLING RETURN CODES: (DEFAULT) NONE
   DEFAULT RETURN CODE: (DEFAULT) 0
   USER EXIT 1 – NOTIFY: <NONE>
    PRIMARY EXIT (IEFDB401) ADDR: 02EBFE98 EP: 82EBFE98 – SOURCE: OSV6
      LPALIB: SYS1.LPALIB
    MODULE ENTRIES: 625 CPU: 0.03997 AVERAGE: 0.00006
   OS/EM EXIT – CALLED FIRST – NOTIFY: <NONE>
    EXIT (OS$DB401) – VERSION 6.0.1 2004-06-24 19:38:31
     ADDR: 0B4E62E8 EP: 8B4E62E8 – SOURCE: OSV6
       LNKLIB: SYS1.OSEM.LOAD1
    MODULE ENTRIES: 593 CPU: 0.85988 AVERAGE: 0.00145
    WARN OPTION IS NOT ACTIVE
    TAPECONTROL OPTION IS ACTIVE
    JOBCLASS A: TOTAL TAPES: 0
    JOBCLASS B: TOTAL TAPES: 0

  SVC26 – EXIT IS ENABLED
   EXIT ENTRIES: 2,490 OVERHEAD: 4.860 AVERAGE: 0.01951 PER HOUR: 0
   VALID RETURN CODES: (DEFAULT) ANY
   GOOD RETURN CODES: (DEFAULT) NONE
   DISABLING RETURN CODES: (DEFAULT) NONE
   DEFAULT RETURN CODE: (DEFAULT) 0
   OS/EM EXIT – CALLED FIRST – NOTIFY: <NONE>
    EXIT (OS$0002F) – VERSION 6.0.1 2004-06-28 21:36:50
     ADDR: 0B4E5028 EP: 8B4E5028 – SOURCE: OSV6
       LNKLIB: SYS1.OSEM.LOAD1
    MODULE ENTRIES: 2,490 CPU: 1.292 AVERAGE: 0.00518
    WARN OPTION IS NOT ACTIVE
    NOTCAT2 OPTION IS ACTIVE
    RECATALOG OPTION IS NOT ACTIVE
```

```
   DELETE OPTION IS NOT ACTIVE
   FAIL OPTION IS ACTIVE
    JOBCLASS: A:9 STC TSU


 IEFALLOD - EXIT IS ENABLED
  EXIT ENTRIES: 0 OVERHEAD: 0 AVERAGE: 0 PER SECOND: 0
  VALID RETURN CODES: (DEFAULT) 0
  GOOD RETURN CODES: (DEFAULT) 0
  DISABLING RETURN CODES: (DEFAULT) NONE
  DEFAULT RETURN CODE: (DEFAULT) 0
  OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
   EXIT (OS$ALLOD) - VERSION 6.0.1 2004-06-24 19:17:20
    ADDR: 0B4AEF60 EP: 8B4AEF60 - SOURCE: OSV6
     LNKLIB: SYS1.OSEM.LOAD1
   MODULE ENTRIES: 0 CPU: 0 AVERAGE: 0
   RESTRICT OPTION IS NOT ACTIVE
   TAPESHARE OPTION IS ACTIVE
    COMMUNICATION DSN: SYS2.OSEM.TAPESHR
    WAIT OPTION: HOLD
    DEVICES: 500 560 561 562 563 564 565 566 567 568 569 56A 56B 56C 56D 56E
      56F 570 571 572 573 574 575 576 577 578 579 57A 57B 57C 57D 57E 57F 590
 OS$ENF   ADDR: 0B4F5178 EP: 8B4F5178 - VERSION 6.0.1 2004-06-24 19:50:54
     LNKLIB: SYS1.OSEM.LOAD1
 OS$CMD   ADDR: 0B4B0BA8 EP: 8B4B0BA8 - VERSION 6.0.1 2004-06-24 19:22:50
     LNKLIB: SYS1.OSEM.LOAD1


 SVC99 - EXIT IS ENABLED
  EXIT ENTRIES: 1,091 OVERHEAD: 1.807 AVERAGE: 0.01655 PER HOUR: 0
  VALID RETURN CODES: (DEFAULT) ANY
  GOOD RETURN CODES: (DEFAULT) NONE
  DISABLING RETURN CODES: (DEFAULT) NONE
  DEFAULT RETURN CODE: (DEFAULT) 0
  OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
   EXIT (OS$0009I) - VERSION 6.0.1 2004-06-24 23:15:58
    ADDR: 00CAB218 EP: 80CAB218 - SOURCE: OSV6
     LNKLIB: SYS1.OSEM.LOAD1
   MODULE ENTRIES: 1,091 CPU: 26.178 AVERAGE: 0.23993

 DASD DATA
  NOTIFY: <NONE>

 IGGPRE00 - EXIT IS ENABLED
  EXIT ENTRIES: 490 OVERHEAD: 2.652 AVERAGE: 0.05410 PER HOUR: 0
  VALID RETURN CODES: (DEFAULT) 0,4,8
  GOOD RETURN CODES: (DEFAULT) 0
  DISABLING RETURN CODES: (DEFAULT) NONE
  DEFAULT RETURN CODE: (DEFAULT) 0
  USER EXIT 1 - NOTIFY: <NONE>
   PRIMARY EXIT (IGGPRE00) ADDR: 047A4808 EP: 847A4808 - SOURCE: OSV6
     LPALIB: SYS1.LPALIB
   MODULE ENTRIES: 490 CPU: 0.07994 AVERAGE: 0.00016
  OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
   EXIT (OS$PRE00) - VERSION 6.0.1 2004-06-24 20:53:04
    ADDR: 00CA5C50 EP: 80CA5C50 - SOURCE: OSV6
     LNKLIB: SYS1.OSEM.LOAD1
   MODULE ENTRIES: 490 CPU: 0.34903 AVERAGE: 0.00071
   DSORG OPTION IS ACTIVE
   WARN OPTION IS NOT ACTIVE
   QUICKPOOL OPTION IS ACTIVE
   CONTROL OPTION IS ACTIVE
   NOABSTR OPTION IS ACTIVE
   NOCONTIG OPTION IS NOT ACTIVE
   NOMXIG OPTION IS ACTIVE
   NOALX OPTION IS ACTIVE
   NOISAM OPTION IS ACTIVE
   NOSINGLELEVEL OPTION IS ACTIVE
   NOUNMOVABLE OPTION IS NOT ACTIVE
   NOADSP OPTION IS ACTIVE
   RESETADSP OPTION IS NOT ACTIVE
   NOPROTECT OPTION IS ACTIVE
   RESETPROTECT OPTION IS NOT ACTIVE

 IGGPOST0 - EXIT IS ENABLED
```

```
   EXIT ENTRIES: 490 OVERHEAD: 1.919 AVERAGE: 0.03915 PER HOUR: 0
   VALID RETURN CODES: (DEFAULT) ANY
   GOOD RETURN CODES: (DEFAULT) ANY
   DISABLING RETURN CODES: (DEFAULT) NONE
   DEFAULT RETURN CODE: (DEFAULT) 0
   USER EXIT 1 – NOTIFY: <NONE>
    PRIMARY EXIT (IGGPOST0) ADDR: 04E2CF58 EP: 84E2CF58 – SOURCE: OSV6
       LPALIB: SYS1.LPALIB
     MODULE ENTRIES: 490 CPU: 0.00001 AVERAGE: 0.00000

 HSM DATA
  NOTIFY: <NONE>

  ARCADEXT – EXIT IS ENABLED
   EXIT ENTRIES: 0 OVERHEAD: 0 AVERAGE: 0 PER SECOND: 0
   VALID RETURN CODES: (DEFAULT) 0,4
   GOOD RETURN CODES: (DEFAULT) 0
   DISABLING RETURN CODES: (DEFAULT) NONE
   DEFAULT RETURN CODE: (DEFAULT) 0
   NO OS/EM FUNCTIONS ACTIVE

  ARCBDEXT – EXIT IS ENABLED
   EXIT ENTRIES: 0 OVERHEAD: 0 AVERAGE: 0 PER SECOND: 0
   VALID RETURN CODES: (DEFAULT) 0,4,8,12
   GOOD RETURN CODES: (DEFAULT) 0,4
   DISABLING RETURN CODES: (DEFAULT) NONE
   DEFAULT RETURN CODE: (DEFAULT) 0
   OS/EM EXIT – CALLED FIRST – NOTIFY: <NONE>
    EXIT (OS$BDEXT) – VERSION 6.0.1 2004–06–24 19:20:14
     ADDR: 0B581560 EP: 8B581560 – SOURCE: OSV6
       LNKLIB: SYS1.OSEM.LOAD1
     MODULE ENTRIES: 0 CPU: 0 AVERAGE: 0
     BACKUPCONTROL OPTION IS ACTIVE
       EXCLUDE: BKPEXC DISPOLV

  ARCCDEXT – EXIT IS ENABLED
   EXIT ENTRIES: 0 OVERHEAD: 0 AVERAGE: 0 PER SECOND: 0
   VALID RETURN CODES: (DEFAULT) ANY
   GOOD RETURN CODES: (DEFAULT) 0
   DISABLING RETURN CODES: (DEFAULT) NONE
   DEFAULT RETURN CODE: (DEFAULT) 0
   OS/EM EXIT – CALLED FIRST – NOTIFY: <NONE>
    EXIT (OS$CDEXT) – VERSION 6.0.1 2004–06–24 19:22:07
     ADDR: 0B4F86A0 EP: 8B4F86A0 – SOURCE: OSV6
       LNKLIB: SYS1.OSEM.LOAD1
     MODULE ENTRIES: 0 CPU: 0 AVERAGE: 0
     REBLOCK OPTION IS ACTIVE
     FULL-TRACK OPTION IS ACTIVE
     HALF-TRACK OPTION IS ACTIVE
       MINSIZE: 1K

  ARCMDEXT – EXIT IS ENABLED
   EXIT ENTRIES: 0 OVERHEAD: 0 AVERAGE: 0 PER SECOND: 0
   VALID RETURN CODES: (DEFAULT) ANY
   GOOD RETURN CODES: (DEFAULT) ANY
   DISABLING RETURN CODES: (DEFAULT) NONE
   DEFAULT RETURN CODE: (DEFAULT) 0
   OS/EM EXIT – CALLED FIRST – NOTIFY: <NONE>
    EXIT (OS$MDEXT) – VERSION 6.0.1 2004–06–24 19:02:04
     ADDR: 0B5784C0 EP: 8B5784C0 – SOURCE: OSV6
       LNKLIB: SYS1.OSEM.LOAD1
     MODULE ENTRIES: 0 CPU: 0 AVERAGE: 0
     MIGRATIONCONTROL OPTION IS ACTIVE
     HOLD02 OPTION IS ACTIVE
       INCLUDE: ML1H02
     HOLD05 OPTION IS ACTIVE
       MAXSIZE: 750K
       RELATION IS "OR"
       INCLUDE: USERS
     HOLD08 OPTION IS ACTIVE
       INCLUDE: ML1H08
     HOLD09 OPTION IS ACTIVE
       INCLUDE: HOLD09
```

```
   HOLD30 OPTION IS ACTIVE
     INCLUDE: HOLD30
   HOLD OPTION IS ACTIVE
     INCLUDE: HOLD999
   DIRECTML2 OPTION IS ACTIVE
     MINSIZE: 20000K

 ARCMMEXT - EXIT IS ENABLED
  EXIT ENTRIES: 0 OVERHEAD: 0 AVERAGE: 0 PER SECOND: 0
  VALID RETURN CODES: (DEFAULT) 0,4
  GOOD RETURN CODES: (DEFAULT) 0
  DISABLING RETURN CODES: (DEFAULT) NONE
  DEFAULT RETURN CODE: (DEFAULT) 0
  OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
   EXIT (OS$MMEXT) - VERSION 6.0.1 2004-06-24 19:04:43
    ADDR: 0B4F66E8 EP: 8B4F66E8 - SOURCE: OSV6
     LNKLIB: SYS1.OSEM.LOAD1
    MODULE ENTRIES: 0 CPU: 0 AVERAGE: 0
   ML2CONTROL OPTION IS ACTIVE
   HOLD01 OPTION IS ACTIVE
     INCLUDE: ML2H01
   HOLD02 OPTION IS ACTIVE
     INCLUDE: ML2H02
   HOLD10 OPTION IS ACTIVE
     MAXSIZE: 440K
     RELATION IS "AND"
     INCLUDE: USERS

 ARCMVEXT - EXIT IS ENABLED
  EXIT ENTRIES: 0 OVERHEAD: 0 AVERAGE: 0 PER SECOND: 0
  VALID RETURN CODES: (DEFAULT) ANY
  GOOD RETURN CODES: (DEFAULT) ANY
  DISABLING RETURN CODES: (DEFAULT) NONE
  DEFAULT RETURN CODE: (DEFAULT) 0
  OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
   EXIT (OS$MVEXT) - VERSION 6.0.1 2004-06-24 19:06:23
    ADDR: 0B56C258 EP: 8B56C258 - SOURCE: OSV6
     LNKLIB: SYS1.OSEM.LOAD1
    MODULE ENTRIES: 0 CPU: 0 AVERAGE: 0
   DEFRAG OPTION IS NOT ACTIVE

 ARCRDEXT - EXIT IS ENABLED
  EXIT ENTRIES: 0 OVERHEAD: 0 AVERAGE: 0 PER SECOND: 0
  VALID RETURN CODES: (DEFAULT) ANY
  GOOD RETURN CODES: (DEFAULT) ANY
  DISABLING RETURN CODES: (DEFAULT) NONE
  DEFAULT RETURN CODE: (DEFAULT) 0
  OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
   EXIT (OS$RDEXT) - VERSION 6.0.1 2004-06-24 21:11:37
    ADDR: 0B4F71D0 EP: 8B4F71D0 - SOURCE: OSV6
     LNKLIB: SYS1.OSEM.LOAD1
    MODULE ENTRIES: 0 CPU: 0 AVERAGE: 0
   DIRECTRECALL OPTION IS ACTIVE

 ARCRPEXT - EXIT IS ENABLED
  EXIT ENTRIES: 0 OVERHEAD: 0 AVERAGE: 0 PER SECOND: 0
  VALID RETURN CODES: (DEFAULT) 0,8
  GOOD RETURN CODES: (DEFAULT) 0
  DISABLING RETURN CODES: (DEFAULT) NONE
  DEFAULT RETURN CODE: (DEFAULT) 0
  NO OS/EM FUNCTIONS ACTIVE

 ISPF DATA
  NOTIFY: <NONE>

  EXIT16 - EXIT IS ENABLED
   EXIT ENTRIES: 4 OVERHEAD: 0.19974 AVERAGE: 0.04993 PER HOUR: 0
   VALID RETURN CODES: (DEFAULT) ANY
   GOOD RETURN CODES: (DEFAULT) ANY
   DISABLING RETURN CODES: (DEFAULT) NONE
   DEFAULT RETURN CODE: (DEFAULT) 0
   OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
    EXIT (OS$EXT16) - VERSION 6.0.1 2004-06-24 19:57:42
```

```
   ADDR: 0B4F62F0 EP: 8B4F62F0 - SOURCE: OSV6
     LNKLIB: SYS1.OSEM.LOAD1
   MODULE ENTRIES: 4 CPU: 0.33003 AVERAGE: 0.08250
  LOG PREFIX OPTION IS ACTIVE
     PREFIX:  &SYSNAME
  LIST PREFIX OPTION IS ACTIVE
     PREFIX:  &SYSNAME
  TEMP PREFIX OPTION IS ACTIVE
     PREFIX:  &SYSNAME

 SAF DATA
  NOTIFY: <NONE>
   NO ACTIVE EXITS

 RACF DATA
  NOTIFY: <NONE>
  ICHRIN03 TABLE NOT RELOADED
  ICHRRCDE TABLE NOT RELOADED
  ICHRFR01 TABLE NOT RELOADED

  ICHRDX01 - EXIT IS ENABLED
   EXIT ENTRIES: 0 OVERHEAD: 0 AVERAGE: 0 PER SECOND: 0
   VALID RETURN CODES: (DEFAULT) 0,4,8,12
   GOOD RETURN CODES: (DEFAULT) 0
   DISABLING RETURN CODES: (DEFAULT) NONE
   DEFAULT RETURN CODE: (DEFAULT) 0
   NO OS/EM FUNCTIONS ACTIVE

  ICHRCX02 - EXIT IS ENABLED
   EXIT ENTRIES: 2,299 OVERHEAD: 3.811 AVERAGE: 0.01657 PER HOUR: 0
   VALID RETURN CODES: (DEFAULT) 0,4
   GOOD RETURN CODES: (DEFAULT) 0
   DISABLING RETURN CODES: (DEFAULT) NONE
   DEFAULT RETURN CODE: (DEFAULT) 0
   USER EXIT 1 - NOTIFY: <NONE>
    PRIMARY EXIT (ICHRCX02) ADDR: 00DE0408 EP: 00DE0408 - SOURCE: OSV6
      LPALIB: USER.LPALIB
    MODULE ENTRIES: 2,299 CPU: 0.10001 AVERAGE: 0.00004
   NO OS/EM FUNCTIONS ACTIVE

  ICHRIX02 - EXIT IS ENABLED
   EXIT ENTRIES: 309 OVERHEAD: 5.57730 AVERAGE: 0.01804 PER HOUR: 0
   VALID RETURN CODES: (DEFAULT) 0,4
   GOOD RETURN CODES: (DEFAULT) 0
   DISABLING RETURN CODES: (DEFAULT) NONE
   DEFAULT RETURN CODE: (DEFAULT) 0
   USER EXIT 1 - NOTIFY: <NONE>
    PRIMARY EXIT (ICHRIX02) ADDR: 00D0E000 EP: 00D0E000 - SOURCE: OSV6
      LPALIB: USER.LPALIB
    MODULE ENTRIES: 282 CPU: 0.13999 AVERAGE: 0.00049

 SMF DATA
  NOTIFY: <NONE>

  IEFACTRT - EXIT IS ENABLED
   EXIT ENTRIES: 162 OVERHEAD: 1.75765 AVERAGE: 0.01084 PER HOUR: 0
   VALID RETURN CODES: (DEFAULT) ANY
   GOOD RETURN CODES: (DEFAULT) 0
   DISABLING RETURN CODES: (DEFAULT) NONE
   DEFAULT RETURN CODE: (DEFAULT) 0
   OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
    EXIT (OS$ACTRT) - VERSION 6.0.1 2004-07-03 14:16:31
     ADDR: 0B4EFB08 EP: 8B4EFB08 - SOURCE: OSV6
      LNKLIB: SYS1.OSEM.LOAD1
    MODULE ENTRIES: 162 CPU: 3.105 AVERAGE: 0.19163
   QUICKDELETE OPTION IS ACTIVE
   CONDCODETEXT OPTION IS ACTIVE
    TEXT: FLUSHED
   LOGOFFDISPLAY OPTION IS ACTIVE
    DELAY: 5
   STEPNOTIFY OPTION IS NOT ACTIVE
   STEPENDSTATS OPTION IS ACTIVE
    JOBCLASS: A:9
```

```
    JOBENDSTATS OPTION IS ACTIVE
     JOBCLASS: A:9
      STATBOX TITLE 1: "TRIDENT SERVICES"
      STATBOX TITLE 2: "DEVELOPMENT"
      STATBOX TITLE 3: "SAN FRANCISCO, CA"
    STEPENDWTO OPTION IS ACTIVE
     JOBCLASS: A:9
    JOBENDWTO OPTION IS ACTIVE
     JOBCLASS: A:9
    ABENDMSG OPTION IS ACTIVE
     JOBCLASS: A&glm.D F K:L P:Q
    CANCELWTOR OPTION IS ACTIVE
     JOBCLASS: A
    ESTIMATED COST OPTION IS ACTIVE
     DEFAULT RATES:
      MINIMUM COST: 00000.00 FIXED COST: 00000.00
      CPU TIME - TCB: 00.00000 SRB: 00.00000
      NORMALIZATION FACTOR: 000.0000
      SERVICE UNITS - TCB: .0000050 SRB: .0000000 I/O: .0000000 MSO: .0000000
      I/O COUNTS - DASD: 00.00075 TAPE: 00.00000 VIO: 00.00000
      TAPE MOUNTS - SPECIFIC: 00.00000 NON-SPECIFIC: 00.00000
      DEVICE CONNECT TIME: 00.00000
     TEST RATES:
      MINIMUM COST: 00000.00 FIXED COST: 00000.00
      CPU TIME - TCB: 00.04860 SRB: 00.04860
      NORMALIZATION FACTOR: 008.5200
      SERVICE UNITS - TCB: .0000000 SRB: .0000000 I/O: .0000000 MSO: .0000000
      I/O COUNTS - DASD: 00.00000 TAPE: 00.00000 VIO: 00.00000
      TAPE MOUNTS - SPECIFIC: 00.00000 NON-SPECIFIC: 00.00000
      DEVICE CONNECT TIME: 00.00000
     EXPR RATES:
      MINIMUM COST: 00000.00 FIXED COST: 00000.00
      CPU TIME - TCB: 00.04860 SRB: 00.04860
      NORMALIZATION FACTOR: 004.2600
      SERVICE UNITS - TCB: .0000000 SRB: .0000000 I/O: .0000000 MSO: .0000000
      I/O COUNTS - DASD: 00.00000 TAPE: 00.00000 VIO: 00.00000
      TAPE MOUNTS - SPECIFIC: 00.00000 NON-SPECIFIC: 00.00000
      DEVICE CONNECT TIME: 00.00000
     P390 RATES:
      MINIMUM COST: 00000.00 FIXED COST: 00000.00
      CPU TIME - TCB: 00.04860 SRB: 00.04860
      NORMALIZATION FACTOR: 008.5200
      SERVICE UNITS - TCB: .0000000 SRB: .0000000 I/O: .0000000 MSO: .0000000
      I/O COUNTS - DASD: 00.00000 TAPE: 00.00000 VIO: 00.00000
      TAPE MOUNTS - SPECIFIC: 00.00000 NON-SPECIFIC: 00.00000
      DEVICE CONNECT TIME: 00.00000

  IEFUJI - EXIT IS ENABLED
   EXIT ENTRIES: 91 OVERHEAD: 0.95881 AVERAGE: 0.01053 PER HOUR: 0
   VALID RETURN CODES: (DEFAULT) ANY
   GOOD RETURN CODES: (DEFAULT) 0
   DISABLING RETURN CODES: (DEFAULT) NONE
   DEFAULT RETURN CODE: (DEFAULT) 0
   OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
    EXIT (OS$UJI) - VERSION 6.0.1 2004-06-28 21:23:41
     ADDR: 0B4E7690 EP: 8B4E7690 - SOURCE: OSV6
      LNKLIB: SYS1.OSEM.LOAD1
     MODULE ENTRIES: 71 CPU: 4.11667 AVERAGE: 0.05798
    JOBCLASSCHECK OPTION IS ACTIVE
     RACF LOGGING: NORMAL
    JOBNAMECHECK OPTION IS NOT ACTIVE

  IEFUSI - EXIT IS ENABLED
   EXIT ENTRIES: 144 OVERHEAD: 2.48746 AVERAGE: 0.01727 PER HOUR: 0
   VALID RETURN CODES: (DEFAULT) ANY
   GOOD RETURN CODES: (DEFAULT) 0
   DISABLING RETURN CODES: (DEFAULT) NONE
   DEFAULT RETURN CODE: (DEFAULT) 0
   OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
    EXIT (OS$USI) - VERSION 6.0.1 2004-07-03 15:31:02
     ADDR: 0B5EDEC8 EP: 8B5EDEC8 - SOURCE: OS$IPL
      LNKLIB: SYS1.OSEM.LOAD1
     MODULE ENTRIES: 144 CPU: 4.41716 AVERAGE: 0.03067
```

```
     QUICKDELETE OPTION IS ACTIVE
     REGION OVERRIDE OPTION IS NOT ACTIVE
     REGIONCONTROL OPTION IS ACTIVE
     WEIGHT NOT ACTIVE
     DEFAULT:
       6144K REG < 16M; 6144K LIM < 16M; 0K REG > 16M; 0K LIM > 16M
     REGION: 1
       6144K REG < 16M; 6144K LIM < 16M; 0K REG > 16M; 0K LIM > 16M
       INCLUDE JOBCLASS: A:D F M:N P
     REGION: 2
       8192K REG < 16M; 8192K LIM < 16M; 40960K REG > 16M; 45960K LIM > 16M
       200 BLKS DEF HSP SIZE; 40M MAX TOTAL SIZE; 10 MAX TOTAL SPACES
       INCLUDE JOBS/USERS: ENF ENFSPL
     REGION: 3
       4096K REG < 16M; 16384K LIM < 16M; 0K REG > 16M; 0K LIM > 16M
       INCLUDE JOBCLASS: TSU
     REGION: 4
       4096K REG < 16M; 4096K LIM < 16M; 0K REG > 16M; 0K LIM > 16M
       INCLUDE PROGRAMS:  IFCEREP1
     REGION: 5
       6144K REG < 16M; 8192K LIM < 16M; 0K REG > 16M; 90000K LIM > 16M
       INCLUDE PROGRAMS:  DFHSIP
     REGION: 6
       8192K REG < 16M; 8192K LIM < 16M; 0K REG > 16M; 0K LIM > 16M
       INCLUDE PROGRAMS:  DXRRLM00 GIMSMP ICNRTNDF
     REGION: 7
       8192K REG < 16M; 16384K LIM < 16M; 64000K REG > 16M; 65000K LIM > 16M
       INCLUDE PROGRAMS:  ARCCTL ASMA90
     REGION: 8
       8192K REG < 16M; 8192K LIM < 16M; 40960K REG > 16M; 45960K LIM > 16M
       200 BLKS DEF HSP SIZE; 40M MAX TOTAL SIZE; 10 MAX TOTAL SPACES
       INCLUDE PROGRAMS:  CAS9SPLZ

 IEFUSO - EXIT IS ENABLED
  EXIT ENTRIES: 0 OVERHEAD: 0 AVERAGE: 0 PER SECOND: 0
  VALID RETURN CODES: (DEFAULT) ANY
  GOOD RETURN CODES: (DEFAULT) 4
  DISABLING RETURN CODES: (DEFAULT) NONE
  DEFAULT RETURN CODE: (DEFAULT) 0
  SYSOUT EXTENSION TO USE: MAXIMUM
  OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
   EXIT (OS$USO) - VERSION 6.0.1 2004-06-28 21:26:32
    ADDR: 0B4E4118 EP: 8B4E4118 - SOURCE: OSV6
     LNKLIB: SYS1.OSEM.LOAD1
   MODULE ENTRIES: 0 CPU: 0 AVERAGE: 0
   SYSOUT EXTENSION OPTION IS ACTIVE
   WEIGHT NOT ACTIVE
   EXTENSION: 1
    SYSOUT EXTENSION: 1000 LINES
     WTO WHEN EXTENSION GRANTED
     WTOR AFTER 1 EXTENSIONS
     INCLUDE JOBCLASS: S

 IEFUTL - EXIT IS ENABLED
  EXIT ENTRIES: 0 OVERHEAD: 0 AVERAGE: 0 PER SECOND: 0
  VALID RETURN CODES: (DEFAULT) ANY
  GOOD RETURN CODES: (DEFAULT) 4,8
  DISABLING RETURN CODES: (DEFAULT) NONE
  DEFAULT RETURN CODE: (DEFAULT) 0
  TIME EXTENSION TO USE: MAXIMUM
  OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
   EXIT (OS$UTL) - VERSION 6.0.1 2004-06-28 21:30:12
    ADDR: 0B4C6DB0 EP: 8B4C6DB0 - SOURCE: OSV6
     LNKLIB: SYS1.OSEM.LOAD1
   MODULE ENTRIES: 0 CPU: 0 AVERAGE: 0
   TSO DISCONNECT OPTION IS NOT ACTIVE
   WAIT TIME OPTION IS ACTIVE
   JOB CPU OPTION IS NOT ACTIVE
   STEP CPU OPTION IS NOT ACTIVE
   WEIGHT:  DAYS: 1  PROGRAM: 2  TERMINAL: 4  JOBCLASS: 3  JOBNAME: 5
   EXTENSION: 1
    WAIT EXTENSION: 30 MINUTES
    TIME LIMITS:
```

```
        MONDAY: 0001:2400
        TUESDAY: 0001:2400
        WEDNESDAY: 0001:2400
        THURSDAY: 0001:2400
        FRIDAY: 0001:2400
        SATURDAY: 0001:2400
        SUNDAY: 0001:2400
       INCLUDE JOBS/USERS: PCEDI
     EXTENSION: 2
       WAIT EXTENSION: 30 MINUTES
       TIME LIMITS:
        MONDAY: 0600:1930
        TUESDAY: 0600:1930
        WEDNESDAY: 0600:1930
        THURSDAY: 0600:1930
        FRIDAY: 0600:1930
        SATURDAY: 0001:2400
        SUNDAY: 0001:2400
       INCLUDE JOBCLASS: A:9 TSU
       INCLUDE JOBS/USERS: HE- SP-


  IEFU29 - EXIT IS ENABLED
   EXIT ENTRIES: 0 OVERHEAD: 0 AVERAGE: 0 PER SECOND: 0
   VALID RETURN CODES: (DEFAULT) 0,4
   GOOD RETURN CODES: (DEFAULT) 0
   DISABLING RETURN CODES: (DEFAULT) NONE
   DEFAULT RETURN CODE: (DEFAULT) 0
   USER EXIT 1 - NOTIFY: SPJRT
     PRIMARY EXIT (USRU29) ADDR: 0B58F5A8 EP: 8B58F5A8 - SOURCE: OSV6
       LNKLIB: USER.LINKLIB
     MODULE ENTRIES: 0 CPU: 0 AVERAGE: 0


  IEFU83 - EXIT IS ENABLED
   EXIT ENTRIES: 2,174 OVERHEAD: 2.432 AVERAGE: 0.01118 PER HOUR: 0
   VALID RETURN CODES: (DEFAULT) 0,4
   GOOD RETURN CODES: (DEFAULT) 0
   DISABLING RETURN CODES: (DEFAULT) NONE
   DEFAULT RETURN CODE: (DEFAULT) 0
   OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
     EXIT (OS$U83) - VERSION 6.0A.1 2004-06-24 23:01:11
       ADDR: 00CA70D8 EP: 80CA70D8 - SOURCE: OSV6
         LNKLIB: SYS1.OSEM.LOAD1
     MODULE ENTRIES: 1,993 CPU: 37.717 AVERAGE: 0.18924
     CATALOG ACCOUNT OPTION IS ACTIVE
     ACCOUNT ERROR FILLER: *
     ARCSTC JOBS: HSM
     DEFAULT OWNER VALUE: PINKSLIP
     WEIGHT:  JOBCLASS: 3 JOBNAME: 1 USERID: 2 GROUPNAME: 4
     NUMBER: 1
 #   S  L  #   S  L  #   S  L  #   S  L  #   S  L  #   S  L  #   S  L  #   S  L
 1   0 16  0   0  0  0   0  0  0   0  0  0   0  0  0   0  0  0   0  0  0   0  0
     INCLUDE JOBCLASS: S:W
     NUMBER: 2
 #   S  L  #   S  L  #   S  L  #   S  L  #   S  L  #   S  L  #   S  L  #   S  L
 2   4  8  0   0  0  0   0  0  0   0  0  0   0  0  0   0  0  0   0  0  0   0  0
     INCLUDE JOBS: SPH-
     NUMBER: 3
 #   S  L  #   S  L  #   S  L  #   S  L  #   S  L  #   S  L  #   S  L  #   S  L
 1   4  4  2   2  2  3   3  3  4   4  4  0   0  0  0   0  0  0   0  0  0   0  0
     INCLUDE USERIDS: SPHG-
     NUMBER: 4
 #   S  L  #   S  L  #   S  L  #   S  L  #   S  L  #   S  L  #   S  L  #   S  L
 3   2  6  0   0  0  0   0  0  0   0  0  0   0  0  0   0  0  0   0  0  0   0  0
     INCLUDE GROUPS: SYS1


 TSO DATA
  NOTIFY: <NONE>


  IKJEFF10 - EXIT IS ENABLED
   EXIT ENTRIES: 2,225 OVERHEAD: 17.658 AVERAGE: 0.07936 PER HOUR: 0
   VALID RETURN CODES: (DEFAULT) 0,4,8,12,16
   GOOD RETURN CODES: (DEFAULT) 0
   DISABLING RETURN CODES: (DEFAULT) NONE
```

```
   DEFAULT RETURN CODE: (DEFAULT) 0
   USER EXIT 1 - NOTIFY: <NONE>
    PRIMARY EXIT (IKJEFF10) ADDR: 00CDA080 EP: 00CDA080 - SOURCE: OSV6
      LNKLIB: SYS1.LINKLIB
    MODULE ENTRIES: 1 CPU: 0.00997 AVERAGE: 0.00997
   OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
    EXIT (OS$EFF10) - VERSION 6.0.1 2004-06-28 19:36:41
     ADDR: 00CA3898 EP: 80CA3898 - SOURCE: OSV6
      LNKLIB: SYS1.OSEM.LOAD1
    MODULE ENTRIES: 3 CPU: 0.17979 AVERAGE: 0.05993
   REFORMATACCT OPTION IS NOT ACTIVE
   RACFCHECK OPTION IS NOT ACTIVE
   JOBCLASSCHECK OPTION IS ACTIVE
    RACF LOGGING: NORMAL
   COMMANDCHECK OPTION IS NOT ACTIVE
   JES2CMDCHECK OPTION IS NOT ACTIVE
   USERJOBNAME OPTION IS NOT ACTIVE
   NOTIFY OPTION IS NOT ACTIVE

 IKJEFF53 - EXIT IS ENABLED
  EXIT ENTRIES: 0 OVERHEAD: 0 AVERAGE: 0 PER SECOND: 0
  VALID RETURN CODES: (DEFAULT) 0,4,8,12,16
  GOOD RETURN CODES: (DEFAULT) 0
  DISABLING RETURN CODES: (DEFAULT) NONE
  DEFAULT RETURN CODE: (DEFAULT) 0
  USER EXIT 1 - NOTIFY: <NONE>
   PRIMARY EXIT (IKJEFF53) ADDR: 00CAC360 EP: 00CAC360 - SOURCE: OSV6
     LNKLIB: SYS1.LINKLIB
   MODULE ENTRIES: 0 CPU: 0 AVERAGE: 0

 IKJEFLD1 - EXIT IS ENABLED
  EXIT ENTRIES: 4 OVERHEAD: 0.47959 AVERAGE: 0.11989 PER HOUR: 0
  VALID RETURN CODES: (DEFAULT) 0,12,16
  GOOD RETURN CODES: (DEFAULT) 0
  DISABLING RETURN CODES: (DEFAULT) NONE
  DEFAULT RETURN CODE: (DEFAULT) 0
  OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
   EXIT (OS$EFLD1) - VERSION 6.0.1 2004-06-24 19:50:10
    ADDR: 0B581190 EP: 8B581190 - SOURCE: OSV6
     LNKLIB: SYS1.OSEM.LOAD1
   MODULE ENTRIES: 4 CPU: 0.00000 AVERAGE: 0.00000
   MAIL OPTION IS ACTIVE
   NOTICES OPTION IS ACTIVE
   TSBPASSWORD OPTION IS ACTIVE

 IKJEFLN2 - EXIT IS ENABLED
  EXIT ENTRIES: 4 OVERHEAD: 0.41958 AVERAGE: 0.10489 PER HOUR: 0
  VALID RETURN CODES: (DEFAULT) 0,12,16
  GOOD RETURN CODES: (DEFAULT) 0
  DISABLING RETURN CODES: (DEFAULT) NONE
  DEFAULT RETURN CODE: (DEFAULT) 0
  USER EXIT 1 - NOTIFY: <NONE>
   PRIMARY EXIT (IKJEFLN2) ADDR: 04E3FCC0 EP: 84E3FCE0 - SOURCE: OSV6
     LPALIB: USER.LPALIB
   MODULE ENTRIES: 4 CPU: 0.05987 AVERAGE: 0.01496

 JES2 (JES2) DATA
 NOTIFY: <NONE>
  PRIMARY JES2
  JES VERSION z/OS 1.4 FIXED
  AUTOINSTALL ENABLED

 EXIT 0 - EXIT IS ENABLED - KEY: 0
  EXIT ENTRIES: 1 OVERHEAD: 0.11986 AVERAGE: 0.11986 PER HOUR: 0
  VALID RETURN CODES: (DEFAULT) 0,4,8,12
  GOOD RETURN CODES: (DEFAULT) 0
  DISABLING RETURN CODES: (DEFAULT) NONE
  DEFAULT RETURN CODE: (DEFAULT) 0
  AUTOINSTALL ENABLED
  USER EXIT 1 - NOTIFY: <NONE>
   PRIMARY EXIT (HASPXIT0:EXIT00) ADDR: 80000000 EP: 80007178 - SOURCE: JES2
     LOADED BY JES
   MODULE ENTRIES: 1 CPU: 0.19987 AVERAGE: 0.19987
```

```
   USER EXIT 2 - NOTIFY: <NONE>
    PRIMARY EXIT (HASPXIT0:EXIT01) ADDR: 80000000 EP: 80007290 - SOURCE: JES2
      LOADED BY JES
    MODULE ENTRIES: 1 CPU: 0.16972 AVERAGE: 0.16972
   USER EXIT 3 - NOTIFY: <NONE>
    PRIMARY EXIT (HASPXIT0:EXIT02) ADDR: 80000000 EP: 800073A8 - SOURCE: JES2
      LOADED BY JES
    MODULE ENTRIES: 1 CPU: 0.14989 AVERAGE: 0.14989
   USER EXIT 4 - NOTIFY: <NONE>
    PRIMARY EXIT (HASPXIT0:EXIT03) ADDR: 80000000 EP: 800074C0 - SOURCE: JES2
      LOADED BY JES
    MODULE ENTRIES: 1 CPU: 0.13990 AVERAGE: 0.13990
   OS/EM EXIT - CALLED LAST - NOTIFY: <NONE>
    EXIT (OS$2X00G:OS$00) - VERSION 6.0.1 2004-07-05 10:06:34
     ADDR: 0B4ABBE8 EP: 8B4ABD18 - SOURCE: JES2
       LNKLIB: SYS1.OSEM.LOAD1
    MODULE ENTRIES: 2 CPU: 0.67952 AVERAGE: 0.33976

  EXIT 2 - EXIT IS ENABLED - KEY: 0
   EXIT ENTRIES: 55 OVERHEAD: 3.08779 AVERAGE: 0.05614 PER HOUR: 0
   VALID RETURN CODES: (DEFAULT) 0,4,8,12
   GOOD RETURN CODES: (DEFAULT) 0
   DISABLING RETURN CODES: (DEFAULT) NONE
   DEFAULT RETURN CODE: (DEFAULT) 0
   AUTOINSTALL ENABLED
   OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
    EXIT (OS$2X02G:OS$02) - VERSION 6.0.1 2004-06-28 22:44:41
     ADDR: 0B4E2268 EP: 8B4E23A8 - SOURCE: OSV6
       LNKLIB: SYS1.OSEM.LOAD1
    MODULE ENTRIES: 55 CPU: 2.24793 AVERAGE: 0.04087
    PCE USER FIELD 1
    JOBROUTE OPTION IS ACTIVE
    REPTSOQ OPTION IS ACTIVE
    ADDTSOPASS OPTION IS ACTIVE
    ADD PASSWORDS TO JOBS SUBMITTED BY:
     STCS: CONTROLM JOB TMON1DLS TMON8DLS
     TSUS: HEBILLY HEJRT HEJTH HEJT2 HEJT3
    PASSWORD TABLE CONTAINS ENTRIES FOR USERS:
     GNLPROD SYSPROD TESTUSR
    PASSWORD TABLE LOADED FROM DATASET:
     SYSX.NEWPASS

  EXIT 4 - EXIT IS ENABLED - KEY: 0
   EXIT ENTRIES: 2,364 OVERHEAD: 12.730 AVERAGE: 0.05384 PER HOUR: 0
   VALID RETURN CODES: (DEFAULT) 0,4,8,12,16
   GOOD RETURN CODES: (DEFAULT) 0
   DISABLING RETURN CODES: (DEFAULT) NONE
   DEFAULT RETURN CODE: (DEFAULT) 0
   AUTOINSTALL ENABLED
   OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
    EXIT (OS$2X04G:OS$04) - VERSION 6.0.1 2004-06-28 22:46:36
     ADDR: 0B4E92F8 EP: 8B4E9428 - SOURCE: OSV6
       LNKLIB: SYS1.OSEM.LOAD1
    MODULE ENTRIES: 2,364 CPU: 4.533 AVERAGE: 0.01917
    JOBROUTE OPTION IS ACTIVE
    EZPROCLIB OPTION IS ACTIVE

  EXIT 5 - EXIT IS ENABLED - KEY: 0
   EXIT ENTRIES: 12 OVERHEAD: 0.61949 AVERAGE: 0.05162 PER HOUR: 0
   VALID RETURN CODES: (DEFAULT) 0,4,8,12,16
   GOOD RETURN CODES: (DEFAULT) 0
   DISABLING RETURN CODES: (DEFAULT) NONE
   DEFAULT RETURN CODE: (DEFAULT) 0
   AUTOINSTALL ENABLED
   OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
    EXIT (OS$2X05G:OS$05) - VERSION 6.0.1 2004-07-03 14:43:10
     ADDR: 0B4CD6A8 EP: 8B4CD7D8 - SOURCE: OSV6
       LNKLIB: SYS1.OSEM.LOAD1
    MODULE ENTRIES: 12 CPU: 0.37968 AVERAGE: 0.03164
    JOBROUTE OPTION IS ACTIVE
     RESOURCE DSN: SYS2.JOBROUTE.RESOURCE

     SCHENV CONVERT OPTION IS ACTIVE
```

```
    SYSAFFANY OPTION IS ACTIVE
    DEFAULT RESOURCE OPTION IS ACTIVE
     RESOURCE: P390

    JOBROUTE JECL OPTIONS:
      AFTER NO-JOB ACTION: IGNORE
      AFTER NO-SPECIFIC-JOB ACTION: FAIL
      AFTER MULTIPLE-JOBS ACTION: OK
      AFTER IMPOSSIBLE-JOB ACTION: CANCEL

      BEFORE NO-JOB ACTION: OK
      BEFORE NO-SPECIFIC-JOB ACTION: FAIL
      BEFORE MULTIPLE-JOBS ACTION: OK

      EXCLUDE NO-JOB ACTION: OK
      EXCLUDE NO-SPECIFIC-JOB ACTION: FAIL
      EXCLUDE MULTIPLE-JOBS ACTION: OK

      PRED NO-JOB ACTION: IGNORE
      PRED NO-SPECIFIC-JOB ACTION: FAIL
      PRED MULTIPLE-JOBS ACTION: OK
      PRED IMPOSSIBLE-JOB ACTION: CANCEL

      WITH NO-JOB ACTION: WAIT
      WITH NO-SPECIFIC-JOB ACTION: FAIL
      WITH MULTIPLE-JOBS ACTION: OK
      WITH IMPOSSIBLE-JOB ACTION: CANCEL

      CNTL DEFAULT IS SHARE

      THREAD DEFAULT IS EXCLUSIVE

    MESSAGE NUMBER SUBSTITUTION IS NOT ACTIVE

    ROUTING IS ACTIVE
     ROUTE: 001 SPHANK
      DSNAMES:   SPHGR.R+
     ROUTE: 002 SPHNK
      DDNAMES:   TEST123
     ROUTE: 003 CHANGE_JOBCLASS_T
      JOBNAMES:  HERCBJ-
     ROUTE: 005 ACCT
      ACCOUNT :  'MYACCOUT,123,234'
     ROUTE: 006 BY.MEMBER
      DSNAMES:   HEJRT.CNTL.CNTL
     ROUTE: 008 CHANGE_SCHEDENV_BATCH
      JOBNAMES:  SPHSCHEN
     ROUTE: 009 JLRDSN
      DSNAMES:   SPJR6.JCL.CNTL
     ROUTE: 012 CHANGE_JOBCLASS_A
      JOB TIME:  0.0:0.07
     ROUTE: 014 CHANGE_JOBCLASS_B
      DDNAMES:   MYFILE
     ROUTE: 019 CHANGE_JOBCLASS_U
      DDNAMES:   B2HPRO


OS$J2MM ADDR: 0B3FDA68 EP: 8B3FDB98 - VERSION 6.0.1 2004-06-28 21:45:58
    LNKLIB: SYS1.OSEM.LOAD1
OS$J2M0 ADDR: 0B422480 EP: 8B4225C0 - VERSION 6.0.1 2004-06-28 18:04:54
    LNKLIB: SYS1.OSEM.LOAD1
OS$J2M1 ADDR: 0B408EC0 EP: 8B408FF0 - VERSION 6.0.1 2004-06-28 21:50:27
    LNKLIB: SYS1.OSEM.LOAD1
OS$J2M2 ADDR: 00C940E8 EP: 80C940E8 - VERSION 6.0.1 2004-06-28 21:53:04
    LNKLIB: SYS1.OSEM.LOAD1
OS$J2M3 ADDR: 0B4019B0 EP: 8B4019B0 - VERSION 6.0.1 2004-06-28 21:58:05
    LNKLIB: SYS1.OSEM.LOAD1
OS$J2M4 ADDR: 0B4642B0 EP: 8B4643E0 - VERSION 6.0.1 2004-06-28 22:07:16
    LNKLIB: SYS1.OSEM.LOAD1


EXIT 6 - EXIT IS ENABLED - KEY: 0
 EXIT ENTRIES: 1,715 OVERHEAD: 13.285 AVERAGE: 0.07746 PER HOUR: 0
 VALID RETURN CODES: (DEFAULT) 0,4,8
 GOOD RETURN CODES: (DEFAULT) 0
```

```
 DISABLING RETURN CODES: (DEFAULT) NONE
 DEFAULT RETURN CODE: (DEFAULT) 0
 AUTOINSTALL ENABLED
 OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
  EXIT (OS$2X06G:OS$06) - VERSION 6.0.1 2004-06-28 22:56:19
   ADDR: 0B4BFC60 EP: 8B4BFD90 - SOURCE: OSV6
    LNKLIB: SYS1.OSEM.LOAD1
  MODULE ENTRIES: 1,715 CPU: 3.974 AVERAGE: 0.02316
  JOB TIME REQUIRED OPTION IS NOT ACTIVE
  SET JOB TIME (INSERT) OPTION IS ACTIVE
   JOBCLASS: A:R T:9
  SET JOB TIME (MAXIMUM) OPTION IS ACTIVE
   JOBCLASS: A:R T:9
  SET JOB TIME (NOLIMIT) OPTION IS ACTIVE
   JOBCLASS: A:R T:9
  SET JOB TIME (HIGH) OPTION IS ACTIVE
   JOBCLASS: A:R T:9
  SET JOB TIME (LOW) OPTION IS ACTIVE
   JOBCLASS: A:R T:9
  JCL CHECK OPTION IS NOT ACTIVE

 EXIT 9 - EXIT IS ENABLED - KEY: 0
  EXIT ENTRIES: 0 OVERHEAD: 0 AVERAGE: 0 PER SECOND: 0
  VALID RETURN CODES: (DEFAULT) 0,4
  GOOD RETURN CODES: (DEFAULT) 0
  DISABLING RETURN CODES: (DEFAULT) NONE
  DEFAULT RETURN CODE: (DEFAULT) 0
  AUTOINSTALL ENABLED
  OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
   EXIT (OS$2X09G:OS$09) - VERSION 6.0.1 2004-07-03 14:58:29
    ADDR: 0B4DB390 EP: 8B4DB4C0 - SOURCE: OSV6
     LNKLIB: SYS1.OSEM.LOAD1
   MODULE ENTRIES: 0 CPU: 0 AVERAGE: 0
   SYSOUT EXTENSION OPTION IS ACTIVE
   WEIGHT:  JOBCLASS: 3 JOBNAME: 1 PGMNAME: 2 SYSOUTCLASS: 4
   DEFAULT:
    SYSOUT EXTENSION: 10000 LINES
                      20 PAGES
                      99999 BYTES
     WTO WHEN EXTENSION GRANTED
   EXTENSION: 1
    SYSOUT EXTENSION: 1000 LINES
                      33 PAGES
     WTO WHEN EXTENSION GRANTED
     WTOR AFTER 3 EXTENSIONS
    INCLUDE JOBCLASS: V
    INCLUDE JOBS/USERS: SPJRT-
    INCLUDE PROGRAMS: IEBGENER IKJEFT01
    INCLUDE SYSOUT CLASS: X
   EXTENSION: 2
    SYSOUT EXTENSION: 9999 LINES
     WTO WHEN EXTENSION GRANTED
    INCLUDE JOBS/USERS: ASM-

 EXIT 10 - EXIT IS ENABLED - KEY: 0
  EXIT ENTRIES: 109 OVERHEAD: 6.20115 AVERAGE: 0.05689 PER HOUR: 0
  VALID RETURN CODES: (DEFAULT) 0,4,8
  GOOD RETURN CODES: (DEFAULT) 0
  DISABLING RETURN CODES: (DEFAULT) NONE
  DEFAULT RETURN CODE: (DEFAULT) 0
  AUTOINSTALL ENABLED
  OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
   EXIT (OS$2X10G:OS$10) - VERSION 6.0.1 2004-07-03 15:06:22
    ADDR: 0B4F42E8 EP: 8B4F4428 - SOURCE: JES2
     LNKLIB: SYS1.OSEM.LOAD1
   MODULE ENTRIES: 109 CPU: 1.98567 AVERAGE: 0.01821

 EXIT 14 - EXIT IS ENABLED - KEY: 0
  EXIT ENTRIES: 1,866 OVERHEAD: 10.293 AVERAGE: 0.05515 PER HOUR: 0
  VALID RETURN CODES: (DEFAULT) 0,4,8,12
  GOOD RETURN CODES: (DEFAULT) 0
  DISABLING RETURN CODES: (DEFAULT) NONE
  DEFAULT RETURN CODE: (DEFAULT) 0
```

```
   AUTOINSTALL ENABLED
   OS/EM EXIT - CALLED LAST - NOTIFY: <NONE>
    EXIT (OS$2X14G:OS$14) - VERSION 6.0.1 2004-06-28 23:04:44
     ADDR: 0B4F5750 EP: 8B4F5880 - SOURCE: OSV6
       LNKLIB: SYS1.OSEM.LOAD1
    MODULE ENTRIES: 1,866 CPU: 3.544 AVERAGE: 0.01898
   DSN ENQ OPTION IS ACTIVE
   JOB LIMITING OPTION IS ACTIVE
    ENTRY SELECT SCHEME: LIBERAL
    LIMIT01:
     MAX JOBS (OTHER WORK): 1
     MAX JOBS (INIT IDLE):  2
     INCLUDE JOBCLASS: S
     INCLUDE USERIDS: -
     SCOPE: LOCAL
       INCLUDE JOBCLASS: C:E
    RACF ENTRY IS NOT ACTIVE
   JOBROUTE OPTION IS ACTIVE
   HSM RECALL OPTION IS NOT ACTIVE
   PROGRAM LIMITING OPTION IS ACTIVE
    PGMLIM BLOCK $SJ JOBS OPTION IS NOT ACTIVE
    PROGRAM: IEFBR14
     MAX JOBS (LOCAL):     10        CURRENT:   0
     MAX JOBS (MAS-WIDE): 10        CURRENT:   0
     PROGRAM: SASXA1
     MAX JOBS (LOCAL):      2        CURRENT:   0
     MAX JOBS (MAS-WIDE):  2        CURRENT:   0
OS$J2LM ADDR: 0B3F4670 EP: 8B3F47A0 - VERSION 6.0.1 2004-06-29 05:29:36
       LNKLIB: SYS1.OSEM.LOAD1
OS$J2L0 ADDR: 0B41F740 EP: 8B41F880 - VERSION 6.0.1 2004-06-28 18:11:08
       LNKLIB: SYS1.OSEM.LOAD1
OS$J2L1 ADDR: 0B45F0F0 EP: 8B45F220 - VERSION 6.0.1 2004-06-28 21:24:19
       LNKLIB: SYS1.OSEM.LOAD1
OS$J2L3 ADDR: 0B46D0F8 EP: 8B46D0F8 - VERSION 6.0.1 2004-06-28 21:26:52
       LNKLIB: SYS1.OSEM.LOAD1
OS$J2L4 ADDR: 0B3F9028 EP: 8B3F9158 - VERSION 6.0.1 2004-06-28 21:29:58
       LNKLIB: SYS1.OSEM.LOAD1

EXIT 20 - EXIT IS ENABLED - KEY: 0
 EXIT ENTRIES: 53 OVERHEAD: 2.71691 AVERAGE: 0.05126 PER HOUR: 0
 VALID RETURN CODES: (DEFAULT) 0,4,8,12
 GOOD RETURN CODES: (DEFAULT) 0
 DISABLING RETURN CODES: (DEFAULT) NONE
 DEFAULT RETURN CODE: (DEFAULT) 0
 AUTOINSTALL ENABLED
 OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
  EXIT (OS$2X20G:OS$20) - VERSION 6.0.1 2004-06-28 23:07:49
   ADDR: 0B474150 EP: 8B474278 - SOURCE: JES2
     LNKLIB: SYS1.OSEM.LOAD1
  MODULE ENTRIES: 53 CPU: 1.01734 AVERAGE: 0.01919
  JOBROUTE OPTION IS ACTIVE

EXIT 24 - EXIT IS ENABLED - KEY: 0
 EXIT ENTRIES: 1 OVERHEAD: 0.05995 AVERAGE: 0.05995 PER HOUR: 0
 VALID RETURN CODES: (DEFAULT) 0,4,8
 GOOD RETURN CODES: (DEFAULT) 0
 DISABLING RETURN CODES: (DEFAULT) NONE
 DEFAULT RETURN CODE: (DEFAULT) 0
 AUTOINSTALL ENABLED
 OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
  EXIT (OS$2X24G:OS$24) - VERSION 6.0.1 2004-07-03 15:11:51
   ADDR: 0B4A9A50 EP: 8B4A9B80 - SOURCE: JES2
     LNKLIB: SYS1.OSEM.LOAD1
  MODULE ENTRIES: 1 CPU: 1.02948 AVERAGE: 1.02948

EXIT 28 - EXIT IS ENABLED - KEY: 0
 EXIT ENTRIES: 10 OVERHEAD: 0.28990 AVERAGE: 0.02899 PER HOUR: 0
 VALID RETURN CODES: (DEFAULT) 0,4
 GOOD RETURN CODES: (DEFAULT) 0
 DISABLING RETURN CODES: (DEFAULT) NONE
 DEFAULT RETURN CODE: (DEFAULT) 0
 AUTOINSTALL ENABLED
 OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
```

```
   EXIT (OS$2X28G:OS$28) - VERSION 6.0.1 2004-06-28 23:10:54
     ADDR: 0B4E6050 EP: 8B4E6188 - SOURCE: JES2
       LNKLIB: SYS1.OSEM.LOAD1
     MODULE ENTRIES: 10 CPU: 0.65983 AVERAGE: 0.06598
     JOBROUTE OPTION IS ACTIVE
     PROGRAM LIMITING OPTION IS ACTIVE


 EXIT 29 - EXIT IS ENABLED - KEY: 0
  EXIT ENTRIES: 12 OVERHEAD: 0.65935 AVERAGE: 0.05494 PER HOUR: 0
  VALID RETURN CODES: (DEFAULT) 0,4
  GOOD RETURN CODES: (DEFAULT) 0
  DISABLING RETURN CODES: (DEFAULT) NONE
  DEFAULT RETURN CODE: (DEFAULT) 0
  AUTOINSTALL ENABLED
  OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
   EXIT (OS$2X29G:OS$29) - VERSION 6.0.1 2004-06-28 23:12:10
     ADDR: 0B4E2008 EP: 8B4E2118 - SOURCE: JES2
       LNKLIB: SYS1.OSEM.LOAD1
     MODULE ENTRIES: 12 CPU: 0.00000 AVERAGE: 0.00000
     JOBROUTE OPTION IS ACTIVE
     PROGRAM LIMITING OPTION IS ACTIVE


 EXIT 32 - EXIT IS ENABLED - KEY: 0
  EXIT ENTRIES: 55 OVERHEAD: 0.78892 AVERAGE: 0.01434 PER HOUR: 0
  VALID RETURN CODES: (DEFAULT) 0,4
  GOOD RETURN CODES: (DEFAULT) 0
  DISABLING RETURN CODES: (DEFAULT) NONE
  DEFAULT RETURN CODE: (DEFAULT) 0
  AUTOINSTALL ENABLED
  OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
   EXIT (OS$2X32G:OS$32) - VERSION 6.0.1 2004-07-03 15:14:52
     ADDR: 0B4E0DF8 EP: 8B4E0F30 - SOURCE: OSV6
       LNKLIB: SYS1.OSEM.LOAD1
     MODULE ENTRIES: 55 CPU: 4.12673 AVERAGE: 0.07503
     JOBSTARTMSG OPTION IS ACTIVE
     DSN ENQ OPTION IS ACTIVE
      JOB-BLOCKED WTO OPTION IS ACTIVE
      JOB OWNER MESSAGE OPTION IS ACTIVE
      RESOURCE OWNER MESSAGE OPTION IS ACTIVE
      DSNENQ BLOCK $SJ JOBS OPTION IS NOT ACTIVE
 OS$J2DM ADDR: 0B40AEB8 EP: 8B40AFE0 - VERSION 6.0.1 2004-06-28 19:43:48
       LNKLIB: SYS1.OSEM.LOAD1
 OS$J2D0 ADDR: 0B41D4E8 EP: 8B41D618 - VERSION 6.0.1 2004-06-28 18:04:20
       LNKLIB: SYS1.OSEM.LOAD1
 OS$J2D1 ADDR: 0B411038 EP: 8B411160 - VERSION 6.0.1 2004-06-28 19:47:13
       LNKLIB: SYS1.OSEM.LOAD1
 OS$J2D3 ADDR: 0B40FD90 EP: 8B40FD90 - VERSION 6.0.1 2004-06-28 19:53:29
       LNKLIB: SYS1.OSEM.LOAD1


 EXIT 44 - EXIT IS ENABLED - KEY: 0
  EXIT ENTRIES: 53 OVERHEAD: 3.04432 AVERAGE: 0.05744 PER HOUR: 0
  VALID RETURN CODES: (DEFAULT) 0,4
  GOOD RETURN CODES: (DEFAULT) 0
  DISABLING RETURN CODES: (DEFAULT) NONE
  DEFAULT RETURN CODE: (DEFAULT) 0
  AUTOINSTALL ENABLED
  OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
   EXIT (OS$2X44G:OS$44) - VERSION 6.0.1 2004-06-28 23:15:07
     ADDR: 0B3FA5D8 EP: 8B3FA708 - SOURCE: JES2
       LNKLIB: SYS1.OSEM.LOAD1
     MODULE ENTRIES: 53 CPU: 1.374 AVERAGE: 0.25923
     JOBROUTE OPTION IS ACTIVE
     HSM RECALL OPTION IS NOT ACTIVE
     PROGRAM LIMITING OPTION IS ACTIVE


 EXIT 49 - EXIT IS ENABLED - KEY: 0
  EXIT ENTRIES: 198 OVERHEAD: 1.055 AVERAGE: 0.05323 PER HOUR: 0
  VALID RETURN CODES: (DEFAULT) 0,4
  GOOD RETURN CODES: (DEFAULT) 0
  DISABLING RETURN CODES: (DEFAULT) NONE
  DEFAULT RETURN CODE: (DEFAULT) 0
  AUTOINSTALL ENABLED
  OS/EM EXIT - CALLED LAST - NOTIFY: <NONE>
```

```
  EXIT (OS$2X49G:OS$49) - VERSION 6.0.1 2004-07-03 15:17:58
    ADDR: 0B4EF108 EP: 8B4EF240 - SOURCE: OSV6
      LNKLIB: SYS1.OSEM.LOAD1
    MODULE ENTRIES: 198 CPU: 3.72267 AVERAGE: 0.01880
    JOBROUTE OPTION IS ACTIVE
    HSM RECALL OPTION IS NOT ACTIVE
    DSN ENQ OPTION IS ACTIVE
    PROGRAM LIMITING OPTION IS ACTIVE

JES3 AREA NOT PRESENT

MISC DATA
 NOTIFY: <NONE>

 SVC19 - EXIT IS ENABLED
  EXIT ENTRIES: 0 OVERHEAD: 0 AVERAGE: 0 PER SECOND: 0
  VALID RETURN CODES: (DEFAULT) ANY
  GOOD RETURN CODES: (DEFAULT) 0
  DISABLING RETURN CODES: (DEFAULT) NONE
  DEFAULT RETURN CODE: (DEFAULT) 0
  NO OS/EM FUNCTIONS ACTIVE

 SVC20 - EXIT IS ENABLED
  EXIT ENTRIES: 0 OVERHEAD: 0 AVERAGE: 0 PER SECOND: 0
  VALID RETURN CODES: (DEFAULT) ANY
  GOOD RETURN CODES: (DEFAULT) 0
  DISABLING RETURN CODES: (DEFAULT) NONE
  DEFAULT RETURN CODE: (DEFAULT) 0
  NO OS/EM FUNCTIONS ACTIVE

 SVC22 - EXIT IS ENABLED
  EXIT ENTRIES: 0 OVERHEAD: 0 AVERAGE: 0 PER SECOND: 0
  VALID RETURN CODES: (DEFAULT) ANY
  GOOD RETURN CODES: (DEFAULT) 0
  DISABLING RETURN CODES: (DEFAULT) NONE
  DEFAULT RETURN CODE: (DEFAULT) 0
  NO OS/EM FUNCTIONS ACTIVE

 SVC31 - EXIT IS ENABLED
  EXIT ENTRIES: 0 OVERHEAD: 0 AVERAGE: 0 PER SECOND: 0
  VALID RETURN CODES: (DEFAULT) ANY
  GOOD RETURN CODES: (DEFAULT) 0
  DISABLING RETURN CODES: (DEFAULT) NONE
  DEFAULT RETURN CODE: (DEFAULT) 0
  NO OS/EM FUNCTIONS ACTIVE

 SVC35 - EXIT IS ENABLED
  EXIT ENTRIES: 2,149 OVERHEAD: 4.753 AVERAGE: 0.02211 PER HOUR: 0
  VALID RETURN CODES: (DEFAULT) ANY
  GOOD RETURN CODES: (DEFAULT) 0
  DISABLING RETURN CODES: (DEFAULT) NONE
  DEFAULT RETURN CODE: (DEFAULT) 0
  OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
   EXIT (OS$0003E) - VERSION 6.0.1 2004-06-28 21:38:27
    ADDR: 0B5EBA48 EP: 8B5EBA48 - SOURCE: OS$IPL
      LNKLIB: SYS1.OSEM.LOAD1
    MODULE ENTRIES: 2,149 CPU: 0.25982 AVERAGE: 0.00012

 SVC42 - EXIT IS ENABLED
  EXIT ENTRIES: 1,018 OVERHEAD: 2.560 AVERAGE: 0.02514 PER HOUR: 0
  VALID RETURN CODES: (DEFAULT) ANY
  GOOD RETURN CODES: (DEFAULT) 0
  DISABLING RETURN CODES: (DEFAULT) NONE
  DEFAULT RETURN CODE: (DEFAULT) 0
  OS/EM EXIT - CALLED FIRST - NOTIFY: <NONE>
   EXIT (OS$0004B) - VERSION 6.0.1 2004-06-28 21:41:36
    ADDR: 0B604188 EP: 8B604188 - SOURCE: OS$IPL
      LNKLIB: SYS1.OSEM.LOAD1
    MODULE ENTRIES: 1,018 CPU: 3.80641 AVERAGE: 0.00373
    INTERCEPT OPTION IS NOT ACTIVE

QUICKPOOL AREA NOT PRESENT
```

RELOAD Command

This command is used to RELOAD OS/EM control and interface modules, RELOAD, or LOAD if not already loaded, user exit modules.

Syntax notation

Unlike the other OS$CNTL commands, RELOAD does not accept multiple parameters. You may only specify one keyword and its attendant parameter. While it is possible to load and activate a previously inactive exit with the RELOAD command, LIMIT checking cannot be specified. If you wish LIMIT checking to be in effect for the exit, you will have to issue the standard OS$CNTL command for the exit. The intent of the RELOAD command is to simplify the reloading of an exit module you have changed without having to specify complete syntax of the ordinary OS$CNTL command.

Since each user exit must be explicitly entered by name, this command is used to change, or add, user exits for the ALLOC, SMF, TSO, JES2, JES3, RACF, and HSM commands without having to account for the positional nature of the option used to specify user exits in these commands. Using this command to load modules also activates the named exit if it is not already active.

OS/EM Modules

```
OS$CNTL RELOAD                  -
        OS$ACTRT  |             -
        OS$ADEXT  |             -
        OS$ALCCN  |             -
        OS$ASYNC  |             -
        OS$BDEXT  |             -
        OS$CDEXT  |             -
        OS$CMD    |             -
        OS$DADCN  |             -
        OS$DB401  |             -
        OS$DEL    |             -
        OS$EFF10  |             -
        OS$EFLD1  |             -
        OS$HSMCN  |             -
        OS$ISPCN  |             -
        OS$JSCBA  |             -
        OS$J2MCN  |             -
        OS$J2OFF  |             -
        OS$J2SCN  |             -
        OS$J2X02  |             -
        OS$J2X05  |             -
        OS$J2X06  |             -
        OS$J3ECN  |             -
        OS$J3OFF  |             -
        OS$J3SVC  |             -
```

```
OS$LIMIT   |              –
OS$LOCK    |              –
OS$MDEXT   |              –
OS$MMEXT   |              –
OS$MVEXT   |              –
OS$NOTFY   |              –
OS$POST0   |              –
OS$PRE00   |              –
OS$QMSG    |              –
OS$RACCN   |              –
OS$RDEXT   |              –
OS$SECHK   |              –
OS$SMFCN   |              –
OS$STATE   |              –
OS$STOR    |              –
OS$SVCCN   |              –
OS$SVC0    |              –
OS$SVC3    |              –
OS$TSOCN   |              –
OS$TSSRB   |              –
OS$UJI     |              –
OS$UJP     |              –
OS$USI     |              –
OS$UTL     |              –
OS$U84CN   |              –
OS$WTO     |              –
OS$W21SD   |              –
OS$0002F   |              –
OS$0004B   |              –
OS$24ITF   |              –
{LIBrary(library.dsn)}
```

OS/EM System Module

The name of the OS/EM System module to be reloaded (see list of valid OS/EM System Modules above)

LIBRARY   Specifies the loading of a OS/EM system module from a private Authorized library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for OS/EM system module modules.

library.dsn

Specifies the name of a private Authorized library used to locate and load the OS/EM system module. The library name should be enclosed in single quotes (').

Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

Allocation User Exits

```
OS$CNTL RELOAD                   -
     IEFDB401{(MODNAME)}      |   -
     IEFALLOD{(MODNAME)}      |   -
     IEFALLSW{(MODNAME)}      |   -
     IEFALLVE{(MODNAME)}      |   -
     IEFALLVM{(MODNAME)}      |   -
    {PRimary|BAckup}              -
    {FIrst|SEcond|THird}          -
    {LIBrary(library.dsn)}
```

Allocation exit point
The name of the Allocation exit point to be reloaded (see list of valid Allocation exit points above)

modname   An optional parameter specifying the module name of the Allocation user exit to be reloaded. If this name is not specified, the module name of the last Allocation user exit to occupy this exit position will be reloaded. If you are unsure of the last Allocation user exit name to occupy this exit position, issue a QUERY command to determine the last Allocation user exit to occupy the user exit position.

PRIMARY   Specifies that the module name of the Allocation exit name to be reloaded is a primary user exit.

BACKUP   Specifies that the module name of the Allocation exit name to be reloaded is a backup user exit.

FIRST   Specifies to reload user exit number one for Allocation exit point.

SECOND   Specifies to reload user exit number two for Allocation exit point.

THIRD   Specifies to reload user exit number three for Allocation exit point.

LIBRARY   Specifies the loading of a User exit exit module from a private Authorized library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for User exit modules.

> **library.dsn**
> Specifies the name of a private Authorized library used to locate and load the Allocation user exit. The library name should be enclosed in single quotes (').
>
> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

DFP User Exits

```
OS$CNTL RELOAD               -
     IGGPOST0{(MODNAME)}      |  -
     IGGPRE00{(MODNAME)}      |  -
    {PRimary|BAckup}          -
    {FIrst|SEcond|THird}      -
    {LIBrary(library.dsn)}
```

DFP exit point   The name of the DFP exit point to be reloaded (see list of valid DFP exit points above)

modname   An optional parameter specifying the module name of the DFP user exit to be reloaded. If this name is not specified, the module name of the last DFP user exit to occupy this exit position will be reloaded. If you are unsure of the last DFP user exit name to occupy this exit position, issue a QUERY command to determine the last DFP user exit to occupy the user exit position.

PRIMARY   Specifies that the module name of the DFP exit name to be reloaded is a primary user exit.

BACKUP   Specifies that the module name of the DFP exit name to be reloaded is a backup user exit.

FIRST   Specifies to reload user exit number one for DFP exit point.

SECOND   Specifies to reload user exit number two for DFP exit point.

THIRD   Specifies to reload user exit number three for DFP exit point.

LIBRARY   Specifies the loading of a User exit exit module from a private Authorized library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for User exit modules.

    library.dsn
       Specifies the name of a private Authorized library used to locate and load the DFP user exit. The library name should be enclosed in single quotes (').

       Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

DFHSM User Exits

```
OS$CNTL RELOAD                      -
      ARCADEXT{(MODNAME)}       |   -
      ARCBDEXT{(MODNAME)}       |   -
      ARCBEEXT{(MODNAME)}       |   -
      ARCCBEXT{(MODNAME)}       |   -
      ARCCDEXT{(MODNAME)}       |   -
      ARCCREXT{(MODNAME)}       |   -
      ARCINEXT{(MODNAME)}       |   -
      ARCMDEXT{(MODNAME)}       |   -
      ARCMMEXT{(MODNAME)}       |   -
      ARCMVEXT{(MODNAME)}       |   -
      ARCM2EXT{(MODNAME)}       |   -
      ARCRDEXT{(MODNAME)}       |   -
      ARCSAEXT{(MODNAME)}       |   -
      ARCSKEXT{(MODNAME)}       |   -
      ARCTDEXT{(MODNAME)}       |   -
      ARCTVEXT{(MODNAME)}       |   -
      {PRimary|BAckup}              -
      {FIrst|SEcond|THird}         -
      {LIBrary(library.dsn)}
```

DFHSM exit point

    The name of the DFHSM exit point to be reloaded (see list of valid DFHSM exit points above)

modname   An optional parameter specifying the module name of the DFHSM user exit to be re-loaded. If this name is not specified, the module name of the last DFHSM user exit to occupy this exit position will be reloaded. If you are unsure of the last DFHSM user exit name to occupy this exit position, issue a QUERY command to determine the last DFHSM user exit to occupy the user exit position.

PRIMARY   Specifies that the module name of the DFHSM exit name to be reloaded is a primary user exit.

BACKUP   Specifies that the module name of the DFHSM exit name to be reloaded is a backup user exit.

FIRST   Specifies to reload user exit number one for DFHSM exit point.

SECOND   Specifies to reload user exit number two for DFHSM exit point.

THIRD   Specifies to reload user exit number three for DFHSM exit point.

LIBRARY   Specifies the loading of a User exit exit module from a private Authorized library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for User exit modules.

        library.dsn

        Specifies the name of a private Authorized library used to locate and load the DFHSM user exit. The library name should be enclosed in single quotes (').

        Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

ISPF User Exits

```
OS$CNTL RELOAD                   -
     EXIT1{(MODNAME)}        |  -
     EXIT2{(MODNAME)}        |  -
     EXIT3{(MODNAME)}        |  -
     EXIT4{(MODNAME)}        |  -
     EXIT5{(MODNAME)}        |  -
     EXIT6{(MODNAME)}        |  -
     EXIT7{(MODNAME)}        |  -
     EXIT8{(MODNAME)}        |  -
     EXIT9{(MODNAME)}        |  -
     EXIT10{(MODNAME)}       |  -
     EXIT11{(MODNAME)}       |  -
     EXIT12{(MODNAME)}       |  -
     EXIT13{(MODNAME)}       |  -
     EXIT14{(MODNAME)}       |  -
     EXIT15{(MODNAME)}       |  -
     EXIT16{(MODNAME)}       |  -
     {PRimary|BAckup}           -
     {FIrst|SEcond|THird}       -
     {LIBrary(library.dsn)}
```

ISPF exit point   The name of the ISPF exit point to be reloaded (see list of valid ISPF exit points above)

modname   An optional parameter specifying the module name of the ISPF user exit to be reloaded. If this name is not specified, the module name of the last ISPF user exit to occupy this exit position will be reloaded. If you are unsure of the last ISPF user exit name to occupy this exit position, issue a QUERY command to determine the last ISPF user exit to occupy the user exit position.

PRIMARY   Specifies that the module name of the ISPF exit name to be reloaded is a primary user exit.

BACKUP   Specifies that the module name of the ISPF exit name to be reloaded is a backup user exit.

FIRST   Specifies to reload user exit number one for ISPF exit point.

SECOND   Specifies to reload user exit number two for ISPF exit point.

THIRD   Specifies to reload user exit number three for ISPF exit point.

LIBRARY   Specifies the loading of a User exit exit module from a private Authorized library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for User exit modules.

   library.dsn
      Specifies the name of a private Authorized library used to locate and load the ISPF user exit. The library name should be enclosed in single quotes (').

      Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

JES2 User Exits

```
OS$CNTL RELOAD                              -
        J2EXITnnn{(lmodname:entryname)} -
      {PRimary|BAckup}                      -
      {FIrst|SEcond|THird}                  -
      {LIBrary(library.dsn)}
```

JES2 exit point The name of the JES2 exit point to be reloaded (see list of valid JES2 exit points above)

lmodname:entryname

An optional parameter specifying the module name of the JES2 user exit to be reloaded. If this name is not specified, the module name of the last JES2 user exit to occupy this exit position will be reloaded. If you are unsure of the last JES2 user exit name to occupy this exit position, issue a QUERY command to determine the last JES2 user exit to occupy the user exit position.

PRIMARY   Specifies that the module name of the JES2 exit name to be reloaded is a primary user exit.

BACKUP   Specifies that the module name of the JES2 exit name to be reloaded is a backup user exit.

FIRST   Specifies to reload user exit number one for JES2 exit point.

SECOND   Specifies to reload user exit number two for JES2 exit point.

THIRD   Specifies to reload user exit number three for JES2 exit point.

LIBRARY   Specifies the loading of a User exit exit module from a private Authorized library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for User exit modules.

library.dsn

Specifies the name of a private Authorized library used to locate and load the JES2 user exit. The library name should be enclosed in single quotes (').

Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

JES3 User Exits

```
OS$CNTL RELOAD              -
        J3EXITnn{(modname)}    -
     {PRimary|BAckup}         -
     {FIrst|SEcond|THird}     -
     {LIBrary(library.dsn)}   -
```

JES3 exit point The name of the JES3 exit point to be reloaded (see list of valid JES3 exit points above)

modname An optional parameter specifying the module name of the JES3 user exit to be reloaded. If this name is not specified, the module name of the last JES3 user exit to occupy this exit position will be reloaded. If you are unsure of the last JES3 user exit name to occupy this exit position, issue a QUERY command to determine the last JES3 user exit to occupy the user exit position.

PRIMARY Specifies that the module name of the JES3 exit name to be reloaded is a primary user exit.

BACKUP Specifies that the module name of the JES3 exit name to be reloaded is a backup user exit.

FIRST Specifies to reload user exit number one for JES3 exit point.

SECOND Specifies to reload user exit number two for JES3 exit point.

THIRD Specifies to reload user exit number three for JES3 exit point.

LIBRARY Specifies the loading of a User exit exit module from a private Authorized library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for User exit modules.

library.dsn
Specifies the name of a private Authorized library used to locate and load the JES3 user exit. The library name should be enclosed in single quotes (').

Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

RACF User Exits

```
OS$CNTL RELOAD                         -
     ICHRDX01{(MODNAME)}         |    -
     ICHRDX02{(MODNAME)}         |    -
     ICHRCX01{(MODNAME)}         |    -
     ICHRCX02{(MODNAME)}         |    -
     ICHRIX01{(MODNAME)}         |    -
     ICHRIX02{(MODNAME)}         |    -
     ICHRLX01{(MODNAME)}         |    -
     ICHRLX02{(MODNAME)}         |    -
     ICHRFX01{(MODNAME)}         |    -
     ICHRFX02{(MODNAME)}         |    -
     ICHDEX01{(MODNAME)}         |    -
     ICHPWX01{(MODNAME)}         |    -
     ICHCNX00{(MODNAME)}         |    -
     ICHCCX00{(MODNAME)}         |    -
     ICHRTX00{(MODNAME)}         |    -
     IRRACX01{(MODNAME)}         |    -
     IRRACX02{(MODNAME)}         |    -
     IRREVX01{(MODNAME)}         |    -
     {PRimary|BAckup}                  -
     {FIrst|SEcond|THird}             -
     {LIBrary(library.dsn)}
```

RACF exit point
> The name of the RACF exit point to be reloaded (see list of valid RACF exit points above)

modname An optional parameter specifying the module name of the RACF user exit to be re-loaded. If this name is not specified, the module name of the last RACF user exit to occupy this exit position will be reloaded. If you are unsure of the last RACF user exit name to occupy this exit position, issue a QUERY command to determine the last RACF user exit to occupy the user exit position.

PRIMARY Specifies that the module name of the RACF exit name to be reloaded is a primary user exit.

BACKUP Specifies that the module name of the RACF exit name to be reloaded is a backup user exit.

FIRST Specifies to reload user exit number one for RACF exit point.

SECOND Specifies to reload user exit number two for RACF exit point.

THIRD Specifies to reload user exit number three for RACF exit point.

LIBRARY Specifies the loading of a User exit exit module from a private Authorized library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for User exit modules.

> **library.dsn**
> > Specifies the name of a private Authorized library used to locate and load the RACF user exit. The library name should be enclosed in single quotes (').
>
> > **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

RACF Tables

```
OS$CNTL RELOAD                    -
     ICHRIN03{(MODNAME | RESET)} | -
     ICHRRCDE{(MODNAME | RESET)} | -
     ICHRFR01{(MODNAME | RESET)} | -
     {LIBRARY(LIB.NAME)}
```

RACF Table   The name of the RACF Table to be reloaded or reset

tblname   An optional parameter specifying the module name of the RACF Table to be replaced.

RESET   Forces a reload of the RACF table specified.

LIBRARY   Specifies the loading of a table module exit module from a private Authorized library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for table module modules.

> **library.dsn**
>> Specifies the name of a private Authorized library used to locate and load the RACF Table user exit. The library name should be enclosed in single quotes (').
>>
>> **Note:** If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

SMF User Exits

```
OS$CNTL RELOAD                        -
     IEFACTRT{(MODNAME)}        |    -
     IEFUJI{(MODNAME)}          |    -
     IEFUJP{(MODNAME)}          |    -
     IEFUJV{(MODNAME)}          |    -
     IEFUSI{(MODNAME)}          |    -
     IEFUSO{(MODNAME)}          |    -
     IEFUTL{(MODNAME)}          |    -
     IEFU29{(MODNAME)}          |    -
     IEFU83{(MODNAME)}          |    -
     IEFU84{(MODNAME)}          |    -
     IEFU85{(MODNAME)}          |    -
     {PRimary|BAckup}                 -
     {FIrst|SEcond|THird}             -
     {LIBrary(library.dsn)}
```

SMF exit point The name of the SMF exit point to be reloaded (see list of valid SMF exit points above)

modname An optional parameter specifying the module name of the SMF user exit to be reloaded. If this name is not specified, the module name of the last SMF user exit to occupy this exit position will be reloaded. If you are unsure of the last SMF user exit name to occupy this exit position, issue a QUERY command to determine the last SMF user exit to occupy the user exit position.

PRIMARY Specifies that the module name of the SMF exit name to be reloaded is a primary user exit.

BACKUP Specifies that the module name of the SMF exit name to be reloaded is a backup user exit.

FIRST Specifies to reload user exit number one for SMF exit point.

SECOND Specifies to reload user exit number two for SMF exit point.

THIRD Specifies to reload user exit number three for SMF exit point.

LIBRARY Specifies the loading of a User exit exit module from a private Authorized library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for User exit modules.

        library.dsn
        Specifies the name of a private Authorized library used to locate and load the SMF user exit. The library name should be enclosed in single quotes (').

        Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

RELOAD SMF IEFUSI user exits 1 and 2

These commands will reload, and activate, user exits #1 and #2 for SMF IEFUSI:

```
OS$CNTL RELOAD IEFUSI(USREXIT1) First
OS$CNTL RELOAD IEFUSI(USREXIT2) Second
```

Each exit is loaded with a single invocation of the OS$CNTL RELOAD command as required.

Now, assume that the above commands were the first time that USREXIT1 and USREXIT2 were loaded. You have made modifications to USREXIT1 which you want to reload. The following command will accomplish this:

```
OS$CNTL RELOAD IEFUSI First
```

Note: The module name is not specified. Since you are reloading USREXIT1, the name need not be entered since it will be the assumed name when the RELOAD command executes.

TSO User Exits

```
OS$CNTL RELOAD                          -

    ICQAMFX1{(MODNAME)}         |   -
    ICQAMFX2{(MODNAME)}         |   -
    ICQAMPX1{(MODNAME)}         |   -
    ICQAMPX2{(MODNAME)}         |   -
    IEEVSNX0{(MODNAME)}         |   -
    IEEVSNX1{(MODNAME)}         |   -
    IEEVSNX2{(MODNAME)}         |   -
    IEEVSNX3{(MODNAME)}         |   -
    IEEVSNX4{(MODNAME)}         |   -
    IKJADINI{(MODNAME)}         |   -
    IKJADTER{(MODNAME)}         |   -
    IKJCNXAC{(MODNAME)}         |   -
    IKJCNXCD{(MODNAME)}         |   -
    IKJCNXCI{(MODNAME)}         |   -
    IKJCNXCT{(MODNAME)}         |   -
    IKJCNXDE{(MODNAME)}         |   -
    IKJCNXPP{(MODNAME)}         |   -
    IKJCNX50{(MODNAME)}         |   -
    IKJCNX64{(MODNAME)}         |   -
    IKJCT43I{(MODNAME)}         |   -
    IKJCT43T{(MODNAME)}         |   -
    IKJCT44B{(MODNAME)}         |   -
    IKJCT44S{(MODNAME)}         |   -
    IKJEESXA{(MODNAME)}         |   -
    IKJEESXB{(MODNAME)}         |   -
    IKJEESX0{(MODNAME)}         |   -
    IKJEESX1{(MODNAME)}         |   -
    IKJEESX2{(MODNAME)}         |   -
    IKJEESX3{(MODNAME)}         |   -
    IKJEESX4{(MODNAME)}         |   -
    IKJEESX5{(MODNAME)}         |   -
    IKJEESX6{(MODNAME)}         |   -
    IKJEESX7{(MODNAME)}         |   -
    IKJEESX8{(MODNAME)}         |   -
    IKJEESX9{(MODNAME)}         |   -
    IKJEFD21{(MODNAME)}         |   -
    IKJEFD22{(MODNAME)}         |   -
    IKJEFD47{(MODNAME)}         |   -
    IKJEFD49{(MODNAME)}         |   -
    IKJEFF10{(MODNAME)}         |   -
    IKJEFF53{(MODNAME)}         |   -
    IKJEFLD1{(MODNAME)}         |   -
    IKJEFLD2{(MODNAME)}         |   -
    IKJEFLD3{(MODNAME)}         |   -
    IKJEFLN1{(MODNAME)}         |   -
    IKJEFLN2{(MODNAME)}         |   -
    IKJEFXG1{(MODNAME)}         |   -
    IKJEFY11{(MODNAME)}         |   -
    IKJEFY12{(MODNAME)}         |   -
    IKJEFY60{(MODNAME)}         |   -
    IKJEFY64{(MODNAME)}         |   -
    IKJEGASI{(MODNAME)}         |   -
    IKJEGAST{(MODNAME)}         |   -
    IKJEGAUI{(MODNAME)}         |   -
```

```
     IKJEGAUT{(MODNAME)}        |    –
     IKJEGCIE{(MODNAME)}        |    –
     IKJEGCTE{(MODNAME)}        |    –
     IKJEGMIE{(MODNAME)}        |    –
     IKJEGMTE{(MODNAME)}        |    –
     IKJPRMX1{(MODNAME)}        |    –
     IKJPRMX2{(MODNAME)}        |    –
     INMCZ21R{(MODNAME)}        |    –
     INMRZ01R{(MODNAME)}        |    –
     INMRZ02R{(MODNAME)}        |    –
     INMRZ04R{(MODNAME)}        |    –
     INMRZ05R{(MODNAME)}        |    –
     INMRZ06R{(MODNAME)}        |    –
     INMRZ11R{(MODNAME)}        |    –
     INMRZ12R{(MODNAME)}        |    –
     INMRZ13R{(MODNAME)}        |    –
     INMRZ15R{(MODNAME)}        |    –
     INMRZ21R{(MODNAME)}        |    –
     INMXZ01R{(MODNAME)}        |    –
     INMXZ02R{(MODNAME)}        |    –
     INMXZ03R{(MODNAME)}        |    –
     INMXZ21R{(MODNAME)}        |    –
     IRXINITX{(MODNAME)}        |    –
     IRXITMV{(MODNAME)}         |    –
     IRXITTS{(MODNAME)}         |    –
     IRXTERMX{(MODNAME)}        |    –
   {PRimary|BAckup}                 –
   {FIrst|SEcond|THird}             –
   {LIBrary(library.dsn)}
```

TSO exit point The name of the TSO exit point to be reloaded (see list of valid TSO exit points above)

modname An optional parameter specifying the module name of the TSO user exit to be reloaded. If this name is not specified, the module name of the last TSO user exit to occupy this exit position will be reloaded. If you are unsure of the last TSO user exit name to occupy this exit position, issue a QUERY command to determine the last TSO user exit to occupy the user exit position.

PRIMARY Specifies that the module name of the TSO exit name to be reloaded is a primary user exit.

BACKUP Specifies that the module name of the TSO exit name to be reloaded is a backup user exit.

FIRST Specifies to reload user exit number one for TSO exit point.

SECOND Specifies to reload user exit number two for TSO exit point.

THIRD Specifies to reload user exit number three for TSO exit point.

LIBRARY Specifies the loading of a User exit exit module from a private Authorized library named library.dsn. If this parameter is omitted then the normal MVS search criteria is used for User exit modules.

        library.dsn
           Specifies the name of a private Authorized library used to locate and load the TSO user exit. The library name should be enclosed in single quotes (').

           Note: If the program is not found in this library, no other search is performed and the user exit is **not** loaded.

RELOAD various user exits

These commands will activate SMF exit IEFUJV using module USREXIT1 as exit one. It will reload JES2 exit four, user exit two. Since no module specified, the previous name is assumed. Although not required (JES2 is default subsystem name) the JES subsystem name is specified.

```
OS$CNTL RELOAD  IEFUJV(USREXIT1) First
OS$CNTL RELOAD JESNAME(JES2)JESEXIT4 Second
```

Installation Planning

This section provides a list of important topics, which you will need to consider prior to installing OS/EM. The intent is to assist you in assessing the impact, if any, that OS/EM will have on your installation.

CPU Serial Number

You must supply Trident Services with the CPU serial number of each machine that OS/EM will run on. This number is available from IBM (or other manufacturer if your CPU is not from IBM) and consists of a six digit number. The four low-order numbers are the important ones.

Obtain CPU Number

If you are unsure of your CPU serial number, you may enter the following command on an MVS master console to obtain it.

Display CPU Number

```
D M=CPU
IEE174I 12.42.25 DISPLAY M 618
PROCESSOR STATUS
ID  CPU                   SERIAL
0    +                    0114BA3746
1    +                    1114BA3746
2    +                    2114BA3746
CPC ND = 009672.R31.IBM.02.000000052227
CPC ID = 00
+ ONLINE    - OFFLINE    . DOES NOT EXIST
CPC ND  CENTRAL PROCESSING COMPLEX NODE DESCRIPTOR
CPC ID  CENTRAL PROCESSING COMPLEX IDENTIFIER
```

In this sample display, the serial number of ID 0 is '0114BA'. The last 4 characters are the CPU model number. OS/EM uses the last 4 characters of the serial number, in this case '14BA'.

Current User Exits

Every user exit currently in use at your installation should be thoroughly documented as to it's use and the location of both source and load members. All such exits should be functioning properly and should not modify any control blocks not specifically allowed at the exit point. Further, your exits should do nothing more than what is explicitly allowed in the relevant IBM documentation.

If any of these exits can be replaced by using OS/EM's optional facilities, determine if the optional facilities meet all your needs. If your exits contain more functions than those supplied by OS/EM, consider recoding your exits leaving only those functions not supplied by OS/EM.

You will also need to determine at what point you want the optional OS/EM functions to be invoked, either before your own exits or after all your exits have been processed. It is entirely possible that a conflict can develop between your own exits and the optional functions. For example, the optional functions supplied for IKJEFF10 modify the JOB statement. If your IKJEFF10 exit depends on certain information in a certain format on the JOB statement, the OS/EM optional processing might result in a different result for your exit.

OS/EM Reload Function

In order to use the RELOAD function provided in the ISPF Interface, all user exits need to be defined to the Interface using the Basic Exits Functions. Although OS/EM will automatically find and load all user exits which have the standard IBM module names and are in the Linklist whether or not they have been defined to the Interface, the list of modules eligible to be reloaded is built from your entries in the Basic Exits Functions. If you prefer not to enter this information, please refer to "RELOAD Command" on page RELOAD-1 in the OS/EM Reference Manual for instructions on reloading modules manually.

Note: This information will be added automatically to the interface during the upgrade process or during the 'REBUILD' function from the 'MAINTENANCE' section of the interface.

Third Party Exits

Many products, such as job schedulers and SYSOUT archival systems, depend on exits to accomplish their work. You should know at which exit points these supplied exits are invoked, and where they currently reside.

Many of these products also require the same exit point. You should determine in what order they should be invoked if OS/EM is to load and enable them.

JES2 Job Routing Option

The OS/EM optional feature *Job Routing* allows an installation to route jobs to specific LPARs within a MAS. The Job Routing Communications dataset must be on DASD shared by each LPAR within the MAS. Additionally the Job Routing function must be enabled on each LPAR within a MAS concurrently. Failure to do so will result in jobs not being allowed to execute on LPARs where Job Routing is active if they have been through the interpreter on a LPAR without Job Routing. Conversely, LPARs within the MAS without Job Routing active may select jobs for execution without the specified resources.

RACF User Exits

At installations where it is not permissible for a 3rd party product to manage RACF user exits, you may specify to OS/EM to use **SAF** as the security system in use (see Step 7 of the installation instructions.) This will disable OS/EM from managing RACF exits as well as disallowing use of any OS/EM feature for RACF such as Surrogate Password Control, while still allowing calls to RACF for validation of other controls such as JOBCLASSCHECK (see Step 6 of the installation instructions.)

SMP/E

You should determine which of your exits have been installed via the SMP/E USERMOD process. Once OS/EM has been installed, SMP/E knowledge of such exits is no longer necessary. OS/EM dynamically loads its interface modules during initialization; and these, in turn, dynamically load your user exit modules. Therefore, after successful installation, you should remove the exits from SMP/E by the RESTORE

function and link them into an OS/EM accessible library with different names (e.g. MYUJI), then update the OS/EM initialization parms to load the new names.

Dataset Naming Convention

If your installation does not currently have a consistent dataset naming convention, one should be developed to make full use of the OS/EM DASD allocation built-in facility. At a minimum, the naming convention should be able to distinguish between production and test datasets. Ideally, your convention should be able to segregate the various types of datasets in your installation, datasets used primarily for online applications, those datasets used primarily for batch, etc.

Think in terms of classes of data. That is, you might have datasets used for online applications. These datasets should be allocated for the least amount of volume, channel, and control unit contention. Such datasets would constitute a class in OS/EM terms, a dataset name group.

To ensure that these dataset name groups get the processing you want them to have, volumes should be pooled. If you have volumes that have multiple physical and logical paths, these volumes should be reserved for those datasets that have critical access requirements for online datasets. By listing these volumes in a particular OS/EM volume group and designating the proper dataset name group to this volume group, you can ensure that all such datasets will be properly allocated.

If your installation has an existing dataset naming convention, determine if an adequate number of dataset name groups can be created to accomplish your allocation goals. You may find that, without too much re-working of your existing convention, you can group datasets in a satisfactory manner.

OS/EM can also be of benefit in migrating to a new dataset naming convention. You can define a couple of dataset name groups representing a subset of the new convention, establish one or two volume groups for these dataset name groups, and as you allocate datasets under the new names, they will be placed on these reserved volumes. Once volumes are free of datasets under the old names, they can then be used to establish new volume groups with dataset name groups representing another subset of the new convention. Migration can then be done in small, easy steps.

- Remember, OS/EM DASD allocation neither imposes, nor demands, any specific naming convention. OS/EM dataset name groups can consist entirely of discrete dataset names. However, maintenance of such dataset name groups would be problematic. And, without some means of functionally grouping datasets, your allocation rules would be very general at best and may not achieve the desired results.

Tape Allocation Rules

Most likely your installation already has rules concerning the use of tape devices by test jobs. These may be codified in some standards manual; or an informal set of rules, sometimes enforced by operators when there are not enough tape devices to go around. Whatever the rules, you should give some thought as to how you want to implement this OS/EM function. Remember, this function is intended primarily as a means to enforce your installation's standards concerning tape usage by test jobs. The wrong MAXTAPE value applied to a production job class would certainly not win you any friends in your operations group.

Also remember that tape devices are counted as allocation proceeds; therefore, jobs may cancel that did not cancel before (due to the job getting the devices, and possibly forcing other production jobs to wait until the devices are deallocated). You should give thought to running this function in WARN mode so that violations will be apparent to users before their jobs start canceling.

Command Checking

Determine which users, if any, will be allowed to submit operating system and JES2 commands in JCL. The simplest approach would be to severely limit this ability, say to a few system programmers, and RACF define resources COMMAND.* and JES2.$* only; and only permit the appropriate userids. However, if you have other requirements, just ensure that the appropriate resource definitions are in place before invoking this function.

Job Classes

Many OS/EM optional functions may be applied on a job class basis. This means that your installation should have a well-defined set of rules for job class usage. Any rules you develop should account for the following:

- If you run CICS, or other transaction processing system, as a batch job, you should have separate production and test classes. Typically, the production class(es) will have a higher dispatching priority than almost anything else in the system. The test class(es) will be much lower (give thought to placing these classes at a lower priority than TSO. If these test systems hang, they can lock out your TSO users).

- If you are going to control tape usage for test jobs, you need enough classes defined to handle the various allocation rules you develop. You probably will want to tie job turnaround time to the number of tape devices the job uses. That is, a quick turnaround job such as a compile would normally not require any tape devices. A job that requires three, or more, tape devices could be given a long turnaround time.

- The number of production job classes should be held to a minimum. It is not the number of job classes that determines how many production jobs can run, but the number of initiators assigned to these classes.

However, you should have at least one class reserved for those production jobs that consume excessive resources and single-thread such jobs through this class. We also recommend that you reserve one production class for those jobs that absolutely need to be executed when they are submitted. Such jobs would be the SMF dump job; and, if your CICS journal is on disk, the job that dumps a full disk journal to tape.

Job Class Checking

Some of the optional OS/EM control functions allow you to check that a specified job class is valid for the job. These classes must be defined to your security system using the classname FACILITY (or IBMFAC for CA-TOPSECRET) and resource JOBCLASS.x where x is the desired class. If the resource is not defined, OS/EM will by default allow access to the resource, so no Job will fail.

OS/EM IEFUSI Option

The optional OS/EM IEFUSI function is applied based on the weight assigned to each selection criteria type: program name, job class or job name. Before applying storage limits, determine, at the very least, your installation's use of job classes. If, for example, you start CICS as a job, you would not want to specify the CICS job class with the wrong storage limits. In this case, it would be better to specify DFHSIP as a program name and assign it to a REGION keyword with the appropriate limits.

Possible S71A Abends

When using SMF exit IEFU83, including the OS/EM extended function Catalog Account Control, it is possible that SVC dumps will be produced for S71A abends. These abends are normally supressed by the Catalog Address Space where they occur, but when CAS is called by IEFU83 a dump may be produced as OS/EM's SMF Controller may detect the abend. The same problem may be encountered without OS/EM as the SMF ESTAE routine IEEMB830 would then detect the abend.

IBM recommends that you set a SLIP trap in IEASLP00 in SYS1.PARMLIB to suppress the dump. An example for ABEND71A is:

```
SLIP SET,C=71A,ID=X71A,A=NODUMP,END
```

This information is documentated in IBM APAR OW13864.

OS/EM and ISPF Installation-Wide Exits

To use the OS/EM support of the ISPF installation-wide exits, you must have set the EXITS keyword on the ISPMTAIL macro to YES, or by using the ISPCCONF command to change the ISPDFLTS setting 'Enable ISPF Exits'.

For detailed instructions, refer to the ISPF Planning and Customizing manual, section Tailoring ISPF Defaults.

Also be sure that you do not have a version of ISPEXITS available in a STEPLIB in any ISPF logon procedure, otherwise ISPEXITS will be loaded from the STEPLIB and not from the OS/EM load library. Any exit (and associated data area) coded in your ISPEXITS module must be defined to OS/EM via the Basic Exits function.

Installation

OS/EM is distributed as a pre-built SMP/E environment. The installation process is performed through an ISPF dialogue that guides the user to:

1. Define and load the SMP/E datasets
2. Define and load the OS/EM target and distribution libraries
3. Generate the appropriate JES offset tables
4. Define and build the OS/EM executable libraries and control datasets

Additional installation steps involve setting up system environment and other related subsystems (e.g. RACF, DFSMShsm) to support OS/EM operation.

Some changes to the system PARMLIB will be required to enable OS/EM operation.

System Requirements

This section identifies the system requirements for installing and running OS/EM.

- z/OS 1.4 or later

- An available Type 3 SVC number for JES3 only, which you choose, or let OS/EM dynamically choose one

Installation

OS/EM is distributed via CD. This CD contains a binary distribution file named **OSM0600.DIST.TERSE**. As the name implies, the data is in the 'TERSED' format using the TRSMAIN utility. Users who do not have the TRSMAIN utility installed on their system can obtain it from the IBM Technical Support website:

> **http://techsupport.services.ibm.com/390/trsmain.html**

Download the distribution file into a sequential dataset with the following attributes:

> RECFM=FB,LRECL=1024,BLKSIZE=6144,SPACE=(CYL,(30,5))

The distribution dataset contains a pre-built SMP/E environment which is loaded into the pre-allocated datasets. An ISPF dialogue is provided to guide the user through the installation process (this is similar to a ServerPac installation procedure). Follow these instructions carefully to avoid errors when attempting to load the SMP/E environment.

Step 1: Load the Installation Library

The Installation Library contains the ISPF dialogue and JCL skeletons that are used to define and load all the OS/EM datasets. Extract the Installation Library using the following JCL:

```
//jobname  JOB (acct info),'name',CLASS=A,MSGCLASS=X
//*
//UNPKDIST EXEC PGM=TRSMAIN,PARM=UNPACK
//SYSPRINT DD SYSOUT=*
//INFILE   DD DSN=osem.dist.dataset,DISP=OLD
//OUTFILE  DD DSN=&&PDS,DISP=(NEW,PASS),
//            UNIT=SYSDA,SPACE=(CYL,(15,30,15),RLSE)
//*
//EXTRPREP EXEC PGM=TRSMAIN,PARM=UNPACK
//SYSPRINT DD SYSOUT=*
//INFILE   DD DSN=&&PDS(PREP),DISP=(OLD,DELETE)
//OUTFILE  DD DSN=hlq.OSEM.PREP,DISP=(,CATLG,DELETE),
//            UNIT=SYSDA,SPACE=(27920,(20,15,15),RLSE),
//            VOL=SER=SYS000
```

- Replace the JOB statement with one that meets your installation's requirements.
- Replace the DSN= for the INFILE dataset in the UNPKDIST job step to point to the downloaded OS/EM distribution dataset.
- Replace the DSN= for the OUTFILE dataset in the EXTRPREP job step to meet your installation's requirements, and specify an appropriate DASD esoteric name and volume serial number.

Step 2: Execute the OS/EM Installation Dialogue

Execute the Installation Dialog by entering the following TSO command:

> ex 'hlq.OSEM.PREP(OS$DISK)' 'hlq.OSEM.PREP'

Ensure that dataset names specified in the above command is the same that was used in installation step 1.

The following menu will be displayed:

```
 OS/EM ------------- OS/EM Installation Preparation ------------- Version 6.0
 Option ===>

                                                    UserID  -SPRCB
                        1  Set Variables            System ID-PROD
                        2  Allocate DLIB/TLIB Datasets   Time    -14:54
                        3  Allocate SMP/E Datasets   Terminal -3278
                        4  Allocate Executable Datasets   PF Keys  -12
                        5  Load SMP/E Environment
                        6  Create JES Offset Table
                        7  Copy SMP/E to Executable




  F1=Help   F2=Split  F3=Exit   F7=Up    F8=Down  F9=Swap  F12=Cancel


 Figure 1.  OS/EM Installation Menu
```

Step 3: Load the Pre-built SMP/E Environment

The pre-built OS/EM SMP/E environment is loaded by executing the selection items in the main menu in sequence.

1. **Set Variables** This option defines the parameters to be used for subsequent installation steps. Set the values according to your installation's naming conventions.

```
 OS/EM -------------- OS/EM Installation Variables -------------- Version 6.0
 COMMAND ===>

      Library Type              High Level Qualifier     Product Qualifier
  SMP/E Libraries          ===>  MVS$SMP             ===>  OSM0600
  Distribution Libraries   ===>  SYSA                ===>  OSM0600
  Target Libraries         ===>  SYS2A               ===>  OSM0600
  Executable Libraries     ===>  SYS2                ===>  OSEM

  COBOL SCEELKED Library DSN ==>  SYS1.SCEELKED
  JES SMPMTS Library DSN     ==>  MVS$SMP.ZOSV106.SMPMTS
  RELFILE DSN Prefix         ==>  SYS2A.REL
  TRSMAIN Library DSN        ==>  SYS1.IBM.LINKLIB

  Unit and Volume Names:
     SMP/E Unit      ===>  SYSDA      Volume  ===>  SMS001
     DLIB Unit       ===>  SYSDA      Volume  ===>  SMS002
     TLIB Unit       ===>  SYSDA      Volume  ===>  SMS003
     Executable Unit ===>  SYSDA      Volume  ===>  SMS004
     Work File Unit  ===>  SYSDA

  Distribution File Name    ===>  OSEM600.D050101.PACK

  F1=Help   F2=Split  F3=Exit   F7=Up    F8=Down  F9=Swap  F12=Cancel



 Figure 2.  OS/EM Installation Variables
```

Notes:

- Do not use quotes (') when specifying dataset names.

- The SMP/E Macro Temporary Storage dataset (SMPMTS) is used for generating the JES Offset tables. If your installation does not have an SMPMTS dataset, specify SYS1.MACLIB.

Subsequent installation steps will submit jobs. For each job that will be submitted, the following panel will be displayed:

```
OS/EM --------------- ALLOCATE DLIB/TLIB DATASETS -------------- Version 6.0
COMMAND ===>


  Select from the following:
    1 - Submit the Job
    2 - Browse the Job
    3 - Edit the Job


  Job Statement Information:  Verify before proceeding

  ===> //SPRCBA JOB (ACCT),ALLOCATION,
  ===> //          MSGCLASS=X,CLASS=A,NOTIFY=&SYSUID,REGION=0M
  ===> //*
  ===> //*

 Select option 1 to submit job, or press PF3 (END) to exit.




  F1=Help    F2=Split   F3=Exit    F7=Up      F8=Down    F9=Swap    F12=Cancel



 Figure 3.   OS/EM Installation Job Submission
```

Alter the JOB statement to meet your installation's standards and then select option 1 to submit the job. You may browse or edit the JCL prior to submission using options 2 and 3.

2. **Allocate DLIB/TLIB Datasets** This step will allocate the OS/EM Distribution and Target libraries (load libraries, ISPF libraries, sample library). You should receive a return code of zero for this job.

3. **Allocate SMP/E Datasets** This step will allocate the SMP/E datasets for the OS/EM system. You should receive a return code of zero for this job.

4. **Allocate Executable Datasets** This step will allocate the datasets that OS/EM will use for execution. You should receive a return code of zero for this job.

5. **Load SMP/E Environment** This step will load the SMP/E environment from the OS/EM distribution tape / dataset. You should receive a return code of zero for this job.

6. **Generate JES Offset Table** You will be presented with a panel where you can choose to generate the offset table for JES2 or JES3. You should receive a return code of zero or one (for JES2) and zero (for JES3) for this job.

   Important - If your installation uses multiple JES systems with different release or maintenance levels, the JES offset table must be generated on each of these systems.

7. **Copy SMP/E to Executable** This step will build the OS/EM executable datasets from the SMP/E environment. You should receive a return code of zero for this job.

Once all installation steps have been completed, terminate the dialogue by pressing PF3.

Step 4: Define Security (optional)

Many of the OS/EM optional functions such as the Job Class Checking, Account Number Checking, DDNAME Checking, JCL parameter checking, MVS Operating System and JES2 commands are controlled by appropriate definitions to your installation's security system (RACF, CA-TOPSECRET, or CA-ACF2). If you intend to use these functions, the proper definitions must be in place before OS/EM can enforce the use of these resources. If resource checking (RACROUTE) for a particular resource is requested by OS/EM and the resource is not defined to the installation's security system, OS/EM will by default allow the use of the requested resource if using RACF, or disallow the use of the requested resource if using ACF2.

All such definitions are done by establishing the proper resources within the class FACILITY (CA-TOPSECRET users will use class IBMFAC). Job class resources take the form JOBCLASS.x where x is the desired jobclass. Users would then be permitted to the proper jobclass. For example, if JOBCLASSCHECKING is in effect, and resource JOBCLASS.A is defined, users would have to be permitted to this resource before they could submit jobs to JOBCLASS A. READ authority is sufficient.

- If JOBCLASSCHECKING is in effect, but the resources are not defined to your security system, **submission will be allowed** for RACF users.

MVS Operating system and JES2 command submittal authority is also defined within class FACILITY (or IBMFAC). The resource takes the form COMMAND.cmd for operating system commands, and JES2.$cmd for JES2 commands.

For operating system commands, cmd is the long form of the command. For example, COMMAND.MOUNT would be specified as the resource name for establishing authority to issue MVS MOUNT commands (do not code COMMAND.M).

The commands $VS, $ADD and $TRACE must be fully designated; all other commands must be a single letter. The proper resource designation for $A for example would be JES2.$A, a generic resource for JES2 commands would be JES2.$*, this covers all JES2 commands.

To permit the user to issue any JES2 command, define the resource as JES2.* and permit the user to this resource. Read authority is sufficient.

- Two special resources are allowed for command authorization: COMMAND.* and JES2.*. These resources establish global resources that users can be permitted to. These special resources would be useful where you want to restrict the authority to issue such commands via submitted JCL, but some users should not be restricted. Use of these resources will mean that each and every command does not have to be defined.

- If command checking is in effect and no resources are defined, no user will be permitted to issue commands in submitted jobs.

Finally, use of the OS$CNTL command can be controlled via your security system. Again, the class is FACILITY|IBMFAC and the resource is OS$CNTL.sysid.function, where sysid is the four character SMF id of your system, and function is either ALLOC, CODE, DASD, HSM, ISPF, JES2, JES3, POOL, QUERY, RACF, RELOAD, SMF, SVC, or TSO. READ access is sufficient.

Note: The resource OS$CNTL.sysid.RACF must be defined before any RACF commands may be issued. Protection of other commands is optional.

Step 5: Define Subsystem Name OSEM

OS/EM runs as a MVS subsystem. Therefore, the subsystem name must be defined. Edit your SYS1.PARMLIB member IEFSSNxx to add OSEM as the subsystem name. The member IEFSSN60 in the OS/EM SAMPLIB can be copied into your current IEFSSN member in SYS1.PARMLIB or copy IEFSSN60 into SYS1.PARMLIB as member IEFSSNOS and update the IEASYS member parameter SSN=(00,OS).

Notes:

- The OS/EM subsystem **must** be defined **after** the JES subsystem entry.

```
SUBSYS SUBNAME(OSEM)
  INITRTN(OS$IPL)
  INITPARM('subs,MSG=x,SVC=nnn,SEC=yyyy,CLASS=zzzzzzzz,SMF=xx')
                                          ,SMF=(xx,yyy)')
                                          ,SMF=(,yyy)')
```

OSEM is the sub-system name, OS$IPL is the execution module that establishes the OS/EM environment.

The additional entries are the initialization parameters that are

The INITPARM string is passed to the subsystem initialization routine. This string contains the following parameters:

subs The OS/EM Job Entry Subsystem to control

       JES2
       JES3

       Note: If the sub-system parameter is not specified, OS/EM will look at the JESCT to determine the primary Job Entry sub-system in use (JES2 or JES3). If the primary Job Entry sub-system cannot be determined from the JESCT, OS/EM will search the active LPA to determine if HASPSSSM for JES2, or IATSI34 for JES3 is available to set the primary Job Entry sub-system. If neither the HASPSSSM nor IATSI34 is in the active LPA, OS/EM will load the interfaces for both JES2 and JES3.

x The message support required during OS/EM Sub-system initialization

    0   Errors Only
    1   Default - Includes Started/Ended and Interface module loaded messages
    2   All messages

nnn The SVC number you want OS/EM to use with JES3 only. If you omit this parameter (SVC=nnn), as in the example, OS/EM starts scanning for an available SVC number and will use the first available number. The OS/EM scan starts at SVC number 255 and works backwards.

yyyy Defines the security system installed at your installation. You must code this operand, along with the CLASS parameter, if you intend to use any of the OS/EM functions that depend on security system definitions.

       RACF - Resource Access Control Facility
       TOPS - CA-TOPSECRET
       ACF2 - CA-ACF2
       SAF - System Authorization Facility

       Note: SAF may be coded to disable OS/EM's ability to manage RACF exits.

zzzzzzzz Resource class for authorization checking

       FACILITY - for RACF
       FACILITY - for CA-ACF2
       FACILITY - for SAF
       IBMFAC   - for CA-TOPSECRET **or**
       DATASET - for CA-TOPSECRET

xx Suffix of SMFPRM member to be invoked after OS$IPL executes

yyy SMF number to use for audit records.

Note: See SMF Record Format in the appendix for the format of these SMF records.

Step 6: Define Procedure OSEM

The OSEM procedure is automatically invoked by the OS/EM subsystem initialization. This procedure initializes the OS/EM environment.

The SAMPLIB member OSEM contains a sample procedure. Copy this member into a PROCLIB pointed to by your Master Scheduler JCL and update it to reflect your dataset naming.

```
//OSEM      PROC
//OS$INIT   EXEC PGM=OS$INIT,TIME=(0,15)
//SYSTSPRT DD DISP=OLD,DSN=xhlq.OSEM.IPL.REPORT
//SYSMDUMP DD DISP=OLD,DSN=xhlq.OSEM.DUMP
//SYSTSIN  DD DSN=xhlq.OSEM.PARMLIB(TIME),DISP=SHR
//           DD DSN=xhlq.OSEM.PARMLIB(CODEINIT),DISP=SHR
//           DD DSN=xhlq.OSEM.PARMLIB(JES2INIT),DISP=SHR
//           DD DSN=xhlq.OSEM.PARMLIB(JES3INIT),DISP=SHR
//           DD DSN=xhlq.OSEM.PARMLIB(MVSINIT),DISP=SHR
//           DD DSN=xhlq.OSEM.PARMLIB(DASDINIT),DISP=SHR
//           DD DSN=xhlq.OSEM.PARMLIB(DSNINIT),DISP=SHR
//           DD DSN=xhlq.OSEM.PARMLIB(HSMINIT),DISP=SHR
//           DD DSN=xhlq.OSEM.PARMLIB(JCLINIT),DISP=SHR
//           DD DSN=xhlq.OSEM.PARMLIB(JOBINIT),DISP=SHR
//           DD DSN=xhlq.OSEM.PARMLIB(JOBRINIT),DISP=SHR
//           DD DSN=xhlq.OSEM.PARMLIB(MISCINIT),DISP=SHR
//           DD DSN=xhlq.OSEM.PARMLIB(PREFINIT),DISP=SHR
//           DD DSN=xhlq.OSEM.PARMLIB(VOLINIT),DISP=SHR
//           DD DSN=xhlq.OSEM.PARMLIB(POOLINIT),DISP=SHR
//           DD DSN=xhlq.OSEM.PARMLIB(RACFINIT),DISP=SHR
//           DD DSN=xhlq.OSEM.PARMLIB(RSTRINIT),DISP=SHR
//           DD DSN=xhlq.OSEM.PARMLIB(SVCINIT),DISP=SHR
//           DD DSN=xhlq.OSEM.PARMLIB(TIMEINIT),DISP=SHR
//           DD DSN=xhlq.OSEM.PARMLIB(TPSHINIT),DISP=SHR
//           DD DSN=xhlq.OSEM.PARMLIB(QUERY),DISP=SHR
//*
```

Ensure that 'xhlq' is set to the datset name high-level qualifier for the OS/EM executable datasets.

In this example, the SYSTSIN DD statement is a concatenation that points to the initialization members that build the OS/EM environment. This is the way in which initialization members are built by the ISPF interface.

Since OSEM runs as a started task, you must define OSEM to your security system giving it SYS1 authority. Otherwise OS/EM initialization will fail.

Step 7: Define OS/EM Load Library to LINKLST

Perform one of the following procedures:

1.   If your IEASYSxx PARMLIB member uses the PROG= parameter:

   •   Copy the OS/EM SAMPLIB member PROGL6 into your system PARMLIB.
   •   Update PROGL6 to point to the LNKLST name used in your system and modify the DSNAME to match the OS/EM executable load library name.
   •   Update IEASYSxx to include the PROGL6 member in the list (e.g. PROG=(00,L1,L6))

2. If your IEASYSxx PARMLIB member uses the LNK= parameter:

- Copy the OS/EM SAMPLIB member LNKLST60 into your system PARMLIB. Update the member to ensure that the executable load library name is correct.
- Update IEASYSxx to include the LNKLST60 member in the list (e.g. LNK=(00,60))

Notes:

- Use caution if your site uses both the LNK= and PROG= parameters. A **LNKLST ACTIVATE** statement in a PROGxx member will cause the LNKLSTxx member(s) to be ignored.

Step 8: Authorize OS/EM Executable Load Library

Perform one of the following procedures:

1. If your IEASYSxx PARMLIB member uses the PROG= parameter:

- Copy the OS/EM SAMPLIB member PROGOS into your system PARMLIB.
- Update PROGOS to specify the correct executable load library name and the volume name where the library resides (as specified in installation step 2).
- Update IEASYSxx to include the PROGL6 member in the list (e.g. PROG=(00,OS,L6))

2. If your IEASYSxx PARMLIB member uses the APF= parameter:

- Edit the IEAAPFxx member and add the SAMPLIB member LNKLST60
- Update the OS/EM load library definition to specify the correct executable load library name and the volume name where the library resides (as defined in installation step 2).

Notes:

- Users may use both IEAAPFxx and PROGxx to define authorized load libraries, however there are restrictions related to dynamic authorization lists. Users should consult the MVS Initialization and Tuning Reference if you intend to use both mechanisms.

Step 9: Copy OS$START SAMPLIB Member

- Copy the member OS$START from the OS/EM SAMPLIB into a SYSPROC library that is concatenated to your TSO logon procedure.

- Modify the symbolic parameters in the **SITE SPECIFIC PARMS** block in the OS$START CLIST to match the names of the ISPF libraries that you will be using. If this is a first time install, the symbolic OLDTLIB should point to your new table library for OS/EM.

Note: The OS/EM CLIST library is shipped with LRECL=80 and RECFM=FB. Only CLIST libraries with like characteristics can be concatenated. If your CLIST libraries are RECFM=VB, it is recommended that you use the sample CLIST ICQSMC00 to copy these CLISTS to a RECFM=VB CLIST dataset. ICQSMC00 is shipped in the IBM library ICQ.ICQSAMP as a part of TSO/E.

Step 10: Add the ISPF Interface

Since you will use the ISPF interface on a regular basis, you should place an entry for the interface on an ISPF menu, preferably a menu that is not widely available to your regular ISPF users.

If you use **O** as the selection letter, the entry in the menu's)PROC section would be:

```
O,'CMD(OS$START) NOCHECK'
```

You will also need to add the following line at the end of the menu's)PROC section to allow users to go directly to an OS/EM sub-menu.

```
&NXOPT = .TRAIL
```

Step 11: Create ISPF Tables for OS/EM Version 6.0

This procedure will build the initial OS/EM PARMLIB and ISPF Table library entries for your environment:

*   Start the ISPF interface from ISPF option 6 by entering %OS$START.

*   Select **Installation Functions** (Option 1) from the OS/EM Primary Option Menu.

*   Select **Create Tables for Version 6.0** (Option 9) from the MAINTENANCE AND INSTALLATION panel.

This process may take several minutes. When complete, the OS/EM Tables and Initialization members will be initialized.

Notes:

*   For more information about this process see **Installation, Create** in the OS/EM User Guide.
*   In the event that this procedure does not complete successfully, ***do not simply re-run the Create option.*** Refer to **Installation, Create** in the OS/EM User Guide for corrective procedures.

Step 12: Upgrade OS/EM Tables to OS/EM Version 6.0 Tables

If this is a new installation, go to step 13.

The **Upgrade** function parses a Query Report of your current OS/EM environment to determine which exits and/or optional features you are using and stores that information in the OS/EM Version 6.0 PARMLIB and ISPF Table library.

Perform the following procedure to upgrade to OS/EM Version 6.0:

*   Start the **OS/EM 6.0 ISPF interface** from ISPF option 6 by entering %OS$START (or whatever CLIST name you used in installation step 11 to differentiate the CLIST from your current OS/EM environment).

*   Select **Installation Functions** (Option 1) from the OS/EM Primary Option Menu.

*   Select **Upgrade to OS/EM Version 6.0** (Option 10) from the MAINTENANCE AND INSTALLATION panel.

*   The **VERIFY UPGRADE** panel will be displayed. Perform the following:

    1. Enter **YES** next to **Execute Query Function ?** if the OS/EM 6.0 upgrade process is to migrate the current OS/EM settings by executing an OS/EM query

        OR

    2. Enter **NO** next to **Execute Query Function ?** and next to **Use this Query Report** enter the name of a dataset that contains the output of an OS/EM Query. The upgrade will migrate the OS/EM settings that are detailed in the saved report.

    3. A list of datasets that are used by the upgrade function is displayed at the bottom of the panel. Verify that the dataset names are correct before proceding. If the dataset names are incorrect

press **PF3** and correct the OS$START CLIST (or whatever name was used in installation step 11) to reference the correct datasets.

The upgrade process may take several minutes. When complete, the OS/EM settings from the current environment or the saved Query Report will be migrated to the OS/EM 6.0 tables.

Notes:

- For more information about this process see **Installation, Upgrade** in the OS/EM User Guide.
- Since the upgrade function rebuilds the initialization members, it is essential to execute this function before you IPL. Otherwise, the initialization members that the install procedure places into the OS/EM PARMLIB will be empty, and no OS/EM features or user exits will be activated.

Step 13: Enter Authorization Code for OS/EM

Users upgrading from a prior release of OS/EM should skip to Step 15 because Step 12 copies the existing authorization codes into the new tables.

- Start the **OS/EM 6.0 ISPF interface** from ISPF option 6 by entering %OS$START.

- Select **System Level Controls** (Option 1) from the OS/EM Primary Option Menu.

- Select **Authorization Codes** (Option 1) from the MAINTENANCE AND INSTALLATION panel.

- Enter the authorization code provided with the OS/EM software distribution package.

See **Authorization Code, Definition and Use** in the OS/EM User Guide for complete instructions.

Step 14: Build Initialization Member for the Authorization Code

Users upgrading from a prior release of OS/EM should skip to Step 15 because Step 12 creates the initialization member.

If you are only installing the HSM Optimizer Reports go to step 22.

- Select **Build Initialization Member** from the OS/EM Primary Menu.

- Enter a non-blank character next to the **SYSTEM** option.

See the OS/EM User Guide for complete instructions.

Step 15: JES2 EXIT Implementation

New OS/EM Users

The OS/EM AUTOINSTALL feature (new to OS/EM Version 6.0) will process the JES2 initialization parameters and automatically place the defined user exits under OS/EM control. Therefore, there is nothing that a new user must do to implement existing JES2 exits in OS/EM.

However, since OS/EM provides centralized management of all common user exits, it makes more sense to explicitly define the user exits to OS/EM. These exits can be defined to OS/EM before or after the initial IPLs with OS/EM 6.0.

The OS/EM processing rules for JES2 exits are:

- Exits that are defined in the JES2 initialization parameters will be loaded and controlled by OS/EM. The console message OS$2TP258 will be issued for each exit point that is defined and these exits will be indicated with **LOADED BY JES** in an OS/EM query.
- If the same exit point is defined to both OS/EM and the JES2 parms (and both are defined as active/enabled), only the OS/EM definition will be used. This permits users to migrate from JES2 to OS/EM exit definitions without the need to immediately modify JES2 parameters.

A suggested migration strategy from JES2 PARM definitions to OS/EM is:

1. IPL the system using the existing JES2 PARM exit definitions.

2. Rebuild the OS/EM ISPF Table Library and initialization members from the current environment:

   - From the OS/EM ISPF Main Menu select **Maintenance Functions** (Option 1)
   - Select **Rebuild OS/EM Tables from Query Function** (Option 8)
   - Press **Enter** (do not change any of the input fields). This process may take several minutes.
   - Return to the OS/EM ISPF Main Menu
   - Select **Build Initialization Member** (Option 8)
   - Place a non-blank character next to **JES2** under **BASIC EXIT FUNCTIONS**.

3. The exit definitions in the JES2 parameters will now be ignored in subsequent IPLs. The **EXIT(nnn)** and **LOADMOD** statements can be removed from the JES2 initialization parameters at the user's convenience.

If you are using the JES2 Pre-Initialization Exit (EXIT0) to control the start of the JES2 Initialization process, it must be Link Edited as a separate Load Module with a name other than **HASPXIT0**, and additional Exit Entry Points (such as EXIT19 or EXIT24, for example) should not be included. These should be assembled and Link Edited into a separate Load Module (or Modules) of their own and additionally defined to OS/EM, as appropriate.

IBM Command Conversion Routine

Beginning with OS/390 Version 2 Release 4, IBM has provided a compatibility and migration aid in the form of a user Exit 5 routine. Without OS/EM, this exit is invoked automatically if you do not specify your own Exit 5. Since OS/EM enables Exit 5 this user exit will not be automatically invoked. To ensure that this exit continues to be available, you **must** define it to the OS/EM Basic Exits Function. The module name of this exit is **HASX05C** with an entry point name of **HASX5CTR**. Because this exit is not MVS re-entrant, you will need to code KEY: 1 on the OS/EM entry panel.

Users Upgrading From Prior Versions of OS/EM

Prior versions of OS/EM required users to define OS/EM JES2 the interface module and the user exit points in the JES2 initialization parms. The OS/EM AUTOINSTALL feature (new to OS/EM Version 6.0) automatically adds the OS/EM JES2 Interface for all of the user exit points.

Users who are upgrading to OS/EM 6.0 **must remove** the OS/EM LOADMOD and EXIT(nnn) definitions from the JES2 initialization parms before IPLing with OSEM 6.0:

```
LOADMOD(OS$J2ITF) STORAGE=CSA

EXIT(001) ROUTINE=EXIT1,ENABLE,TRACE=NO
   *
   *
   *
EXIT(nnn) ROUTINE=EXITnnn,ENABLE,TRACE=NO
```

Important:

Failure to remove these definitions will cause OS/EM to attempt to dynamically define these exits during JES2 initialization. These definitions will fail (load module not found) and error messages will be issued, but JES2 and OS/EM initialization will continue normally.

Step 16: Set up PARMLIB Members

New OS/EM Users

Make the following changes to the system PARMLIB:

1. **EXIT ADD definitions in PROGxx or EXITxx members.:** These members define system exit routines. OS/EM will now load and manage these exits and so you will need to remove these definitions from PARMLIB and add them to OS/EM.

   - Start the OS/EM ISPF dialog (OS$START) and go to MVS Basic Exit Selection (2.3 from the Primary Menu) and define the user exits that are currently defined in PROGxx and/or EXITxx PARMLIB members. For more information, consult the OS/EM User's Guide.
   - If exits are defined in a **EXITxx** member, remove the **EXIT=xx** definition from the IEASYSxx member.
   - If exits are defined in a **PROGxx** member and this member contains only **EXIT ADD** definitions, remove the member suffix from the PROG= parameters in the IEASYSxx member. If the PROGxx member contains other definitions, edit the member and remove the **EXIT ADD** definitions.

Users Upgrading From Prior Versions of OS/EM

OS/EM Version 6 introduces significant architectural changes that affect how it is configured to OS/390 & z/OS.

1. **EXIT ADD definitions in PROGxx member.:** Prior versions of OS/EM required that the OS/EM exit point management modules be defined to the operating system via **EXIT ADD** control statements in a PROGxx member. OS/EM Version 6 dynamically resolves the user exit points during initialization, and so the EXIT ADD statements must be removed.

   - If the **EXIT ADD** definition statements are defined in their own PROGxx member, remove the member suffix entry from the PROG= parameter in the IEASYSxx member.
   - If the **EXIT ADD** definition statements are defined in a PROGxx member along with other control statements, edit the member and delete the **EXIT ADD** entries.

     Note: If the **EXIT ADD** statements are not removed, message CSV431I will be issued at IPL time for each entry point (Module Not Found). This will not prevent OS/EM from initializing successfully.

2. **IEAFIXxx Entries** Prior versions of OS/EM required selected modules to be loaded into the Fixed Link Pack Area (FLPA) by specifying them in IEAFIXxx members. This is no longer required and these definitions must be removed from the system initialization parameters. The entries can be removed by one of the following methods:

   - If the OS/EM entries are defined in an IEAFIXxx member along with definitions for other applications, delete the OS/EM definitions from the member.
   - If the OS/EM entries are defined its own member, remove the member suffix specification from the FIX= parameter of the IEASYSxx member. If the OS/EM member suffix is the only one specified (i.e. FIX=xx), remove the FIX= parameter from the IEASYSxx member.

3. **IEALPA60** Prior versions of OS/EM required selected modules to be loaded into the Modified Pageable Link Pack Area (MLPA) by specifying them in IEALPAxx members. This is no longer

required and these definitions must be removed from the system initialization parameters. The entries can be removed by one of the following methods:

- If the OS/EM entries are defined in an IEALPAxx member along with definitions for other applications, delete the OS/EM definitions from the member.
- If the OS/EM entries are defined its own member, remove the member suffix specification from the LPA= parameter of the IEASYSxx member. If the OS/EM member suffix is the only one specified (i.e. LPA=xx), remove the LPA= parameter from the IEASYSxx member.

Step 17: Update HSM Parmlib Member ARCCMDxx

This step may be skipped during an upgrade of OS/EM, however you should review your ARCCMDxx member to be sure all DFHSM exits are specified.

In order to activate the HSM Optimizer functions the DFHSM ARCCMDxx parm member must be updated to enable all the DFHSM exits.

```
SETSYS EXITON(AD BD BE CB CD CR ED IN MD MM)
SETSYS EXITON(MV M2 RD RP SA SD SK TD TE TV)
```

Step 18: Update SMF Parmlib Member SMFPRMxx

This step may be skipped during an upgrade of OS/EM, however you should review your SMFPRMxx member to be sure all SMF exits are enabled. The EXITS parameter should be specified on both the SYS and SUBSYS keywords, as the following example shows:

```
SYS(NOTYPE(16:19,99),EXITS(IEFACTRT,IEFUAV,IEFUJI,IEFUJP,IEFUJV,
     IEFUSI,IEFUSO,IEFUTL,IEFU29,IEFU83,IEFU84,IEFU85),
     INTERVAL(003030),NODETAIL)
SUBSYS(STC,EXITS(IEFACTRT,IEFUAV,IEFUJI,IEFUJP,IEFUJV,IEFUSI,
     IEFUSO,IEFUTL,IEFU29,IEFU83,IEFU84,IEFU85))
```

Step 19: Password Authentication (RACF users only)

This step may be skipped during an upgrade.

RACF provides three types of password authentication:

1. In-house or vendor supplied exit

2. RACF masking algorithm to perform encoding

3. RACF DES algorithm to perform authentication

Prior to RACF release 2.1 the default authentication method was the masking algorithm. Beginning with RACF release 2.1, a two-step method of checking is the default, where RACF uses both the masking algorithm and the DES algorithm.

You **must** control the type of authentication used via OS/EM if you are running RACF 2.1 or above.

- If you are using your own authentication exit, you need to define the exit to OS/EM using the ISPF Facility MVS Basic Exit Support.

- If you want to use only the masking algorithm, specify ICHDEX01 as primary user exit one using the ISPF Facility MVS Basic Exit Support. This program resides in SYS1.LINKLIB and unconditionally returns with a return code of **4**, which tells RACF to use the masking algorithm.

- If you want to use only the DES algorithm, you will need to specify your own exit as the primary user exit using the ISPF Facility MVS Basic Exit Support. This exit **must** return with a return code of **8** to force the DES algorithm to be used.

- To use the two-step method of checking, which is the default beginning with release 2.1 of RACF, nothing needs to be done as this is OS/EM's default mode of operation.

Note: For more information on using the ISPF Facility MVS Basic Exit Support, see the OS/EM User Guide. For more information regarding RACF Password Authentication, refer to the RACF System Programmer's Guide.

Step 20: IPL System

IPL the system. OS/EM will initialize with the parameters you placed in the parmlib members pointed to by the OSEM procedure.

Use the ISPF interface at any time to modify processing options and/or user exits, or to build initialization members that your installation requires.

Step 21: HSM Optimizer Reports

Refer to the OS/EM Version 6.0 Users Guide initializing and creating HSM Optimizer Reports.

Appendix A. Supported Exits

The following is a list of SMF, TSO, ISPF, JES2, JES3, RACF, Allocation and DFP exits that OS/EM currently supports. The standard support manages the loading and execution of up to three user exits, and optionally an OS/EM exit that provides the Extended support. The listed usage may not cover all the conditions the exit can handle; it is only suggestive of the common use.

Allocation Exits

IEFALLOD	Allocated/Offline Device Exit
IEFALLSW	Specific Waits Exit
IEFALLVE	Volume Enqueue Exit
IEFALLVM	Volume Mount Exit
IEFDB401	Allocation Input Validation Exit (SVC99)

Data Facility Product (DFP) Exits

IGGPRE00	DADSM Pre-processing for Allocate, Extend, Scratch, Partial Release and Rename
IGGPOST0	DADSM Post-processing for Allocate, Extend, Scratch, Partial Release and Rename

Data Facility Hierarchical Storage Manager (DFHSM) Exits

ARCADEXT	Data Set Deletion Exit
ARCBDEXT	Data Set Backup Exit
ARCBEEXT	ABARS Backup Error Exit
ARCCBEXT	Control Data Set Backup Exit
ARCCDEXT	Data Set Reblock Exit
ARCCREXT	ABARS Conflict Resolution Exit
ARCEDEXT	ABARS Expiration Date Exit
ARCINEXT	Initialization Exit
ARCMDEXT	Data Set Migration Exit
ARCMMEXT	Second-Level Migration Data Set Exit
ARCMVEXT	Space Management Volume Exit
ARCM2EXT	ABARS Migration Level 2 Data Set Exit
ARCRDEXT	Recall Exit (Not valid for SMS Managed Data Sets)
ARCRPEXT	Recall/Recover Priority Exit
ARCSAEXT	Space Management and Backup Exit
ARCSDEXT	Shutdown Exit
ARCSKEXT	ABARS Data Set Skip Exit
ARCTDEXT	Tape Data Set Exit
ARCTEEXT	Tape Ejected Exit
ARCTVEXT	Tape Volume Exit

ISPF Exits

Exit 1	ISPF initialization
Exit 2	ISPF termination
Exit 3	SELECT service start
Exit 4	SELECT service end
Exit 5	TSO command start
Exit 6	TSO command end
Exit 7	LIBDEF service
Exit 8	RESERVE
Exit 9	RELEASE
Exit 10	Logical screen start
Exit 11	Logical screen end
Exit 12	ISPF/PDF service start
Exit 13	ISPF/PDF service end
Exit 14	SWAP logical screens
Exit 15	DISPLAY service start
Exit 16	Log, list, and temporary data set allocation

Job Entry System Two (JES2) Exits

IBM supported Exit points 0-49

Exit 0	Pre-initialization
Exit 1	Print/Punch Separators
Exit 2	Job Statement Scan
Exit 3	Job Statement Accounting Field Scan
Exit 4	JCL and JES2 Control Statement Scan
Exit 5	JES2 Command Preprocessor
Exit 6	Converter/Interpreter Text Scan
Exit 7	JCT Read/Write (JES2)
Exit 8	Control Block Read/Write (User)
Exit 9	Job Output Overflow
Exit 10	$WTO Screen
Exit 11	Spool Partitioning Allocation ($TRACK)
Exit 12	Spool Partitioning Allocation ($STRAK)
Exit 13	TSO/E Interactive Data Transmission Facility Screening and Notification
Exit 14	Job Queue Work Select - $QGET
Exit 15	Output Data Set/Copy Select
Exit 16	Notify
Exit 17	BSC RJE SIGNON/SIGNOFF
Exit 18	SNA RJE SIGNON/SIGNOFF
Exit 19	Initialization Statement
Exit 20	End of Input
Exit 21	SMF Record
Exit 22	Cancel/Status
Exit 23	FSS Job Separator Page (JSPA) Processing
Exit 24	Post-initialization
Exit 25	JCT Read (FSS)
Exit 26	Termination/Resource Release
Exit 27	PCE Attach/Detach
Exit 28	Subsystem Interface (SSI) Job Termination
Exit 29	Subsystem Interface (SSI) End-of-Memory
Exit 30	Subsystem Interface (SSI) Data Set Open and RESTART
Exit 31	Subsystem Interface (SSI) Allocation
Exit 32	Subsystem Interface (SSI) Job Selection
Exit 33	Subsystem Interface (SSI) Data Set Close
Exit 34	Subsystem Interface (SSI) Data Set Unallocation

Exit 35	Subsystem Interface (SSI) End-of-Task
Exit 36	Pre-security Authorization Call
Exit 37	Post-security Authorization Call
Exit 38	TSO/E Receive Data Set Disposition
Exit 39	NJE SYSOUT Reception Data Set Disposition
Exit 40	Modifying SYSOUT Characteristics
Exit 41	Modifying Output Grouping Key Selection
Exit 42	Modifying a Notify User Message
Exit 43	Transaction Program Select/Terminate/Change
Exit 44	JES2 Converter Exit (Main Task)
Exit 45	Pre-SJF Exit Request
Exit 46	Transmitting a NJE Data Area
Exit 47	Receiving a NJE Data Area
Exit 48	Subsystem Interface (SSI) SYSOUT Data Set Unallocation
Exit 49	Job Queue Work Select

User Defined Exit points 50-255

Job Entry System Three (JES3) Exits

IBM supported Exit points

IATUX01	Reserved Name
IATUX02	Reserved Name
IATUX03	Examine of modify Converter/Interpreter Text created from JCL
IATUX04	Examine the Job Information from the JCL
IATUX05	Examine the Step Information from the JCL
IATUX06	Examine DD Statement Information from the JCL
IATUX07	Examine or Substitute Unit, Type and Volume Serial Information
IATUX08	Examine Setup Information
IATUX09	Examine Final Job Status, JST and JVT
IATUX10	Generate a Message
IATUX11	Inhibit Printing of the LOCATE Request or Response
IATUX14	Job Validation/Restart LOCATE Request or Response
IATUX15	Scan an Initialization Statement
IATUX16	Reserved Name
IATUX17	Define Set of Scheduler Elements
IATUX18	Check Input Authority Level for Consoles
IATUX19	Examine or Modify Data Temporary OSE
IATUX20	Examine or Modify Data Written on Job Header Pages
IATUX21	Create and Write Data Set Headers for Output Data Sets
IATUX22	Examine or Alter the Forms Alignment
IATUX23	Examine or Modify Data Written to Trailer Pages
IATUX24	Examine the Net-id and Devices Requested
IATUX25	Examine or Modify Volume Serial Number
IATUX26	Examine MVS Scheduler Control Blocks
IATUX27	Examine or Alter the JDAB, JCT and JMR
IATUX28	Examine the Accounting Information as Provided by the Job Statement
IATUX29	Examine the Accounting Information as Provided JCT, JDAB and JMR
IATUX30	Examine Authority Level for TSO/E Terminal Commands
IATUX31	Examine or Modify Destination or Message Text
IATUX32	Override the DYNALLDSN Initialization Statement
IATUX33	JES3 Control Statement and the JCL EXEC Statement Installation Exit
IATUX34	JCL DD Statement User Exit and the JCL EXEC Statement Installation Exit
IATUX35	Validity Check Network Commands
IATUX36	Collect Accounting Information
IATUX37	Modify the JES3 Networking Data Set Header

IATUX38	Change the SYSOUT Class for Networking Data Sets
IATUX39	Modify the Data Set Header for a SYSOUT Data Set
IATUX40	Modify Job Header
IATUX41	Determine the Disposition of Job Over JCL Limit
IATUX42	TSO/E Interactive Data Transmission Facility Screening and Notification
IATUX43	Modify Job Header Segments
IATUX44	Examine and Modify the JCL
IATUX45	Examine and Modify the Data Sent to an Output Writer FSS
IATUX46	Select Processors Eligible for Converter/Interpreter Processing
IATUX47	Reserved Name
IATUX48	Override Operator Modification of Output Data Sets
IATUX49	Override Address Selected for Converter/Interpreter Processing
IATUX50	Process User Defined BSIDMOD Codes for Converter/Interpreter
IATUX56	Authorize JES3 Commands Entered Through BDT
IATUX57	Select a Single WTO Routing Code for JES3 MGSROUTE
IATUX58	Modify Security Information Before JES3 Security Processing
IATUX59	Modify Security Information After JES3 Security Processing
IATUX60	Determine Action to take when a TSO/E User is Unable to Receive a Data Set
IATUX61	During MDS Processing, Choose Whether a Job Should be Cancelled or Sent to the Error Queue
IATUX62	Overrides the Decision to Accept a Tape or Disk Mount
IATUX66	Assigns Transmission Priority to a SNA/NJE Data Stream
IATUX67	Determines Action when Remote Data Set is Rejected by RACF
IATUX68	Modify Local NJE Job Trailers
IATUX69	Determine If a Message is to be Sent to the Jes3 Global Address Space
IATUX70	Perform Additional Message Processing
IATUX71	Modify a Tape Request Setup Message
IATUX72	Examine/Modify a Temporary OSE or an OSE Moved to Writer Queue

JES3 Exits IATUX73 - IATUX99

IATUX73 - IATUX99 are provided for future compatibility allowing for the specification of the Linkage Types:

    BALR
    ARETURN
    ARETURN with RC=

Resource Access Control Facility (RACF)

ICHCCX00	RACF password
ICHCNX00	RACF password
ICHDEX01	RACF password encryption
ICHPWX01	New Password exit
ICHRCX01	RACROUTE REQUEST=AUTH Preprocessing
ICHRCX02	RACROUTE REQUEST=AUTH Postprocessing
ICHRDX01	RACROUTE REQUEST=DEFINE Preprocessing
ICHRDX02	RACROUTE REQUEST=DEFINE Postprocessing
ICHRFX01	RACROUTE REQUEST=FASTAUTH Preprocessing
ICHRFX02	RACROUTE REQUEST=FASTAUTH Postprocessing
ICHRFX03	RACROUTE REQUEST=FASTAUTH Preprocessing
ICHRFX04	RACROUTE REQUEST=FASTAUTH Postprocessing
ICHRIX01	RACROUTE REQUEST=VERIFY Preprocessing
ICHRIX02	RACROUTE REQUEST=VERIFY Postprocessing
ICHRLX01	RACROUTE REQUEST=LIST Pre/Postprocessing
ICHRLX02	RACROUTE REQUEST=LIST Selection
IRRACX01	ACEE Compression/Decompression Exit
IRRACX02	ACEE Compression/Decompression Exit
IRREVX01	RACF Common Command Exit

System Authorization Facility (SAF) Exits

ICHRTX00	MVS Router
IRRSXT00	SAF Callable Services Router

System Management Facility (SMF) Exits

IEFACTRT	SMF Job/Step Termination Exit
IEFUJI	Job Initiation Exit
IEFUJP	Job Purge Exit
IEFUJV	Job Validation Exit
IEFUSI	Step Initiation Exit
IEFUSO	SYSOUT Limit Exit
IEFUTL	Time Limit Exit
IEFU29	SMF Dump Exit
IEFU83	SMF Record Exit
IEFU84	SMF Record Exit
IEFU85	SMF Record Exit

Time Sharing Option Extended (TSO/E) Exits

ICQAMFX1	Application Manager Function Pre-initialization
ICQAMFX2	Application Manager Function Post-termination
ICQAMPX1	Application Manager Panel Pre-display
ICQAMPX2	Application Manager Panel Post-display
IEEVSNX0	OPER SEND subcommand Initialization
IEEVSNX1	OPER SEND subcommand Pre-display
IEEVSNX2	OPER SEND subcommand Pre-save
IEEVSNX3	OPER SEND subcommand Failure
IEEVSNX4	OPER SEND subcommand Termination
IKJADINI	ALTLIB Initialization
IKJADTER	ALTLIB Termination
IKJCNXAC	CONSOLE Activation
IKJCNXCD	CONPROFS Pre-display
IKJCNXCI	CONSPROF Initialization
IKJCNXCT	CONPROFS Termination
IKJCNXDE	CONSOLE Deactivation
IKJCNXPP	CONSOLE Pre-parse
IKJCNX50	CONSOLE 80% Message Capacity
IKJCNX64	CONSOLE 100% Message Capacity
IKJCT43I	EXEC Initialization
IKJCT43T	EXEC Termination
IKJCT44B	Add Installation-written CLIST Built-in Functions
IKJCT44S	Add Installation-written CLIST Statements
IKJEESXA	LISTBC Failure
IKJEESXB	LISTBC Termination
IKJEESX0	SEND Initialization
IKJEESX1	SEND Pre-display
IKJEESX2	SEND Pre-save
IKJEESX3	SEND Failure
IKJEESX4	SEND Termination
IKJEESX5	LISTBC Initialization
IKJEESX6	LISTBC Pre-display
IKJEESX7	LISTBC Pre-list
IKJEESX8	LISTBC Pre-read
IKJEESX9	LISTBC Pre-allocate
IKJEFD21	FREE Initialization
IKJEFD22	FREE Termination

IKJEFD47	ALLOCATE Command Initialization
IKJEFD49	ALLOCATE Command Termination
IKJEFF10	SUBMIT Command
IKJEFF53	OUTPUT, STATUS and CANCEL Commands
IKJEFLD1	Logon Authorized Pre-prompt
IKJEFLD2	LOGOFF
IKJEFLD3	LOGON post-prompt
IKJEFLN1	Logon Pre-display
IKJEFLN2	Logon Post-display
IKJEFXG1	Tailor PUTGET and GETLINE processing
IKJEFY11	OUTDES Initialization
IKJEFY12	OUTDES Termination
IKJEFY60	PRINTDS Initialization
IKJEFY64	PRINTDS Termination
IKJEGASI	TESTAUTH Subcommand Initialization
IKJEGAST	TESTAUTH Subcommand Termination
IKJEGAUI	TESTAUTH Initialization
IKJEGAUT	TESTAUTH Termination
IKJEGCIE	TEST Subcommand Initialization
IKJEGCTE	TEST Subcommand Termination
IKJEGMIE	TEST Initialization
IKJEGMTE	TEST Termination
IKJPRMX1	PARMLIB Initialization
IKJPRMX2	PARMLIB Termination
INMCZ21R	TRANSMIT/RECEIVE NAMES Data Set Pre-allocation
INMRZ01R	RECEIVE Initialization
INMRZ02R	RECEIVE Termination
INMRZ04R	RECEIVE Notification
INMRZ05R	RECEIVE Acknowledgment Notification
INMRZ06R	RECEIVE Pre-acknowledgment Notification
INMRZ11R	RECEIVE Data Set Pre-processing
INMRZ12R	RECEIVE Data Set Post-processing
INMRZ13R	RECEIVE Data Set Encryption
INMRZ15R	RECEIVE Post-prompt
INMRZ21R	RECEIVE Log Data Set Pre-allocation
INMXZ01R	TRANSMIT Startup
INMXZ02R	TRANSMIT Termination
INMXZ03R	TRANSMIT Encryption
INMXZ21R	TRANSMIT Log Data Set Pre-allocation

IRXINITX	REXX Pre-environment Initialization
IRXITMV	REXX Post-environment Initialization
IRXITTS	REXX Post-environment Initialization
IRXTERMX	REXX Environment Termination

Appendix B. Define Dataset Name Groups

Dataset Name Groups are used to establish a list of dataset name masks and/or dataset names. This group name is then used in various OS/EM functions instead of specifying the same dataset names in every function.

Build groups as needed. A dataset name or mask may appear in more than one group since each OS/EM function will use Dataset Name Groups in a different way.

Create, change and delete groups by using this dialog. The panels presented allow maintenance of the list of Dataset Name Groups or masks that constitute a group, and add descriptions to groups for documentation purposes.

Refer to the OS/EM User's Guide for detailed information (see Dataset Name Groups).

Dataset name masks

Dataset name masks are created by using qualifiers within a dataset name. Valid qualifiers are:

Qualifier	Description
?	The question mark is used to unconditionally match any single character (except periods) where the question mark occurs in the specification. Multiples are allowed.
&	The ampersand is used to unconditionally match any single alpha character where the ampersand occurs in the specification. Multiples are allowed.
%	The percent sign is used to unconditionally match any single numeric character where the percent sign occurs in the specification. Multiples are allowed.
-	The minus sign is used to unconditionally match a single node of the dataset name. Multiples are allowed.
+	The plus sign is used to unconditionally match all characters/nodes of the dataset name beyond where it is entered in the specification. A single plus sign may be specified.

Examples of dataset name masks

Example	Explanation
AA	Specifies single-level dataset AAA
AA?AA	Specifies a single-level dataset name of five characters. The first and last two characters are AA. The third character can be anything: AA5AA,AABAA, etc.
AA+	Specifies any dataset name beginning with the two characters AA: AA55.TEST
AA-	Specifies a single-level dataset name beginning with the characters AA: AA5PROD

AA.+   Specifies a two or more level dataset name. The first node is AA: AA.PROD.COMP

AA.-   Specifies a two level dataset name. The first node is AA: AA.CICS

-.AA   Specifies a two level dataset name. The last node is AA: PROD.AA

SYS1.-.HRP1000
                 Specifies a three-level dataset name. The first node is SYS1

-.-.-   Specifies any three-level dataset name. This type of specification will match every three-level dataset name within your installation.

GSAX.-.PRM   Specifies a three-level dataset name. The first node is GSAX

SYS?.-   Specifies a two-level dataset name. The first node starts with SYS and any other character. The second node can be anything: SYS1.LINKLIB

SYS&.-   Specifies a two-level dataset name. The first node starts with SYS and any other alphabetic character. The second node can be anything: SYSX.LINKLIB

SYS%.-   Specifies a two-level dataset name. The first node starts with SYS and any other numeric character. The second node can be anything: SYS5.LINKLIB

SYSX.-.EZT??? Specifies a three-level dataset name. The first node is SYSX. The second node can be anything.   The third node begins with EZT and any three characters: SYSX.CICS.EZT030

??SYSUT?.+   Specifies a two or more level dataset name. The first node begins with any two characters, followed by SYSUT and any other single character.

AA.+.BB   Specifies a three or more level dataset name. The first node is AA and the last node is BB.

AA+AA   Specifies a single-level dataset name. The first two characters are AA and the last two characters are AA. The up to four middle characters can be anything. There has to be at least one middle character - AAAA will not match.

SYSX.PROCLIB
                 A fully qualified dataset name.

Appendix C. Define Volume Groups

Volume name groups are used to establish a list of DASD volumes. This group name is then used in various OS/EM functions instead of specifying the same volume serial numbers in every function.

Build groups as needed. A volume serial number may appear in more than one group since each OS/EM function will use volume serial numbers in a different way.

Create, change and delete groups by using this dialog. The panels presented allow specification of a subset of all groups to operate on, add descriptions to groups for documentation purposes, and maintain the list of volume serial numbers or masks that constitute a group.

Refer to the OS/EM User's Guide for detail information (see Volume Groups).

Volume/Jobname Masks

Volume/Jobname masks are created by using qualifiers within a volume serial number or Jobname. Valid qualifiers are:

Qualifier	Description
?	The question mark is used to unconditionally match any single character (except periods) where the question mark occurs in the specification. Multiples are allowed.
&	The ampersand is used to unconditionally match any single alpha character where the ampersand occurs in the specification. Multiples are allowed.
%	The percent sign is used to unconditionally match any single numeric character where the percent sign occurs in the specification. Multiples are allowed.
-	The dash is used to unconditionally match any preceding or succeeding character(s). Multiples are allowed.

Example   Volume Serial Number Masks

Example
Explanation

VOL0%%
Matches any serial number that begins with VOL0 and any two numeric characters: VOL010

&%%%%
Matches any serial number that begins with any alpha character and five numbers.

Example of Jobname Mask

Example
Explanation

SPJTH-
Matches any Jobname that begins with SPJTH

-SP- Matches any Jobname that contains the characters SP in any position

Appendix D. General Masking

Masks are created by using qualifiers within a volume serial number, Jobname, Program name, TSO User ID, or Terminal ID.

Qualifier	Description
?	The question mark is used to unconditionally match any single character (except periods) where the question mark occurs in the specification. Multiples are allowed.
&	The ampersand is used to unconditionally match any single alpha character where the ampersand occurs in the specification. Multiples are allowed.
%	The percent sign is used to unconditionally match any single numeric character where the percent sign occurs in the specification. Multiples are allowed.
-	The dash is used to unconditionally match any preceding or succeeding character(s). Multiples are allowed.

Example Volume Serial Number Masks

Example	Explanation
VOL0%%	Matches any serial number that begins with VOL0 and any two numeric characters: VOL010
&%%%%	Matches any serial number that begins with any alpha character and five numbers.

Example of Jobname Mask

Example	Explanation
SPJTH-	Matches any Jobname that begins with SPJTH
-SP-	Matches any Jobname that contains the characters SP in any position

Example of Terminal Mask

Example	Explanation
TSOGS%%%	Matches any Terminal ID that begins with TSOGS and three numbers

Example of Program Name Mask

Example   Explanation

DFHSIP   Matches the program name DFHSIP (CICS).

Appendix E. SMF Record Format

The SMF records written as an audit trail have the following format:

```
SMFRCD255 DSECT ,
SMF255LEN DS   BL2'0'     RECORD LENGTH
SMF255SEG DS   BL2'0'     SEGMENT DESCRIPTOR
SMF255FLG DC   BL1'0'     HEADER FLAG BYTE
SMF255RTY DC   BL1'0'     RECORD TYPE 0
SMF255TME DC   BL4'0'     TOD, USING FORMAT FROM TIME MACRO W/BIN. INTVL
SMF255DTE DC   PL4'0000'     DATE IN PACKED DECIMAL FORM: CCYYDDDF
SMF255SID DC   CL4' '     SYSTEM IDENTIFICATION
SMF255JOB DC   CL8' '     JOB NAME
SMF255SUB DC   X'0'       SUBTYPE
SMF255#SP DC   FL1'0'     LEADING SPACES
SMF255CMD DC   CL256' '   COMMAND TEXT
          ORG  SMF255CMD
SMF255WTO DC   CL256' '   WTO TEXT
          ORG  SMF255CMD
SMF255SSN DC   CL4' '     SUBSYSTEM NAME
SMF255ST3 DS   0CL45      RESOURCE ENTRIES – 1 TO MAX OF 127
SMF255RLN DC   X'0'       RESOURCE LEN  – 0 INDICATES END
SMF255RES DC   CL44' '    RESOURCE NAME – VARIABLE LEN
*
```

Refer to the **SMF Recording** section of the OS/EM User Guide for instructions on activating this option.

See member SMFPRINT in the OS/EM SAMPLIB for a job to print these SMF records.

Appendix F. JES2 Commands for Job Routing

The following are JES2 commands which control the Job Routing function. Each command is protected by RACF and the resource and command authority needed is listed at the end of the appendix.

$DB Display Backlog

This command displays information about jobs in the different JES queues.

$DC Display Conflicts

This command displays jobs that are currently unable to run on any system in the MAS complex because they have a routing to a resource that is not defined on any member of the MAS. Note that the criterion here is whether the resource is defined to a member of the MAS, not whether that member is currently active.

Command Syntax:

        $DC{,LIST | ,ALL}

With no operands, the response is a single line giving the number of jobs unable to run and the number of resources that those jobs require.

With the "LIST" parameter, the response is multiple lines giving the number of jobs that need each undefined resource, and the name of those resources.

With the "ALL" operand, the response lists each job that is unable to run as well as listing each resource that that job requires.

$DP Display Printers/Punches

The $DP command gives a simple one-line display for each printer or punch defined to JES, showing its status.

Command Syntax:

        $DP{,PUN}

Without the "PUN" operand, each printer is listed. With the "PUN" operand, each punch is listed.

$DRESOURCE
Display Resources

The $DRESOURCE command lists resources defined to the members of the MAS. These are the resources that are referenced by the /*ROUTE JECL statements and by the JOBNAME and PROGRAMNAME routing functions.

Command Syntax:

        $DRESOURCE{,ALL | ,SID}

Note: The command may be abbreviated to $DRE, but no shorter as it would then be interpreted as the standard JES2 $DR command.

With no operands, the command produces a list of those resources attached to the MAS member where it was issued. With the "ALL" operand, it lists resources for all the members of the MAS. With the "SID" operand (the system ID of a specific MAS member), it lists the resources attached to that specific member.

$LF List Forms

The $LF command lists the work that exists in the hardcopy queue, grouped by form, prmode, dest, writer, burst and select. For each unique combination of the above, the number of sysout datasets in each class is listed.

The scope of the command may be changed by entering additional selection criteria on the command.

Command Syntax:

```
$LF{,F=xxxxxxxx}              Select by FORM
   {,W=xxxxxxxx}              Select by WRITER
   {,PRMODE=xxxxxxxx}         Select by PRMODE
   {,C=xxxx}                  Select by FCB
   {,T=xxxx}                  Select by UCS
   {,J=Jnnnnn{-nnnnn} |
    ,J=Snnnnn{-nnnnn} |
    ,J=Tnnnnn{-nnnnn}}        Select by JOB/STC/TSU numbers
   {,R=xxxxxxxx{-xxxxxxxx}}   Select by Destination.  Operand is
                              NODE or NODE1-NODE2, RMT or RMT1-RMT2,
                              NODE.RMT or NODE1.RMT1-NODE2.RMT2,
                              NODE.USERID or USERID
   {,Q=x...}                  Select by SYSOUT classes
   {,LIM=nnn{-nnn}}           Select by LINE number range
   {,PLIM=nnn{-nnn}}          Select by PAGE number range
   {,D=A |,D=H}               Select ALL or HELD
   {,B=Y |,B=N}               Select by BURST=YES or BURST=NO
   {,S=Y |,S=N}               Select by SELECTABLE or NOT SELECTABLE
   {,JOBS}                    Request that DISPLAY be broken down by
                              individual JOBS
```

$LN List JOBQUEUE by NAME

This command produces a detailed list of jobs awaiting execution by jobname, showing resources, DJC holds and such.

Command Syntax:

```
            $LN{,ALL{,IND} |              Select by SYSAFF ALL
                ,ANY      |              Select by SYSAFF ANY
                ,SID      |              Select by SYSAFF to a SID
                ,IND}                    Select by independent mode
            {,V=xxxxxx}                  Select by SPOOL VOLSER
            {,AFTER=xxxxxxxx{(nnnnn)}    Select by AFTER specification
                                         JOBNAME and optional JOB NUMBER
            {,BEFORE=xxxxxxxx{(nnnnn)}   Select by BEFORE specification
                                         JOBNAME and optional JOB NUMBER
            {,WITH=xxxxxxxx{(nnnnn)}     Select by WITH specification
                                         JOBNAME and optional JOB NUMBER
            {,PRED=xxxxxxxx{(nnnnn)}     Select by PRED specification
                                         JOBNAME and optional JOB NUMBER
            {,EXCLUDE=xxxxxxx{(nnnnn)}   Select by EXCLUDE specification
                                         JOBNAME and optional JOB NUMBER
            {,CNTL=xxxxxx}               Select by CNTL resource, resource is
                                         1-44 characters, alpha, numeric,
                                         national, underscore and period.
                                         Period cannot be first or last
                                         character
            {,RES=xxxxxx}                Select by ROUTING resource
                                         Resource is 1-44 characters, alpha,
                                         numeric, national, underscore and
                                         period.  Period cannot be first or
                                         last character
            {,ROUTE=nnn{-nnn}}           Select by execution routing NODE or
                                         NODE.RMT.  No USERIDS.
            {,Q=XEQ |                    Select XEQ queue
              ,Q=CNV |                   Select CONVERT queue
              ,Q=STC |                   Select STCS
              ,Q=TSU |                   Select TSUS
              ,Q=HOLD   |                Select HELD jobs
              ,Q=READY |                 Select READY jobs
              ,Q=ACTIVE |                Select ACTIVE JOBS/STCS/TSUS
              ,Q=DJCOWN |                Select owners of DJC resources
              ,Q=DJCHOLD}                Select JOBS held for DJC
            {,C=x{-x}}                   Select by JOBCLASS range; classes
                                         may be A-Z, 0-9, * (CNV), $ (STC),
                                         or @ (TSU).
```

$LQ List JOBQUEUE

This command produces a summary list of jobs awaiting execution.

The Command Syntax is the same as the $LN command.

$QA Resource ADD command.

$QD Resource DELETE command.

These two commands allow you to ADD and DELETE resources from a MAS member.

Command Syntax:

```
        $QA | $QD                        $QA = ADD, $QD = DELETE
         ,xxxx                           Resource name (1-44 bytes)
         {,SID}                          SID where add/delete is to take place.
                                          The default is the system where the
                                          command is entered.
         {,FORCE}  (DELETE only)         Delete the resource even if the
                                          resource is currently in use by an
                                          active job on the targeted system.
```

$Q'xxx', $QJ

These commands add and delete **DEPENDENT JOB CONTROL (DJC)** conditions, routing resources and CNTL specifications for jobs already in the job queue.

Command Syntax:
```
        $Q'xxxxxxxx'                    Specify JOBNAME
        $QJnnnnn{-nnnnn}                Specify JOB number(s)
         {,HSMRETRY}                    Retry failed HRECALLs
         {,RELEASE(HSM)}                Do not hold job for HRECALLs
         {,HOLD(HSM)}                   Hold job for HRECALLs
         {,RELEASE(USERLIMIT)}          Do not hold job for user limits
         {,HOLD(USERLIMIT)}             Hold job for user limits
         {,RELEASE(PGMLIMIT)}           Do not hold job for program limits
         {,HOLD(PGMLIMIT)}              Hold job for program limits
         {,JOBROUTE=xxxxxx,NODE=nnnn} Route specified job(s) to
                                         node if JOBROUTE resource
                                         is assigned to the job
         {,RELEASE(DJC)}                Do not hold job for dependent job controls
         {,NOAFTER}                     Remove AFTER conditions
         {,NOPRED}                      Remove PRED conditions
         {,NOBEFORE}                    Remove BEFORE conditions
         {,NOWITH}                      Remove WITH conditions
         {,NOEXCLUDE}                   Remove EXCLUDE conditions
         {,NOCNTL}                      Remove all CNTL resources
         {,NOROUTE}                     Remove all ROUTING resources
         {,ADDRES=xxxx}                 Add ROUTING resource.  OBSOLETE.
                                         Use ROUTE instead.
         {,DELRES=xxxx}                 Remove ROUTING resource. OBSOLETE.
                                         Use ROUTE instead.
         {,ROUTE=({+|-}xxxx,....)}      Add or remove ROUTING resource.
                                         + (ADD) and - (DEL) are optional
                                         and default to add.  1 to 8
                                         resources may be specified.
                                         Enclosing parens are optional if
                                         only 1 resource is specified.
                                         NOTE:  A job can never have more
                                         than 8 ROUTING resources.
         {,CNTL=({+|-}xxxx{-SHR | -EXC},...)
                                         Add or remove CNTL resource.
                                         + (ADD) and - (DEL) are optional
                                         and defaults to ADD.  -SHR and
                                         -EXC are optional and default to
                                         -SHR.  Not meaningful for delete.
                                         1 to 8 CNTLs may be specified.
                                         Enclosing parens are optional if
                                         only 1 resource is specified.
                                         NOTE:  A job can never have more
                                         than 8 CNTL resources.
         {,AFTER=({+|-}xxxxx{(nnnn|wait|mult)},...)
                                         Add or Remove AFTER resource.
```

```
                              + (ADD) & - (DEL) are optional and
                              default to ADD.  JOBNUM, WAIT and
                              MULT are optional.  WAIT and MULT
                              are not valid for DELETE.  Up to 10
                              AFTER statements may be specified
                              with the constraint that a job may
                              never have more than 10 DJC entries
                              of all types combined.  The enclosing
                              parentheses are optional if only one
                              job is specified.
{,BEFORE=({+|-}xxxx{(nnnn|OK|MULT)},...)
                              Add or remove BEFORE resource.
                              + (ADD) & - (DEL) are optional and
                              default to ADD.  JOBNUM, and MULT are
                              optional.  MULT and OK are not valid
                              for DELETE.  Up to 10 BEFORE
                              statements may be specified with the
                              constraint that a job may never have
                              more than 10 DJC entries of all types
                              combined.  The enclosing parentheses
                              are optional if only one job is
                              specified.
{,EXCLUDE=({+|-}xxxx(nnnn|OK|MULT)},...)
                              Add or remove EXCLUDE resource.
                              + (ADD) & - (DEL) are optional and
                              default to ADD.  JOBNUM and MULT are
                              optional.  MULT and OK are not valid
                              for DELETE.  Up to 10 exclude
                              statements may be specified with the
                              constraint that a job may never have
                              more than 10 DJC entries of all types
                              combined.  The enclosing parentheses
                              are optional if only one job is
                              specified.
{,PRED=({+|-}xxxx{(nnnn|WAIT|MULT)},...)
                              Add or remove PRED resource.
                              + (ADD) & - (DEL) are optional and
                              default to add.  JOBNUM, WAIT and
                              MULT are optional.  WAIT and MULT
                              are not valid for DELETE.  Up to 10
                              PRED statements may be specified
                              with the constraint that a job may
                              never have more than 10 DJC entries
                              of all types combined.  The enclosing
                              parentheses are optional if only one
                              job is specified.
{,WITH=({+|-}xxxx{(nnnn|WAIT|mult)},...)
                              Add or remove WITH resource.
                              + (ADD) & - (DEL) are optional and
                              defaults to ADD.  JOBNUM, WAIT and
                              MULT are optional.  WAIT and MULT
                              are not valid for DELETE.  Up to 10
                              WITH statements may be specified
                              with the constraint that a job may
                              never have more than 10 DJC entries
                              of all types combined.  The enclosing
                              parentheses are optional if only one
                              job is specified.
```

RACF Resources and Authority Table

Command	Resource Name	Authority
$DB	jesx.DISPLAY.OSEM	READ
$DC	jesx.DISPLAY.OSEM	READ
$DP	jesx.DISPLAY.OSEM	READ
$DRESOURCE	jesx.DISPLAY.OSEM	READ
$LF	jesx.DISPLAY.OSEM	READ
$LN	jesx.DISPLAY.OSEM	READ
$LQ	jesx.DISPLAY.OSEM	READ
$QA	jesx.ADD.OSEM	CONTROL
$QD	jesx.DELETE.OSEM	CONTROL
$Q'	jesx.MODIFY.OSEM	UPDATE
$QJ	jesx.MODIFY.OSEM	UPDATE

Replace **jesx** with the name of your JES2 subsystem.

Note: All listed resources are defined to the **OPERCMDS** class.

Appendix G. JCL Statements for Job Routing

Resource Routing Control Cards

These cards provide a facility by which jobs can be routed to specific CPUs depending on the availability of a particular resource name assigned to a CPU. Resource names are user defined and specified with the $QA command. Once defined, these resource names attached to a CPU remain in effect until they are detached via the $QD command.

Resources specified can define physical I/O units which may be attached to only one CPU at a time, or possibly a software name which may only pertain to one particular CPU.

The format of the resource routing JCL statement is:

```
/*ROUTE XEQ resourcename
```

The card must follow the JOB statement.

Note: This card is not required if the optional routing rules defined with OS/EM in JES2 EXIT5 are used.

Following are some examples of using the ROUTE XEQ control card:

```
System #          Resources Attached
   1                 DUALD, IMS
   2                 3525
   3                 IMS,TSO,NOINQ
//BSPROUT JOB (,,,7552,429),'TEST RESOURCE',CLASS=A
/*ROUTE XEQ IMS
//S1 EXEC PGM=IEFBR14
```

This job will be scheduled to either system #1 or system #3 because of the IMS resource requested.

The $DC command is used to display those jobs which have used the /*ROUTE XEQ resource control card and no CPUs have that resource name attached. For example, using the above list, if a job were submitted with a '/*ROUTE XEQ SCANNER' control card, the job would never execute no matter how many initiators were available until a $QA,SCANNER command was issued on a system in the complex. This would be detectable by issuing a $DC command which would display those jobs waiting for resource names.

Other /*ROUTE control cards formats are:

```
/*ROUTE XEQ HERE
```

The resource name 'HERE' causes the job to be scheduled for execution on the CPU which read the JCL (controlling the card reader.)

Note: Do not have an initiator add the SYSAFF=* parameter to a job as this overrides OS/EM Job Routing.

/*CNTL and /*THREAD Cards

The **CNTL** and **THREAD** cards are processed identically.

This feature provides the ability to single-thread jobs through execution which need a device of which there is only one and must be used serially. Some examples would be the 3525, DUAL density drive and the OCR scanner.

By using the /*CNTL card, you can define a resource name that you need exclusive control of. If any other jobs come into the system with the same control name, they will not execute simultaneously on the same or other CPUs in the complex. This provides better control over the resources that must be used serially. This does not affect jobs running without the /*CNTL card or running in a system without shared spool.

The format for resource control is:

```
/*CNTL resourcename,EXC    or
/*CNTL resourcename,SHR    (the default is SHR)
```

Users may also protect datasets from being updated by different jobs on the same or different CPUs by using the /*CNTL card. Each /*CNTL card may have a 1 to 44 character control name and an EXC or SHR specification.

Jobs with the same control name will not execute simultaneously if one of the jobs has an EXC control specification. Jobs with SHR may execute simultaneously on any CPU.

Following are /*CNTL and /*THREAD usage examples:

```
//JOB1 JOB
/*CNTL MASTER,EXC
//JOB2 JOB
/*THREAD MASTER,SHR
```

In the above example, whichever job began execution first, would lockout the other job from beginning until it has completed.

```
//JOB1 JOB
/*CNTL MASTER,SHR
/*CNTL PINOT_NOIR,SHR
/*THREAD SYS1.LINKLIB,SHR
/*CNTL DUALDENS,SHR
/*CNTL CABERNET,SHR
//JOB2 JOB
/*CNTL MASTER
/*CNTL DUALDENS
//JOB3 JOB
/*THREAD MASTER,SHR
/*THREAD PINOT_NOIR
```

In the above example, all 3 jobs could run simultaneously as they all specify the SHR option. Up to 8 CNTL cards may be specified at one time.

After, Before, Exclude, PRED and With Control Cards

In the following syntax diagrams, the first optional parameter indicates the action to be taken if the referenced job is not in the **execute queue**, (for the /*BEFORE card, the job must also not yet be executing). If a specific job is referenced, i.e. the job number is supplied, only the **IGNORE** and **FAIL** options are

acceptable. The **IGNORE** option indicates that the card is to be treated as a comment. The **FAIL** option indicates that the job is to be failed by passing a return code of 12 back to JES2. The **OK** option indicates that the statement will apply to all jobs with the specified jobname. The **WAIT** option indicates that the job is to wait until a job with the specified jobname is read into the system.

The second optional parameter indicates what action to take if there are multiple jobs in the system with the specified jobname. This situation can never arise if a job number is specified as there can only be one job with a given job number. The options are processed the same as the first option.

Note: There may be 10 Dependent Job Control statements per job.

The purpose of these options is to override, for an individual statement, the default options set by the OS$CNTL command.

```
/*AFTER    XXXXXXXX{(NNNNN)}{,IGNORE}{,IGNORE}
                             {,FAIL  }{,FAIL  }
                             {,WAIT  }{,OK    }
                             {,       }
/*BEFORE   XXXXXXXX{(NNNNN)}{,IGNORE}{,IGNORE}
                             {,FAIL  }{,FAIL  }
                             {,OK    }{,OK    }
                             {,       }
/*EXCLUDE XXXXXXXX{(NNNNN)}{,IGNORE}{,IGNORE}
                             {,FAIL  }{,FAIL  }
                             {,OK    }{,OK    }
                             {,       }
/*PRED    XXXXXXXX{(NNNNN)}{,IGNORE}{,IGNORE}
                             {,FAIL  }{,FAIL  }
                             {,WAIT  }{,OK    }
                             {,       }
/*WITH    XXXXXXXX{(NNNNN)}{,IGNORE}{,IGNORE}
                             {,FAIL  }{,FAIL  }
                             {,WAIT  }{,OK    }
                             {,       }
```

These cards provide a means to schedule jobs before, after or with another. The control card follows the jobcard or any other JES2 control cards (ROUTE - CNTL).

Following is an example of the use of these control cards:

```
/*PRIORITY    13
//BSPTEST JOB (,,7552,429),RUSBASAN,MSGLEVEL=(1,1),CLASS=A
/*ROUTE XEQ MSS
/*AFTER BSPFIRST,WAIT
//S1 EXEC PGM=IEFBR14
/*
/*PRIORITY     2
//BSPFIRST JOB (,,7552,429),RUSBASAN,MSGLEVEL=(1,1),CLASS=A
/*ROUTE XEQ CPU2
/*CNTL DUAL,EXC
//SA EXEC PGM=IEFBR14
/*
```

In the above example, job BSPTEST would not execute until job BSPFIRST has finished execution, even though BSPTEST has a higher priority.

Appendix H. $HASP Messages for Job Routing

The following messages may be issued by the OS/EM Job Routing option:

$HASP606 INSUFFICIENT OPERANDS

    Produced by the $LN command.

$HASP608 OS/EM STATUS UNKNOWN

$HASP610 JOB(S) NOT FOUND

$HASP619 NO OUTPUT QUEUED

    Produced by the $LF command.

$HASP624 'CMD' 'JOBNAME' MULTIPLE JOBS FOUND

    Produced by a $Qx command.

$HASP646 nn PERCENT SPOOL UTILIZATION

    Produced by the $LN command.

$HASP668 NO DEVICE(S) FOUND

    Produced by the $DP command.

$HASP687 UNABLE TO OBTAIN SECURITY PRODUCT MESSAGES

$HASP690 COMMAND REJECTED - AUTHORIZATION FAILURE

$HASP900 TOO MANY|FEW OPERANDS

$HASP901 INVALID OPERAND xxxxx

$HASP905 RESOURCE IN USE. YOU MUST USE 'FORCE' TO DELETE

    Produced by the $QD command.

$HASP907 JOBNAME xxxx IS NOT SUITABLE FOR DJC

    Produced by a $Qx command.

$HASP908 NO MATCH FOUND FOR SPECIFIED RESOURCE

    Produced by the $QJ command.

$HASP921 LIST FORMS   (multiple texts)

    Produced by the $LF command.

$HASP928 DEVICE UNIT STATUS F=FORM Q=X

    Produced by the $DP command.

$HASP931 * -- JOBROUTE FAILED - ALREADY 8 ROUTES IN USE

    Produced by Exit 44, Maximum of 8 routes per job.

$HASP935 jjjj(nnn) JOBNAME SPECIFIED ON /*BEFORE STATEMENT IS INVALID. COR-RECT - RESUBMIT.

$HASP936 jjjj(nnn) JOBNAME SPECIFIED ON /*AFTER STATEMENT IS INVALID. COR-RECT - RESUBMIT.

$HASP937 jjjj(nnn) PARM SPECIFIED ON /*CNTL STATEMENT IS INVALID. CORRECT - RESUBMIT.

$HASP938 jjjj(nnn) ONLY n xxxxx STATEMENTS ALLOWED. CORRECT - RESUBMIT.

$HASP939 jjjj(nnn) JOBNAME SPECIFIED ON /*WITH STATEMENT IS INVALID. CORRECT - RESUBMIT.

$HASP940 jjjj(nnn) * -- AFTER JOBNAME = xxxx --

$HASP941 jjjj(nnn) * -- WITH JOBNAME = xxxx --

$HASP942 jjjj(nnn) * -- RESOURCE ROUTING = xxxxx --

$HASP943 jjjj(nnn) * -- CONTROL INFO = xxxxx --

$HASP944 jjjj(nnn) * -- BEFORE JOBNAME = xxxx --

$HASP945 LIST JOBQUEUE   (multiple texts)

    Produced by the $LQ/$LN commands.

$HASP946 SID - NO RESOURCES ATTACHED

    Produced by the $DRESOURCE command.

$HASP947 DISPLAY RESOURCE   (multiple texts)

    Produced by the $DRESOURCE command.

$HASP948 DISPLAY CONFLICT   (multiple texts)

    Produced by the $DC command.

$HASP949 DISPLAY BACKLOG   (multiple texts)

    Produced by the $DB command.

$HASP950 jobname(JOBnnnn) * -- JOBROUTE 999 xxxxxx = y --

    Produced when OS/EM generates an automatic route or a change to jobclass/priority, scheduling environment, service class or xeq node. Where 999 corresponds to the routing rule used to assign route xxxxx.

$HASP951 OS/EM VER n.n - JOBROUTING ACTIVE

    Shows the version of OS/EM that is active, and informs the user that the JOBROUTING function is active.

Appendix I. MVS Commands for Tape Share

The following operator commands are available to control TAPESHR functions.

In the following command formats, **dev_spec** refers to the syntax allowed for ordinary MVS vary commands, e.g. 580 or 580-581 or (580,582-588), etc.

- V dev_spec,ONTPSHR

  To vary a device onto TAPESHR control, that is to have TAPESHR assume control of varying the device online and offline as needed to fulfill the needs of the various systems.

- V dev_spec,OFFTPSHR

  To cause TAPESHR to relinquish control of a device.

- V dev_spec,OFFLINE,LOCAL

  To indicate to TAPESHR that a device is not to be used, that is brought online, on this system only. The device is still eligible for use on other systems.

- V dev_spec,ONLINE,LOCAL

  To indicate to TAPESHR that a device which was previously varied offline locally may once again be used on this system. This command must be issued on the same system as the VARY OFFLINE,LOCAL command.

- V dev_spec,OFFLINE,GLOBAL

  To indicate to TAPESHR that a device is not to be used by any system in the complex. This command may be issued on any system.

- V dev_spec,ONLINE,GLOBAL

  To indicate to TAPESHR that a device that was previously varied offline globally may now be used again. This command may be issued on any system.

- D TAPESHR

  Displays all devices defined to tapeshr and their current status (see Display Units command below for a list of status codes).

A **modify** command is available to shut down **OS$TPSHR**.

```
F OS$TPSHR,STOP {option}
```

Where {option} is:

- WAIT

  This causes TAPESHR to wait until all owned tape devices have gone offline and so may safely be used by other systems where TAPESHR is still active.

- REMOVE

The devices which do not go offline within 15 seconds will be removed from TAPESHR control and it will become the operator's responsibility to coordinate the use of those devices on the various systems. Note that if any uncontrolled device is eligible for use when a job goes into allocation re- covery, TAPESHR will not participate in device selection other than to remove all TAPESHR devices from the candidate list, thus forcing the job to use an uncontrolled device.

- GLOBALOFFLINE (Default)

  The devices which do not go offline within 15 seconds will be marked as globally offline to protect them from being allocated by another TAPESHR system. After the devices go offline on the system where TAPESHR is being terminated, the operator may issue a command to vary them back online globally to make them available to the other systems where TAPESHR is still active.

You may optionally use the **STOP** command (**P**).

```
P OS$TPSHR
```

The STOP command uses the GLOBALOFFLINE option.

The Display Units command has been enhanced to show the TAPESHR status of those devices controlled by TAPESHR. The additional data includes the system currently owning the device (or the word 'NONE'). There may also be additional characters appended to show additional information. These include:

- -A

  Indicates the device is allocated.

- -LO

  Indicates local offline.

  The -LO status can be removed by issuing a vary online,local command.

- -LO(P)

  Indicates the device is pending local offline.

- -GO

  Indicates global offline.

  The -GO status can be removed by issuing a vary online,global command.

- -GO(P)

  Indicates pending global offline.

- -EO

  Indicates error offline. Error offline indicates that an attempt was made to vary the device online and the system was unable to bring the device online for some (usually hardware) reason. This status can be cleared by re-issuing the vary online command once the problem has been resolved.

- -RST

  Indicates restricted device.

- -PND

  Indicates pending status.

- -D

  Indicates device being deleted.

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