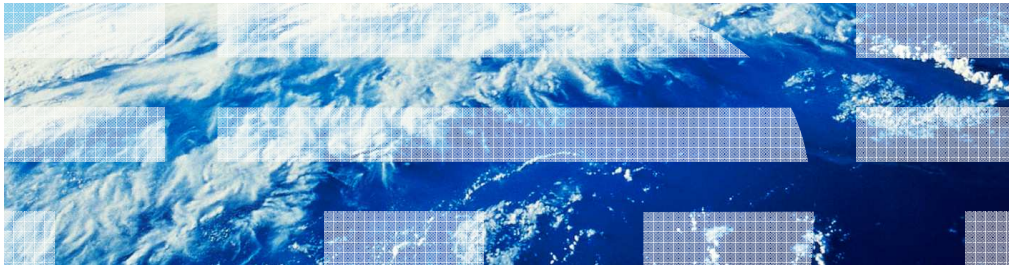


## Migrating to z/OS R13 - Part 2 of 3



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If you have never installed a ServerPac before, or it has been a long time since you have, this is the session for you. The speaker will cover the basic concepts of a ServerPac install, and go through at a high level what the tasks are. Some of the more recent important enhancements will be covered, to help you get the most out of your ServerPac install.

Grateful acknowledgement to Lucy Miller, Senior IT Architect for Customized Offerings, for providing the basis for this presentation.

## Migrating to z/OS R13 - Part 2 of 3 Agenda

- **Migration Actions for z/OS R11 and R12:**
  - General Migration Actions
  - Element-Specific Migration Actions:
    - BCP
    - Communications Server
    - DFSMS
    - Infoprint Server
    - Cryptographic Services – System SSL
    - TSO/E
- **Summary**



## Structure of *Migrating to z/OS R13* presentations



### • Session Part 1 of 3

- Content of z/OS R13: changing and withdrawn elements and functions
- Ordering and Deliverables
- z/OS Policies: coexistence support between z/OS R11, R12, and R13
- Planning for z/OS R13: system requirements for hardware and software
- Programmatic Verification of Migration Actions
- Positioning for sharing IEASYSxx, if desired



### • Session Part 2 of 3

- Content is what you just saw on the prior foil

### • Session Part 3 of 3

- Migrations actions for z/OS R13 and R12 from selected elements:
  - Distributed File Service
  - JES2 and JES3
  - Language Environment
  - z/OS UNIX
- SMP/E and ServerPac Installation Enhancements
- Some Helpful z/OS R13 Sysprog Enhancements!

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Migrating to z/OS R13 - Part 2 of 3

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## Definition of “Migration Action”:



- **Upgrading to a new z/OS release is a two step process:**
  1. **Migration:** the installation of a new version or release of a program to replace an earlier version or release.
  2. **Exploitation:** usage of new enhancements available in the new release. Not covered in this presentation.
- **After a successful migration, the applications and resources on the new system function the same way they did on the old system, if possible.**
- **Migration actions are classified as:**
  - **Required:** required for all users
  - **Required-IF:** only required in certain cases
  - **Recommended:** good to do because it 1) may be required in the future, 2) resolves performance or usability problem 3) improves migration workload.
- **Migration actions are also classified as when they may be performed:**
  - **NOW, Pre-First IPL, or Post-First IPL**



Means “don’t overlook!”



Means some programmatic assistance is available

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## Elements with Migration Actions for z/OS R13



- **Documented in z/OS V1R13 Migration (GA22-7499-19)**

- For complete migration tasks for z/OS R13, see this book!
  - **Planned: from R11 to R13, and R12 to R13, customized books on z/OS Installation and Migration webpage.**

- **From z/OS R11 to z/OS R13:**

- BCP
- Communications Server
- Crypto Services – ICSF, SSL, OCSF, and PKI
- DFSMS
  - DFSORT
- Distributed File Service – zFS
- Infoprint Server
- JES2
- JES3
- Language Environment
  - RMF
  - SDSF
  - Security Server (RACF)
  - SMP/E (covered in Part 1)
- TSO/E
  - XL C/C++
- z/OS UNIX

➤ means that some of that element's migration actions will be discussed in these presentations

▪ means that you need to look for that element's migration actions in the z/OS R13 Migration book

## General Migration Actions for z/OS R13 from z/OS R11



### • Migration Actions You Can Do NOW:

- **Verify that you have enough XCF groups in your CDS and enough XCF members in your XCF groups (Recommended)**
  - As of R13, JES2 is using new XCF groups for its spool migration enhancement. JESXCF uses one XCF for each active migration. JES2 will only use the number of XCF groups available, up to the limit of 5, for spool migrations.
  - Issue DISPLAY XCF,COUPLE and notice MAXGROUP and PEAK values.



### • Migration Actions Pre-First IPL:

- **Accommodate new address spaces (Recommended)**
  - New in R13: **GPM4CIM** for cross-platform performance management with RMF XP. You may start it with a START command.
  - Runtime Diagnostics address space, **HZR**, will be persistent. When started with the START command, it will remain active until stopped with a STOP command. To analyze the system: MODIFY HZS,ANALYZE.
  - New in R12: **ARCnRSTy** for DFSMSHsm for full-volume recovery from dump. (Data set recovery from dump still uses ARCnREST.) Perform security customization to allow new started procedures with these names.

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Migrating to z/OS R13 - Part 2 of 3

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## General Migration Actions for z/OS R13 from z/OS R11



### Migration Actions Pre-First IPL:

- **Remove references to deleted data sets and paths (Required)**
  - Removed in R13: z/OS UNIX System Services Connection Manager ds and paths, DCE ds and paths, DFS ds and paths. *Probably most important: SEUVLINK and SIOELMOD, and SEUWLPA must be removed from linklist and lplist.*
  - Removed in R12:
    - BCP: SYS1.SCUNIMG/ACUNIMG;
      - SYS1.SCUNIMG: Pre-built image CUNIDHC2 for DB2 is removed. “Unicode on Demand” obsoletes need for this pre-built image.
      - Remove SCUNIMG from the linklist and APF authorization list.
    - LE: CEE.SCEEUMAP, and paths /usr/lib/nls/locale/ucmap/IBM and /usr/lib/nls/locale/uconvtable/IBM;
    - all the msys for Setup data sets and paths.
- **Add references to new data sets and paths (Required)**
  - New in R13: RMF XP file system path: /usr/lpp/gpm/IBM.
  - New in R12: <<nothing>>
- **Set up an IPCS environment (Required)**
  - **Reminder:** You must use the IPCS level associated with the GTF data that you collect! R13 GTF data cannot be properly formatted on a pre-R13 system. Pre-R13 GTF data cannot be properly formatted on R13 system. Do not combine pre-R13 and R13 GTS data, and expect it to format on any z/OS release.

## General Migration Actions for z/OS R13 from z/OS R11



### Migration Actions Pre-First IPL:

#### Update your check customization for modified IBM Health Checker for z/OS checks (Recommended)

- Checks changed in z/OS R12 and R13:
  - **SUP\_HIPERDISPATCH** (changed default behavior on zEnterprise, and added MachTypes parm)
  - **PFA\_MESSAGE\_ARRIVAL\_RATE, PFA\_SMF\_ARRIVAL\_RATE, PFA\_ENQUEUE\_REQUEST\_RATE** (new parms, amongst others)
  - **USS\_PARMLIB** (check is case sensitive for PARM on MOUNT)
  - **XCF\_SFM\_CFSTRHANGTIME** (default changed from 300 to 900 seconds). This was a new check in z/OS R12.
  - **ZOSMIGREC\_ROOT\_FS\_SIZE** (DEBUG added)
- Checks deleted in z/OS R12 and R13:
  - **CSVTAM\_VIT\_DSPSIZE** and **CSVTAM\_VIT\_SIZE**
- **Action:** Review your changes for these checks. Remove your changes or make additional changes, as desired.



## General Migration Actions for z/OS R13 from z/OS R11



### Migration Actions Pre-First IPL:

#### **Continued...Update your check customization for modified IBM Health Checker for z/OS checks (Recommended)**

- New checks you'll see on z/OS R12 and R13:
  - ALLOC\_ALLC\_OFFLN\_POLICY, ALLOC\_SPEC\_WAIT\_POLICY, ALLOC\_TIOT\_SIZE
  - CSRES\_AUTOQ\_GLOBALTCPIPDATA, CSRES\_AUTOQ\_RESOLVEVIA, CSRES\_AUTOQ\_TIMEOUT, CSTCP\_IPMAXRT4\_*tcipstackname*, CSTCP\_IPMAXRT6\_*tcipstackname*,
  - CNZ\_Console\_Operating\_Mode, CNZ\_Syscons\_Allowcmd,,
  - DMO\_TAPE\_LIBRARY\_INIT\_ERRORS
  - GRS\_AUTHQLVL\_SETTING
  - IOS\_CAPTUCB\_PROTECT, IOS\_MIDAW, IOS\_STORAGE\_IOSBLKS
  - PFA\_SMF\_ARRIVAL\_RATE, PFA\_ENQUEUE\_REQUEST\_RATE, PFA\_JES\_SPOOL\_USAGE
  - RCF\_PCCA\_ABOVE\_16M, SUP\_LCCA\_ABOVE\_16M
  - SMS\_CDS\_REUSE\_OPTION, SMS\_CDS\_SEPARATE\_VOLUMES
  - XCF\_CDS\_MAXSYSTEM, XCF\_CF\_MEMORY\_UTILIZATION, XCF\_CF\_PROCESSORS, XCF\_CF\_STR\_POLICYSIZE, XCF\_CFRM\_MSGBASED, XCF\_SFM\_CFSTRHANGTIME
  - ...does not include new z/OS R12 and R13 Migration Health Checks...
- **Action:** Review output of new checks, and handle any exceptions found.

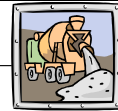
## BCP Migration Actions for z/OS R13 from z/OS R11



### Migration Actions you can do NOW:

- **Ensure at least one blank follows all major keyword statements in CONSOLxx (Required IF, as of R13)**
  - Before R13, you could specify INIT, DEFAULT, HARDCOPY or CONSOLE keyword statements without using a blank delimiter. This could have caused problems during parsing and may have resulted in unintended problems.
  - As of R13, if there is no blank, you will receive a syntax error during CONSOLxx processing. It is possible that you could only be left with the system console if all your CONSOLE statements do not end with blank delimiters.
  - Check that you have at least one blank after these four major keywords now.
- **Define more DASD storage for Predictive Failure Analysis check output (Required IF, as of R13)**
  - Before R13, PFA didn't document the additional DASD storage required for check output.
  - As of R13, zFS may cause PFA to use more storage for the check output.
  - For R13 check output, allow 300 3390 cylinders primary, 50 secondary for check output.

## BCP Migration Actions for z/OS R13 from z/OS R11




### Migration Actions Pre-First IPL:

- **Remove references to the old MTFTPS utility (Required IF, as of R13)**
  - Before R13, you might have used the Problem Documentation Upload Utility (PDUU) – packaged as MTFTPS – to send large volumes of problem data to IBM support.
  - As of R13, PDUU is part of the operating system release, with entry point AMAPDUPL (in SYS1.MIGLIB, with an alias of MTFTPS).
  - Remove the standalone version of MTFTPS, and use the provided AMAPDUPL to ship problem data to IBM support.
- **Update library lookaside (LLA) for automation (Required IF, as of R13)**
  - Before R13, if you started LLA using CSVLLAxx, then stopped and restarted LLA without a parmlib member, you would have a “no parmlib member” state, managing only linklist concatenation data sets.
  - As of R13, in the same scenario, the CSVLLAxx used to start LLA will be used. To get to the previous “no parmlib member” state, you have to specify LLA=NONE on the restart.

## BCP Migration Actions for z/OS R13 from z/OS R11




### Migration Actions Pre-First IPL:

- **Adjust CON= in IEASYSxx to accommodate default change (Required IF, as of R13)**
  - Before R13, default console operating mode was SHARED.
  - As of R13, default console operating mode is DISTRIBUTED. SHARED is intended to be removed in a future release.
  -  Examine your IEASYSxx to see if you are using the default mode for CON=. If so, notice that your console operating mode will change. If you are using SHARED, consider moving to DISTRIBUTED.
  - DISTRIBUTED mode advantages include: potentially reducing IPL times and system join times into the sysplex, allowing more MCS, SMCS, and subsystem consoles to be configured, ... and more!
- **Start Runtime Diagnostics at system initialization (Recommended, as of R13)**
  - Before R13, you started RTD each time you wanted to do an analysis. It would end after the analysis was over.
  - As of R13, you start RTD under master subsystem. RTD remains running, and when you want an analysis, you issue MODIFY HZR,ANALYZE command.
  - Use HZR procedure (shipped in SYS1.PROCLIB, PGM=HZRINIT, and not HZRMAIN as before). Specify S HZR,SUB=MSTR. When you want to do an analysis, issue the above MODIFY command.
  - PFA will now use RTD automatically in z/OS R13 for some PFA checks.

## BCP Migration Actions for z/OS R13 from z/OS R11



### Migration Actions Pre-First IPL:

- **Review the list of WTORs in parmlib member AUTOR00 (Required, as of R12)**
  -  New parmlib member AUTOR00 is shipped in the DDDEF'd PARMLIB. This should be in your parmlib concatenation. AUTOR00 in the parmlib concatenation will result in auto-reply processing being activated.
  - Examine the AUTOR00 WTOR replies, compare the replies and delay duration to your automation and make any updates into your own AUTORxx parmlib member.
    - IEASYSxx statement is `AUTOR=(xx,00)`.
    - Cannot share an IEASYSxx with `AUTOR=` on pre-R12 systems (unless you use `WARNUND!`)
    - Only using AUTOR00 does not require any IEASYSxx updates, therefore it remains sharable with pre-R12 systems.
  - You may stop the activation by specifying `AUTOR=OFF`. Do not remove AUTOR00 from the DDDEF'd PARMLIB as service or new releases may reinstall it.
  - There are accompanying commands for auto-reply processing, see *MVS Commands*. `SET AUTOR= ; D AUTOR,POLICY ; D AUTOR,WTORS ; SETAUTOR OFF ; SETAUTOR IGNORE`

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Migrating to z/OS R13 - Part 2 of 3

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# BCP Migration Actions for z/OS R13 from z/OS R11



## Migration Actions Pre-First IPL:

- Review the list of WTORs in parmlib member AUTOR00 (Required, as of R12)
  - ...continued...
  - *Appendix B in MVS Planning: Operations* contains the AUTOR00 shipped parmlib member for you to review and plan for:



```
/* *****  
/* $HASP294 WAITING FOR RESERVE (VOL volser). REPLY 'CANCEL' TO */  
/* END WAIT */  
/* Rule: 1 System Detected Problem during exec of op init action */  
Msgid(?HASP294) Delay(30S) Reply(CANCEL)  
/* *****  
/* *****  
/* IEA029D {IEASVC|ALLOC|SCHED} PARMLIB MEMBER HAS AN UNBALANCED */  
/* COMMENT. REPLY YES TO CONTINUE IPL OR NO TO RESPECIFY */  
/* {SVC|ALLOC|SCHED} PARM */  
/* Rule: 5 Allow the system to continue to IPL */  
Msgid(IEA029D) Delay(60S) Reply(YES)  
/* *****  
...  
*/
```

The question mark "?" is supported, because some messages (e.g., JES2 messages) start with an installation-specified character (not always \$). See *MVS Init and Tuning Ref* for more information.

## BCP Migration Actions for z/OS R13 from z/OS R11



### Migration Actions Pre-First IPL:

- **Change default locations for LCCA or PCCA control blocks to retain 24-bit virtual storage location (Required-IF, as of R12)**
  - Before R12: if not specified in DIAGxx, default was in 24-bit virtual storage.
  - As of R12: if not specified, default is now 31-bit virtual storage. For only one standard CP online during IPL, then the LCCA and PCCA of the IPL CPU will be 24-bit storage regardless of specification.
- **Accommodate new REUSASID default (Required-IF, as of R12)**
  - In R9-R11: DIAGxx's REUSASID default was NO
  - As of R12: REUSASID is YES.
  - Verify programs can tolerate reusable ASIDs, and have no OD3 abends.
- **Use the new 16M default buffer size (BUFSIZE) for trace options with the CTIGRSxx member (Required IF, as of R12)**
  - Before R12, IBM-supplied CTIGRS00 parmlib member would result in BUFSIZE of 128K, maximum was 16MB, and the buffer was below the line private storage.
  - As of R12, CTIGRS00 will now result in BUFSIZE of 16MB, maximum is 2047MB, and is above the bar private storage in its own memory object.
  - If you specify your own CTIGRSxx member on the CTRACE option in the GRSCNFxx parmlib member, change the BUFSIZE in your CTIGRSxx to 16MB. Or you could just use the IBM-provided CTIGRS00.

## BCP Migration Actions for z/OS R13 from z/OS R11



### Migration Actions Pre-First IPL:

- **Specify install script parameter when using Predictive Failure Analysis (PFA) (Required-IF, as of R12)**
  - Run the installation script, AIRSHREP.sh, with either *migrate* or *new* as an option.
    - *migrate* (recommended): preserves PFA history data from prior releases and creates new directories for checks previously installed on your system
    - *new*: for first time PFA users, or to start PFA with new directories for all checks.
  - /etc/PFA/ini (new usage of /etc!): contains consolidated path information, for all checks. PFA can still use individual ini files from each check directory, if you desire.
  - Fallback considerations, due to directory structure changes. Read *z/OS Problem Management*.
  - Failure to run the script, will result in new z/OS R12 PFA checks not running:
    - AIR010I PFA CHECK Check\_name WAS UNABLE TO OPEN LOG FILE, ERRNO= *errno* ERRNOJR= *errnojr* FILENAME= *path\_name*



## BCP Migration Actions for z/OS R13 from z/OS R11



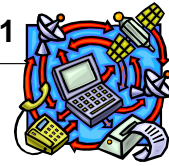
### Migration Actions Post-First IPL:

- **Set AUTHQLVL parameter in GRSCNFxx to recognize new GRS qnames (Required IF as of R13, to protect from denial-of-service attacks)**
  - As of R13, an additional list of qnames are conditionally authorized: ARCDNS, ARCBTAP, ARCGPA, ARCBACV, and ARCMIGV. You decide if you want the additional qnames recognized by setting the AUTHQLVL in GRSCNFxx.
  - Default is AUTHQLVL of 1 (same as pre-R13). AUTHQLVL of 2 means to add the additional five names to the authorized qname list and provide higher level of protection.
    - An unauthorized program issuing ENQ or DEQ requests for any of these qnames when using AUTHQLVL 2 will get ABEND338, or ABEND330. Other problems may occur when raising the default.
  - Use the new AUTHQ2 filter on the EQDQ Monitor to see if unauthorized programs running would have problems, before moving to AUTHQLVL of 2.
  - Rolling IPL is required to ensure consistency across the GRS complex. AUTHQLVL 2 can be tested on one system, but only for ENQ requests initiated on that system. Process is not complete until all systems are at AUTHQLVL 2.
  - Command SETGRS AUTHQLVL=1 can be used for fallback, but you cannot dynamically increase the AUTHQLVL from 1 to 2 with a command (IPL is required).



## Comm Server Migration Actions for z/OS R13 from z/OS R11

### Migration Actions You Can Do NOW:



- **IP Services: Define a user ID for the system resolver with an associated OMVS segment (Required IF, as of R13)**



- As of R13, the system resolver uses z/OS UNIX in the resolver address space. An OMVS segment is required, or the resolver initialization will fail, and the TCP/IP stack initialization will not be able to complete.

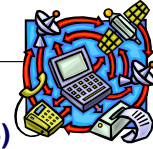
- Verify that your resolver user ID for the resolver started procedure has an OMVS segment associated with it. If you do not have a resolver user ID, you must create one that includes an OMVS segment. Sample EZARACF is provided.

- **IP Services: Ensure that the FTP user exit routine FTCHKPWD tolerates and additional parameter (Required IF, as of R13)**

- As of R13, the z/OS FTP server allows logging into FTP with a password phrase. An additional parameter describing the password or password phrase is now passed to the FTCHKPWD user exit.

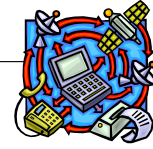
- Inspect your FTCHKPWD user exit routine. Modify as needed to tolerate an additional parameter passed to the exit, or process the password parameter.

## Comm Server Migration Actions for z/OS R13 from z/OS R11



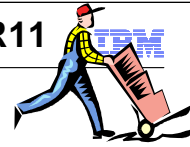
### Migration Actions Pre-First IPL:

- **IP Services: Review VIPARANGE definitions (Recomm, as of R13)**
  - Before R13, any dynamic VIPA creation request, the first matching VIPARANGE statement is used when creating a DVIPA.
  - As of R13, the most specific VIPARANGE statement match is used for creation, in PROFILE.TCPIP.
  - Update VIPARANGE definitions as needed, so creation is as intended.
- **SNA Services: Adjust to the relocation of the VTAM internal trace (VIT) table (Required IF, as of R13)**
  - As of R13, VIT table has moved from ECSA to HVCOMMON. VIT data space is eliminated. (Up to 999 pages of ECSA is now available to other applications.)
  - SIZE parm on the TRACE start option and MODIFY TRACE command is used to set the size of the VIT table . Before it was the number of pages in ECSA (e.g. SIZE=999). Now, it's the number of MB of HVCOMMON (e.g. SIZE=4M).
  - DSPSIZE was the size of the VIT data space, is now not valid. On start list: processing ignores, then continues. On MODIFY TRACE command, the entire command is ignored.
  - Follow instructions in *z/OS R13 Migration*.



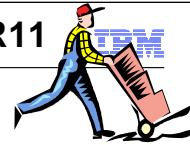
### Migration Actions Pre-First IPL:

- **SNA Services: Disable Enterprise Extender connection health verification (Required-IF, as of R12)**
  - As of R12, VTAM verifies the health of the EE connection while the connection is being activated. A probe is sent using all five ports during activation to the remote partner. If the partner is unreachable by any port for any reason, VTAM does not start the EE connection.
  - Use EEVERIFY=NEVER start option to disable this verification. This is necessary if you use fewer than five ports to start an EE connection.
- **IP Services: Ensure the TN3270 Telnet server can end automatically when OMVS shutdown is issued (Required IF, as of R12)**
  - Before R12, Telnet was active but unusable when you issued F OMVS,SHUTDOWN
  - As of R12, Telnet stops automatically when you issue F OMVS,SHUTDOWN. Ensure you are aware the Telnet server will stop when this command is issued.



### • Migration Actions You Can Do NOW:

- **Accommodate deletion of NOIMBED and NOREPLICAT LISTCAT command output (Recommended, as of R13)**
  - As of R13, the LISTCAT output will no longer display NOIMBED and NOREPLICAT attributes. This may affect any program parsing LISTCAT output.
  - If a cluster has IMBED or REPLICATE still, LISTCAT will display these attributes.
  - **Action:** programs that parse LISTCAT output should be converted to use the Catalog Search Interface (CSI).
  - **In z/OS R12!** IMBED and REPLICATE attributes will be removed automatically from VSAM data sets logically dumped using DFSMSDss and migrated using DFSMSHsm when DFSMSDss is the data mover during restore and recall processing.



### **Migration Actions You Can Do NOW:**

- **Update procedures that use IEBDSCPYP alias name (Recommended, as of R13)**
  - Before R13: IEBCOPY was APF-authorized. IEBDSCPYP was an alias of this APF-authorized IEBCOPY.
    - Programs that called IEBCOPY had to also be APF-authorized, and IEBCOPY had to be run from an APF-authorized library.
  - As of R13, IEBCOPY is no longer APF-authorized.
    - Callers of IEBCOPY no longer need to be APF-authorized, and IEBCOPY can be run from non-authorized libraries.
  - Fallback copy of pre-R13 IEBCOPY is provided in SYS1.LINKLIB, and is called IEBCOPYO. IEBDSCPYP is an alias of IEBCOPYO, and this alias may be eliminated in a future release.
  - Update any programs or procedures that use IEBDSCPYP, to use IEBCOPY.

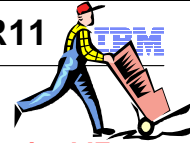
## DFSMS Migration Actions for z/OS R13 from z/OS R11



### Migration Actions Pre-First IPL:

- **Replace DFSMSHsm user-defined patch with new SETSYS FASTREPLICATION command to enable ARC1809I messages (Required-IF, as of R13)**
  - Prior to R13, a patch was required to enable/disable ARC1809I messages during fast replication volume pairing in ARCCMDxx.
  - On R13 and higher, VOLUMEPAIRMESSAGES parameter is added to the existing SETSYS FASTREPLICATION command to control issuance of the ARC1809I message.
- **Remove DFSMSHsm user-defined patch that prevents SMS MVT chain rebuild (Recommended, as of R13)**
  - Prior to R13, a patch was used to prevent SMS MVT chain rebuild at beginning of both primary space management and at interval migration, based on SMS storage group definitions.
  - As of R13, this is maintained automatically by HSM. The patch is ignored, so remove it.
- **Remove DFSMSHsm user-defined patch to disable or enable use of DFSMSdss cross-memory API (Required-IF, as of R12)**
  - Prior to R12, DFSMSHsm use of the DFSMSdss cross-memory API could be disabled or enabled with a patch specified in ARCCMDxx.
  - As of R12, the patch support has been removed. Use the SETSYS DSSXMMODE command in ARCCMDxx parmlib member instead.

## DFSMS Migration Actions for z/OS R13 from z/OS R11



### • Migration Actions Pre-First IPL:

- **Modify DFSMSdss applications to handle larger I/O buffers (Required-IF, as of R12)**
  - Prior to R12, the DFSMSdss maximum I/O buffer size for writing to and reading from a tape during DUMP, COPYDUMP, and RESTORE was 65,520 bytes.
  - As of R12, the maximum is 256K blocks.
  - If you have an application that handles I/O buffers with the DFSMSdss API or XMAPI, ensure that it handles up to the new maximum of 262,144 bytes.

### • Migration Actions Post-First IPL:

- **Use indirect zFS file system data set catalog support (Recommended, as of R12)**
  - This may help you with your migration from HFS to zFS, if you want to use indirect catalog entries for your zFS data set.
  - On z/OS R12: zFS data sets can be cataloged (ONLY zFS data sets, no other VSAM LDS). No change to existing restriction on mounting duplicate data sets.
  - Systems prior to R12 cannot process the indirect catalog entries for zFS data sets, and will fail with a volume not found error.
  - To use this support, do a physical copy of the zFS data set. See *z/OS Planning for Installation* for examples.



## Infoprint Server Migration Actions for z/OS R13 from z/OS R11

### Migration Actions You Can Do NOW:



- **Increase the space in the Printer Inventory file system**



#### **(Required, as of R12)**



- Format of the Printer Inventory files are changing from V1 to V2. V2 files will be created automatically at R12. V1 files will remain (for fallback).
- Need about 200% of the sum of the files, by default found at /var/Printsrv.

- **Remove V2 Printer Inventory files at fallback (Recommended, as of R12)**



- Upon fallback, V1 files will be used. If you start R12 again, any V2 files found will be used (if none found, V2 files will be created and formatted).
- Any changes made to V1 files while on R11 will not be reflected in the V2 files.
- V2 files have the extension "v2db". The default directory is /var/PrintSrv.

## Infoprint Server Migration Actions for z/OS R13 from z/OS R11

### Migration Actions Pre-First IPL:



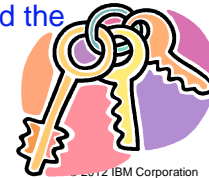
- **Update or remove the region size in the AOPSTART startup procedure (Required, as of R13)**
  - Before R13, no region size was specified on the Infoprint Server startup procedure, AOPSTART in the shipped PROCLIB , so the default for your installation was used (or you could have updated it to have one).
  - At z/OS R13, AOPSTART specifies a region size of 512 MB.
  - You need at least 256 MB if you start the Infoprint Server Transform Manager to run data stream transforms (and applies to pre-R13).
  - You need at least 200 MB if you start the Infoprint Server IPP Server to receive print requests from IPP-enabled clients (and applies to pre-R13).

### Migration Actions After First-IPL:

- **Remove V1 Printer Inventory file system after deployment of R12 or R13 (Recommended, as of R12)**
  - Once fully deployed on z/OS R12 or R13, the V1 files are no longer needed.

### Migration Actions Pre-First IPL:

- **Ensure all RACF user IDs that start SSL applications can access the CSFIQA resource of the CSFSERV class (Required-IF, as of R13)**
  - As of V1R13, System SSL uses the ICSF Query Algorithm callable service (CSFIQA) to retrieve information about the cryptographic algorithms that are available. However, if the user ID that starts the SSL application cannot access the CSFIQA resource of the CSFSERV class, System SSL will not be able to retrieve information using the CSFIQA callable service
    - You will see informational message ICH408I (which indicates insufficient authorization) may be issued to the console.
  - If you use ICSF, you should ensure that any RACF user ID that will start SSL applications can access the CSFIQA callable service.
    - This includes the SSL started task (GSKSRVR), and the **gskkyman** and **gsktrace** utilities.



## TSO/E Migration Actions for z/OS R13 from z/OS R11



### Migration Actions You Can Do Now:

- **Do not rely on TSO/E to check the syntax of passwords (Recommended, as of R11 with OA29028)**
  - Prior to OA29028, TSO/E would only allow alphanumeric or national characters (a-z, A-Z, 0-9, @, #, \$) to be entered in eight characters or less, new or existing password on the TSO/E LOGON panel.
    - If other characters were entered, an error message would display, and the user would be prompted again.
  - As of OA29028, TSO/E LOGON panel will no longer check syntax of eight chars or less passwords before passing them on to the security product for verification.
    - Only TSO/E LOGON panel is affected. Line mode LOGON still restricts to be alphanumeric or national characters, and eight characters or less.
    - The unrelated MIXEDCASE setting in RACF still has control.
    - Password phrases are not affected.
- Check in mixed sysplexes that password syntax is uniformly enforced.

## "Big Migs" for z/OS R13 from z/OS R11



### Migration Actions You Should NOT Overlook from Part 2:



1. Find replacements for removed functions and elements **(Required)**

2. Review the list of WTORs in parmlib member AUTOR00 **(Required, as of R12)**



3. Set AUTHQLVL parameter in GRSCNFxx to recognize new GRS qnames **(Required IF, as of R13)**

4. IP Services: Define a user ID for the system resolver with an associated OMVS segment **(Required IF, as of R13)**



5. Increase the space in the Printer Inventory file system **(Required, as of R12)**



6. Remove V2 Printer Inventory files at fallback **(Recommended, as of R12)**

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- **General:**
  - XCF groups, new address spaces, new and old data sets, IPCS reminder for GTF data.
- **BCP:**
  - Blanks after keywords in CONSOLxx, more DASD for PFA, remove old MTFTPS, LLA restart changes, CON=DISTRIBUTED default, start RTD, LCCA/PCCA/REUSASID DIAGxx defaults, CTIGTSxx updates, PFA install script.
- **Communications Server Migration Actions:**
  - FTP exit for password phrase, VIPARANGE definitions, VIT relocation, EE connect health verification default, TN3270 ends when OMVS shutdown.
- **DFSMS Migration Actions:**
  - LISTCAT output, new IEBCOPY, DFSMSshm ARCCMDxx patches, DFSMSdss larger I/O buffers, zFS indirect.



- **Infoprint Server:**
  - AOPSTART region is 512 MB, remove V1 files after R13 deployment.
- **Cryptographic Services - System SSL:**
  - SSL has access to CSFIQA resource in the CSFSERV class.
- **TSO/E:**
  - Don't rely on TSO/E to check  $\leq 8$  char password syntax.
- **Remember to attend Part 3 for the rest of the z/OS R13 Migration information!**





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