IMS
Version 13

Messages and Codes, Volume 4: IMS Component Codes

(December 18, 2017 edition)

GC19-4243-03

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Note
Before you use this information and the product it supports, read the information in "Notices" on page 277.

December 18, 2017 edition.

This edition applies to IMS Version 13 (program number 5635-A04), IMS Database Value Unit Edition, V13.1 (program number 5655-DSM), IMS Transaction Manager Value Unit Edition, V13.1 (program number 5655-TM2), and to all subsequent releases and modifications until otherwise indicated in new editions.

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About this information

This information provides reference information for the abend codes, messages, status codes, and return codes that are produced by IMS™.

This information provides reference information for the abend codes, messages, status codes, and return codes that are produced by IMS.

Volume 1 provides reference information for the IMS messages that have the DFS prefix, along with their associated return codes. It also provides diagnostic information that helps programmers, operators, and system-support personnel diagnose problems in IMS.

Volume 2 provides reference information for non-DFS prefixed IMS messages that are associated with IMS Base Primitive Environment (BPE); IMS Common Queue Server (CQS); IMS Common Service Layer (CSL); Database Recovery Control (DBRC) facility; IMS Connect; IBM® Resource Lock Manager (IRLM), and so on. It provides diagnostic reference information that helps programmers, operators, and system-support personnel diagnose problems in IMS.

Volume 3 provides reference information for all IMS abnormal termination (abend) codes, including analysis, explanation, possible causes, and APAR processing instructions.

Volume 4 provides return, reason, sense, function, and status codes for IMS Base Primitive Environment (BPE); IMS Common Queue Server (CQS); IMS Common Service Layer (CSL); Database Recovery Control (DBRC) facility; IMS Connect; IBM Resource Lock Manager (IRLM), and so on. It also provides diagnostic reference information that helps programmers, operators, and system-support personnel diagnose problems in IMS.

This information is available as part of IBM Knowledge Center at www.ibm.com/support/knowledgecenter.

Prerequisite knowledge

Before using this information, you should have knowledge of either IMS Database Manager (DB) or IMS Transaction Manager (TM). You should also understand basic z/OS® and IMS concepts, the IMS system for your installation, and have general knowledge of the tasks involved in project planning.

Before using this book, you should have knowledge of either IMS Database Manager (DB) or IMS Transaction Manager (TM). You should also understand basic z/OS and IMS concepts, the IMS system for your installation, and have general knowledge of the tasks involved in project planning.

You should be familiar with z/OS, its system generation, and telecommunications, and the access methods used by IMS. Related publications are listed in the Bibliography.

You can learn more about z/OS by visiting the “z/OS basic skills” topics in IBM Knowledge Center.

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You can gain an understanding of basic IMS concepts by reading *An Introduction to IMS*, an IBM Press publication.

IBM offers a wide variety of classroom and self-study courses to help you learn IMS. For a complete list of courses available, go to the IBM Skills Gateway and search for IMS.

IMS function names used in this information

In this information, the term HALDB Online Reorganization refers to the integrated HALDB Online Reorganization function that is part of IMS Version 13, unless otherwise indicated.

How new and changed information is identified

New and changed information in most IMS library PDF publications is denoted by a character (revision marker) in the left margin. The first edition (-00) of *Release Planning*, as well as the *Program Directory* and *Licensed Program Specifications*, do not include revision markers.

Revision markers follow these general conventions:

- Only technical changes are marked; style and grammatical changes are not marked.
- If part of an element, such as a paragraph, syntax diagram, list item, task step, or figure is changed, the entire element is marked with revision markers, even though only part of the element might have changed.
- If a topic is changed by more than 50%, the entire topic is marked with revision markers (so it might seem to be a new topic, even though it is not).

Revision markers do not necessarily indicate all the changes made to the information because deleted text and graphics cannot be marked with revision markers.

Accessibility features for IMS Version 13

Accessibility features help a user who has a physical disability, such as restricted mobility or limited vision, to use information technology products successfully.

Accessibility features

The following list includes the major accessibility features in z/OS products, including IMS Version 13. These features support:

- Keyboard-only operation.
- Interfaces that are commonly used by screen readers and screen magnifiers.
- Customization of display attributes such as color, contrast, and font size.

Keyboard navigation

You can access IMS Version 13 ISPF panel functions by using a keyboard or keyboard shortcut keys.

For information about navigating the IMS Version 13 ISPF panels using TSO/E or ISPF, refer to the *z/OS TSO/E Primer*, the *z/OS TSO/E User's Guide*, and the *z/OS ISPF User's Guide Volume 1*. These guides describe how to navigate each interface,

including the use of keyboard shortcuts or function keys (PF keys). Each guide includes the default settings for the PF keys and explains how to modify their functions.

Related accessibility information

Online documentation for IMS Version 13 is available in IBM Knowledge Center.

IBM and accessibility

See the *IBM Human Ability and Accessibility Center* at www.ibm.com/able for more information about the commitment that IBM has to accessibility.

How to send your comments

Your feedback is important in helping us provide the most accurate and highest quality information. If you have any comments about this or any other IMS information, you can take one of the following actions:

- Click the **Contact Us** tab at the bottom of any IBM Knowledge Center topic.
- Send an email to imspubs@us.ibm.com. Be sure to include the book title and the publication number.

To help us respond quickly and accurately, please include as much information as you can about the content you are commenting on, where we can find it, and what your suggestions for improvement might be.

Chapter 1. New, changed, and deleted messages and codes for IMS Version 13

A number of messages and codes are new, changed, or deleted in IMS Version 13.

New messages and codes for Version 13

IMS Version 13 includes new BPE, CQS, CSL, DFS, DSP, G, HWS, and XDFLD messages, as well as new abend, DL/I, AIB, and SQL codes.

New BPE messages

The following messages are new:

BPE0048E
BPE0049I
BPE0050I
BPE0051E
BPE0052E
BPE0053E
BPE0054I

New CQS messages

The following messages are new:

CQS0012I
CQS0034A
CQS0247W
CQS0248I
CQS0301I
CSL2504I
CSL3070I
CSL4115E

New CSL messages

The following messages are new:

CSL4113E
CSL4114E

New DFS messages

The following messages are new:

DFS0006E
DFS0095I
DFS0123E
DFS0904I
DFS1849E
DFS1853I
DFS1937I
DFS3187I
DFS3197I
DFS3198I

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DFS3287E
DFS3298E
DFS3417E
DFS3428W
DFS3429E
DFS3436E
DFS3437E
DFS3523W
DFS3527E
DFS3529
DFS3531E
DFS3549E
DFS3553E
DFS3555E
DFS3785E
DFS3786E
DFS3787E
DFS3788I
DFS3789I
DFS3948E
DFS3950A
DFS4408I
DFS4409A
DFS4410I
DFS4411E
DFS4412I
DFS4413E
DFS4414I
DFS4432E
DFS4433E
DFS4434I
DFS4435I
DFS4436I
DFS4437I
DFS4438E
DFS4439E
DFS4440I
DFS4441I
DFS4442I
DFS4443I
DFS4500E
DFS4518I
DFS4575E
DFS4576W
DFS4585W
DFS4586E
DFS4600E
DFS4600I
DFS4601E
DFS4601I
DFS4602E
DFS4603I
DSF4604I
DFS4605I
DFS4606I
DFS4607I

DFS4608E
DFS4610E
DFS4611E
DFS4612E
DFS4613E
DFS4614E
DFS4616E
DFS4617E
DFS4618E
DFS4619E
DFS4620E
DFS4621E
DFS4622E
DFS4623W
DFS4624I
DFS4625E
DFS4626I
DFS4627E
DFS4628I
DFS4629E
DFS4630E
DFS4634I
DFS4635I
DFS4636I
| DFS4637E
DFS4639E
DFS4640E
DFS4641E
DFS4642E
DFS4643E
DFS4644E
DFS4645W
DFS4646I
| DFS4648E
| DFS4649A
DFS4650I
DFS4651I
| DFS4652E
| DFS4660E
| DFS4661E
| DFS4662E
DFS4663E
DFS4664I
DFS4665I
DFS4666E
| DFS4667I
| DFS4668I
| DFS4669E
DFS4671I
| DFS4677E
| DFS4678E
| DFS4679E
DFS4687E
| DFS4704E
| DFS4705E
| DFS4706E

DFS4707E
DFS4708E
DFS4709E
DFS4710E
DFS4711E
DFS4720I
DFS4721I
DFS4831E
DFSIX089

New DSP messages

The following messages are new:

DSP0397E
DSP0398E
DSP0399E
DSP1074E
DSP1075E
DSP1097E
DSP1206E
DSP1249E
DSP1250E
DSP1251E
DSP1256E
DSP1262I
DSP1267E
DSP1268E

New G messages

The following messages are new:

G115

New HWS messages

The following messages are new:

HWSG4000I
HWSG4005I
HWSG4010I
HWSG4015E
HWSG4020W
HWSG4025W
HWSG4030W
HWSG4040W
HWSG4045W
HWSG4060I
HWSG4065E
HWSG4080W
HWSG4100E
HWSG4105W
HWSG4230W
HWSG4235W
HWSG4255W
HWSI1610W
HWSS0776W
HWSU3900E

HWSV4400I
HWSV4405I
HWSV4410E
HWSV4415E
HWSV4425I
HWSV4435W
HWSV4440E
HWSV4480W
HWSV4485W
HWSV4500E
HWSV4600E
HWSV4630W
HWSV4800E
HWSV4820E
HWSV4830W
HWSV4840W
HWSV5000E
HWSV5030W
HWSI1610W
HWSU3900E
HWSV4400I
HWSV4405I
HWSV4410E
HWSV4415E
HWSV4420E
HWSV4425I
HWSV4435W
HWSV4440E
HWSV4480W
HWSV4485W
HWSV4500E
HWSV4600E
HWSV4630W
HWSV4800E
HWSV4820E
HWSV4830W
HWSV4840W
HWSV5000E
HWSV5030W

New XDFLD messages

The following messages are new:

XDFLD600
XDFLD601
XDFLD602
XDFLD603
XDFLD604

New abend, DL/I, AIB, and utility codes

The following codes are new:

0055
0841
1002
1143

BPE 3404
BPE 3405
AN
BH
SF
0100/0110
OTMA 0036
Fast Path utility status codes

New SQL codes

The following codes are new:

000
+098
+100
-010
-101
-104
-117
-122
-158
-198
-199
-203
-204
-205
-206
-208
-301
-302
-303
-305
-313
-350
-404
-407
-408
-413
-420
-490
-514
-516
-517
-518
-519
-530
-531
-840
-904
-5001
-8001
-8002
-8003
-8004
-8005
-8006

-8007
-8008
-8009
-8010
-8011
-8013
-8014
-8015

Changed messages and codes for Version 13

IMS Version 13 includes changed BPE, CQS, CSL, DBD, DFS, DSP, FLD, G, HWS, and SEG messages, as well as changed abend codes and component codes.

The following messages and codes are changed. An asterisk (*) indicates that the message text is changed.

Changed BPE messages

The following messages are changed:
BPE0001E
BPE0006I
BPE0010I
BPE0014E
BPE0017I
BPE0028I
BPE0029I
BPE0037E

Changed CQS messages

The following messages are changed:
CQS0034A
CQS0300I
CQS0222E
CQS0350W
CQS0354E

Changed CSL messages

The following messages are changed:
CSL0001E
CSL0012I
CSL2501I

Changed DBD messages

The following messages are changed:
DBD760

Changed DFS messages

The following messages are changed:
DFS047A
DFS0123E
DFS0430I

DFS0488I
DFS0843I
DFS0535I
DFS550I
DFS554A
DFS686W
DFS0730I
DFS0793I
DFS0832I
DFS0842I
DFS1190I
DFS1269E
DFS1913I
DFS1919I
DFS1994I
DFS2166
DFS2205I
DFS2291I
DFS2372I
DFS2452I
DFS2473I
DFS2499W
DFS2513I
DFS2662A
DFS2679A
DFS2854A
DFS2857E
DFS2858E
DFS0962I
DFS2859I
DFS2868W
DFS2930I
DFS2991E
DFS3298E
DFS3314W
DFS3178E
DFS3347A
DFS3374W*
DFS3422X
DFS3549E
DFS3613I
DFS3678E
DFS3688I
DFS3702I
DFS3709A
DFS4342E
DFS4388W
DFS4401E*
DFS4419I*
DFS4420E
DFS4421E
DFS4424E
DFS4426I
DFS4429E
DFS4440I
DFS4441I

DFS4477E
DFS4478E
DFS4486E
DFS4494E
DFS4600I
DFS4601I
DFS4637E*
DFS4637I
DFS4662E
DFS4663E
DFS4810I

Changed DSP messages

The following messages are changed:
DSP0012I
DSP0141I
DSP0222I
DSP0224I
DSP1076I
DSP1095A

Changed FLD messages

The following messages are changed:
FLD180

Changed G messages

The following messages are changed:
G430
G449
G561

Changed HWS messages

The following messages are changed:
HWSC0001I
HWSC0114W
HWSN1940W
HWSS0714E
HWSV4425I
HWSX0905E
HWSX0907E

Changed SEGM messages

The following messages are changed:
SEGM760

Changed abend codes

The following abend codes are changed:
0029
0071
0073

0088
0107
0113
0119
0370
0587
0602
0630
0717
0757
0780
0800
0840
0979
1002
1009
1011
1021
1026
3055
3303
3305
3422

Changed component codes

The following component codes are changed:
BPEATTCH codes
BPELOAD codes
BPERDPDS codes
AIB 0108/0308
BPE 3400
BPE 3401
BPE 4095
ODBM 0010
Fast Path utility: UR
AC
BA
FM

Deleted messages and codes for Version 13

A number of messages and codes were removed from IMS in Version 13.

Deleted messages

The following messages were removed from IMS Version 13:
CSL0010E
DFS3187W
DFS3253I
DFS4147E
DFS4149W

Deleted codes

The following codes were removed from IMS Version 13:

0062

Chapter 2. IMS problem determination

IMS messages and codes problem determination is accomplished by using procedures established by IBM.

Problem determination is accomplished by using procedures for identifying a failing module or program and determining whether the user or IBM is responsible for resolution of a given problem.

Problem determination information is included, as appropriate, for all messages and codes. In most instances, one or more numbers (for example, "4,6") appear after the heading **Problem Determination** for a given message or code. These numbers are cross-references to the numbered items that appear in the following list of standard problem determination actions to be taken by the user.

1. Save the console sheet from the z/OS console.
2. Save the input associated with the job.
3. Save the SYSOUT (system output) associated with the job.
4. Save the storage memory dump at time of failure of the IMS control region, and save the memory dump of all associated message regions. (If SYS1.DUMP is used, print, and save it.)
5. Save the IMS log printout.
6. Save the IMS master terminal printout.
7. Save the local or remote terminal printout.
8. Save the JCL listings.
9. Save the ACB generation output.
10. Save the IMSGEN listing.
11. Save the SYSABEND memory dump. (If SYS1.DUMP is used, print, and save it.)
12. Save the assembly listing of any user-modified IMS modules.
13. Save the bind map.
14. Save the LOG trace.
15. Save the IMS log printout starting with the records that were written just before abnormal termination.
16. Save the output listing from the MFS Language Utility execution.
17. Collect the following problem-related data:
    a. System memory dump if running batch.
    b. If running online, print log records type X'67', sub-record type X'FF' (Pseudoabend). Use the File Select and Formatting Print program to print these records. The OPTION PRINT control statement must specify EXITR=DFSERA30.
    c. Run the DL/I test program (DFSDDLTO) with SNAP statements before and after the failing call.
    d. Save the PSB and DBD listings or statements, or both, related to the failure.
    e. Create a memory dump of log records type X'67', sub-record type X'FE' (program isolation trace). Use the File Select and Formatting print program to print the records. Program isolation trace must be enabled when the log is created. The OPTION PRINT control statement must specify EXITR=DFSERA40.

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f. If online, a snap from the log of the online region.
g. A history of the database backout, recovery, and reorganization activity.

18. Save the assembly listing for the associated DBDs.
19. Save the assembly listing for the associated PSBs.
20. Save a listing of the VSAM catalog entries for the associated data sets at the time of failure.
21. Reserved for future use
22. Reserved for future use
23. Contact IBM for hardware support.
24. Create a memory dump of the 3270 diagnostic error log records off the IMS log: Record type X'67': sub-record type X'03'.
25. Submit a copy of the IMS log.
26. Determine the CCB involved from the SPACCB field of the scratch pad area or from the CTBCCBPT field. Determine the associated (a) source and output CNT, and (b) the line and PTERM (CTB).

    Determine from log records 01, 02, 03, 07, 08, 11, 12 and 13 the status of the conversation:

    a. The message was ready, but the application was not scheduled. A 01 destination is a conversational SMB.
    b. The application was scheduled and a 08 record was produced.
    c. The application inserted a segment to a conversational terminal. If the destination of the message is CNT, 03 and 13 records are produced.
    d. The application inserted a segment to a conversational program. SPA is the first segment of a message in the 03 records.
    e. The application finished normally or terminated abnormally. The 07 record contains the completion code of a conversational application. The DLRFLAG2 area (the last word of the 07 log record) contains synchronization point information.
    f. A 12 record indicates that the conversation was terminated.
    g. Determine if 02 records, produced for the following commands, affected the terminal in conversation: /EX1, /HOLD, /REL, or /START LINE (no PTERM).
    h. Does restarting IMS affect the conversation? For details, see the input to and output logs from restart.

27. Save the z/OS hardcopy message log output.
28. Determine the status of z/OS and IRLM operating in the other system with which this system is connected during normal operations.
29. Save the IRLM address space dump generated at the time of the failure.
30. Save the memory dump of any IMS online or batch address space that failed near the time of the IRLM failure. Follow IMS problem determination procedures relative to the IMS memory dump. The IMS failure might be related to the IRLM failure.
31. Save a listing of the IRLM start procedure JCL.
32. Save a listing of the IMSGEN performed to install the IRLM.
33. Save listings of the VTAM® definitions performed to install the IRLM.
34. Save the GTF trace output, if any is available showing activity at the time of the failure.
35. Refer to the following manuals for further assistance to resolve your problem:
    - *IMS Version 13 Messages and Codes, Volume 1: DFS Messages*

- *IMS Version 13 Messages and Codes, Volume 2: Non-DFS Messages*
- *IMS Version 13 Messages and Codes, Volume 3: IMS Abend Codes*
- *IMS Version 13 Messages and Codes, Volume 4: IMS Component Codes*
- *IMS Version 13 Diagnosis*

Check all input for accuracy and analyze any memory dumps.

If you are still unable to solve your problem, contact IBM Software Support for further assistance.

36. If you are unable to solve the problem, contact IBM Software Support for assistance.
37. Submit a copy of the type X'02' log records.
38. Save the CCTL SNAP or SDUMP data set.
39. Save a listing of the DBRC RECON.
40. Take an SVC memory dump and contact IBM Software Support for further assistance.

Chapter 3. IMS system services return codes

IMS System Services can return various codes.

SVC return codes

The IMS SVC DFSVC200 routes all IMS SVC requests to the appropriate service. If a problem is encountered, it returns a code.

If an error prevents the SVC from routing the call, DFSVC200 returns one of the following codes in register 15.

1xx—SVC routing function detected an error.

Return code	Meaning
101	The module starting the SVC must be running in supervisor state
102	SVC directory block address is zero or unable to locate the directory entry for region
103	Vector table address is zero
104	Invalid function code
105	SVC routine address is zero
106	The dependent region requested an SVC located in the control region private storage.

2xx—SVC branch entry interface detected an error.

Return code	Meaning
201	Invalid function
202	The SVC directory block address is zero or unable to locate the directory entry for region
203	The vector table address is zero
204	The SVC routine address is zero

IMODULE return codes

The IMODULE SVC returns a code in register 15 in the form *ffxxnnnn*.

Table 1. Parts of register 15 code

Part	Meaning
ff	Function code is listed in parentheses next to the function name.
xx	Return code from a z/OS function. If one exists, it is described within the return codes of each function.
nnnn	The return codes, which are unique to each function, are listed under the function. All return codes are hexadecimal numbers.

IMODULE GETMAIN (01)

Return code	Meaning
00	Storage allocated.
04	Storage not allocated.
08	Parameter error.

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14 ONLY31=YES coded and no 31-bit storage available.
30 TRACK=STE coded and unable to build STE to track. Byte 1 (second byte) of the RC contains the RC from DFSMODU1.
38 Caller in SRB or XM mode.

IMODULE LOAD (02)

Return code
Meaning
00 Module loaded
04 Module not found
08 DFSMODU0 allocation error
0C BLDL/FETCH allocation error

Refer to *Data Administration: Macro Instruction Reference for MVS/DFP.*
10 BLDL/FETCH I/O error
14 FETCH invalid record type
18 FETCH invalid address
1C FETCH program check
20 BLDL/FETCH undefined error
24 DCB not open for BLDL
28 Authorized caller, but module was found in an unauthorized library
2C Alias names not copied to library
38 Caller in SRB or XM mode, or task mode without an SVRB

IMODULE LOCATE (03)

Return code
Meaning
0 Storage/module located successfully
04 Storage/module not found
08 Parameter error
38 Caller in SRB or XM mode

IMODULE DELETE (04)

Return code
Meaning
00 Storage/module released successfully
04 Storage/module not found
08 Parameter error
0C Storage not released (the "xx" location contains the FREEMAIN return code)
38 Caller in SRB or XM mode

IMODULE DIRLOAD (05)

Return code
Meaning
00 Module loaded
08 DFSMODU0 allocation error
0C FETCH allocation error Insufficient storage available in SP 226, SP 230, or SP 255
10 FETCH I/O error
14 FETCH invalid record type
18 FETCH invalid address
1C FETCH program check
20 FETCH undefined error

38 Caller in SRB or XM mode, or task mode without an SVRB

IMODULE GETSTOR (06)

Return code	Meaning
00	Storage allocated
04	Storage not allocated
08	Parameter error
10	SCD unavailable for global request

IMODULE FREESTOR (07)

Return code	Meaning
00	Storage released successfully
04	Storage not released (the "xx" location contains the FREEMAIN return code)
08	Parameter error
0C	Unable to locate SDE (global storage not released)
10	SCD unavailable for global request

Other IMODULE Return Codes

Return code	Meaning
3C	DFSMODU0 unable to obtain internal work area
40	Invalid function request

IMSAUTH return codes

The IMSAUTH supervisor call (SVC) returns a code in register 15 in form *ffnnnnnn.*

Function code *ff* is listed in parentheses next to the function name. The return codes *nnnnnn*, which are unique to each function, are listed under the function. All codes are hexadecimal numbers.

IMSAUTH PGFIX (04)

Return code	Meaning
00	Storage successfully page fixed/page freed
04	One or more entries in error
08	One or more list prefixes in error
0C	Address validity check error
10	List alignment error

IMSAUTH PGFREE (08)

Return code	Meaning
00	Storage successfully page fixed/page freed
04	One or more entries in error
08	One or more list prefixes in error
0C	Address validity check error
10	List alignment error

IMSAUTH BATALLOC (0C)

Return code from DFSMDA00

IMSAUTH SETABND (10)

This function does not issue any unique return codes.

IMSAUTH RSETABND (14)

Return Code	Meaning
14	Invalid function

IMSAUTH RSETAUTH (18)

Return Code	Meaning
00	Request successful
04	Caller not authorized

IMSAUTH NOSWAP (1C)

This function does not issue any unique return codes.

IMSAUTH SETAUTH (20)

Return Code	Meaning
00	Request successful
04	Caller not authorized

IMSAUTH DELSSCT (28)

Return Code	Meaning
00	SSCT deleted successfully
04	SSCT not found
0C	Caller not authorized

IMSAUTH BLDMTMWH (2C)

Return code	Meaning
00	MTMWQHDR built successfully
04	MTMWQHDR exists for another IMS
08	MTMWQHDR exists for caller
0C	Caller not authorized
10	GETMAIN failed for MTMWQHDR in SP 245
1C	SSCT not found

IMSAUTH DELMTMWH (30)

Return code	Meaning
00	MTMWQHDR disconnected
04	MTMWQHDR and blocks disconnected and freed
08	MTMWQHDR not found
0C	Caller not authorized
10	FREEMAIN failed for MTMWQHDR in subpool 245
1C	SSCT not found

IMSAUTH SSCTSCD (34)

Return code	Meaning
00	SCD address stored successfully
0C	Caller not authorized
1C	SSCT not found

IMSAUTH IEBCOPY (38)

Return code	Meaning
00	Link to IEBCOPY completed successfully
0C	Function could not link to IEBCOPY
Other	IEBCOPY return code

IMSAUTH SWAP (3C)

Return code	Meaning
00	Request Successful
04	Request is not for current address space
08	Request not authorized

IMSAUTH LOCSSCT (40)

Return code	Meaning
00	SSCT located successfully
04	SSCT not found

IMSAUTH ADDPCB (44)

Return code	Meaning
00	Function completed successfully
08	GSAM PCB not added to DIRCA

IMSAUTH BLDSSCT (48)

Return code	Meaning
00	SSCT successfully built
0C	Caller not authorized
10	GETMAIN failed for SSCT in subpool 245
18	Unable to load module DFSRTMI0
20	Unable to establish a resource cleanup environment for IMS

IMSAUTH INITSSVT (4C)

Return code	Meaning
00	Request successful
04	SSCT not found
0C	Caller not authorized

IMSAUTH TERMSSVT (50)

Return code	Meaning
00	Request successful
04	SSCT not found
0C	Caller not authorized

IMSAUTH BLDIRLM (54)

Return code	Meaning
00	Request successful
04	IRLM not active
08	IMODULE GETMAIN / GETMAIN failed

1C SSCT not found

IMSAUTH CHKSSCT (58)

Return code	Meaning
00	Subsystem enabled
04	Subsystem disabled
08	SSCT name specified is zero

IMSAUTH VECTADDR (5C)

Return code	Meaning
00	Function completed successfully
04	Caller not authorized

IMSAUTH SSCTIRLM (60)

Return code	Meaning
00	Request successful
04	Caller not authorized
1C	SSCT not found

IMSAUTH RSETIRLM (64)

Return code	Meaning
00	Request successful
04	Caller not authorized
1C	SSCT not found

IMSAUTH UAMBSUBP (68)

Return code	Meaning
00	Function completed successfully
04	Invalid function request or GETMAIN error
Other	VSAM Extended Interface (XVI) function return code

IMSAUTH BDUSRSSI (6C)

Return code	Meaning
00	SSCT successfully built
08	Parameter list invalid
0C	Caller not authorized
10	GETMAIN failed for SSCT or SSVT in subpool 245

IMSAUTH BDSSIBLK (70)

Return code	Meaning
00	Block successfully copied and connected to SSCT
04	SSCT not found
08	Parameter list invalid
0C	Caller not authorized
10	GETMAIN failed for block in subpool 231.

IMSAUTH RSRINIT (74)

Return code	Meaning

| **00** Function completed successfully
| **04** Storage allocation failed
| **08** Validation failure, caller not authorized
| **0C** Validation failure, SSCT not found
| **10** Open data set (RESLIB) failure
| **14** IMODULE LOAD failure for DFSLLRN0/DFSFTFX0
| **18** Close data set (RESLIB) failure

IMSAUTH T0COPY (78)

| **Return code** | **Meaning**
| **00** Function completed successfully
| **04** More than one non-MVS TCB present
| **08** User interface module (UIM) provided but no user area
| **0C** Non-zero return code from DFSMS
| **10** Open data set (RESLIB) failure
| **18** Close data set (RESLIB) failure

IMSAUTH CALLRTM (7C)

This function does not issue any unique return codes.

IMSAUTH SWITCH_AUTH_CONTEXT (80)

| **00** Request completed successfully
| *Other* Return code from STORAGE request or return code from CTXSWCH service

IMSAUTH WLM_PBPOOL (84)

| **Return code** | **Meaning**
| **04** Caller is not under the TCB that issued IDENTIFY.
| **08** Dependent Region Directory block not located.
| **0C** Region IDENTIFY block not found.
| **10** Call made from unsupported region type.
| **14** Invalid function request.
| **20** Create caller is not authorized
| **24** Second Create PB Pool is not allowed.
| **28** Failed to get storage for DFSWLMPP block.
| **2C** WLM Get PB blocks failed for CREATE request.
| **40** No PB Pool block was located for ADD request.
| **44** ADD request not issued from the same TCB as CREATE.
| **48** Failed to get storage for ADD PBs request.
| **4C** WLM Get PB blocks failed for ADD request.
| **60** DELETE caller is not authorized.

Other IMSAUTH return codes

| **Return code** | **Meaning**
| **14** Invalid function

DFSBCB return codes

DFSBCB is a storage manager service which manages storage in specific storage pools, referred to as CBT pools, by using the GET and RELEASE functions.

After returning from DFSBCB, register 15 contains the return code in the form *xxxxyyyy*. The low 16 bits, *yyyy*, contain the return code from DFSBCB. The high 16 bits, *xxxx*, might contain qualifying information. All return codes from DFSBCB requests are hexadecimal numbers.

Return code
Meaning

04 All requested level 1 blocks were not available.

08 No existing storage was available for the request. IMODULE GETMAIN failed while attempting to obtain a new IPAGE. The IMODULE GETMAIN return code is *xxxx*.

0C IMODULE GETMAIN failed for a BCB IPAGE element. The IMODULE GETMAIN return code is *xxxx*.

10 A RELease request was passed an invalid block address. The reason code is *xxxx*.
- **0** Address is 0 or less than 0
- **4** Block is not the type specified.
- **8** Block was not allocated.

14 A GET or RELease request was passed zero or a negative number for the number of blocks.

18 DFSBCB00 had to get another IPAGE of storage for the requested block, but the pool could not be expanded by batch.

1C A BCB queue element was needed for register storage, an AWE, or a latch control area for non-ITASK latching, but there were no free BCBQEs. IMODULE GETMAIN failed while attempting to get a new BCBQE IPAGE. The IMODULE GETMAIN return code is *xxxx*.

20 A GET request was received for an SRBC block, but the common SRB pool was empty.

28 A new BCB IPAGE was unable to be obtained because the IPAGE page formatter was unable to successfully format the IPAGE. The page formatter return code is in the high halfword of the return code (*xxxx*).

2c A new BCB IPAGE was unable to be obtained because the storage for the requested BCB block was required to be page-fixed, and the page-fix service failed. The page fix service return code is in the high halfword of the return code (*xxxx*).

30 A new BCB IPAGE was unable to be obtained; the IPAGE get module, DFSSTM00, returned an unexpected return code. The return code from a failing lower-level service (if any) is placed in the high halfword of the return code (*xxxx*).

DFSPOOL macro return codes

The IMS storage pool manager is called by various internal modules to provide storage management services. The DFSPOOL macro is provided as an interface to the storage pool. DFSPOOL returns all of the return codes in register 15. All return codes are hexadecimal numbers.

After returning from a DFSPOOL GET request, register 15 contains the return code in the form *xxxxyyyy*. The low 16 bits, *yyyy*, contain the return code from DFSPOOL. The high 16 bits, *xxxx*, contain the IMODULE return code if an IMODULE error was detected.

DFSPOOL ALLOC

The ALLOC function allows the caller to allocate one or more predefined IMS storage pools.

Return code
Meaning

00 The storage pool was successfully allocated.
04 The pool was ignored; PALCNULL ('FF') was set.
08 A duplicate pool name was passed. The pool name exists in the hash table.
0C Allocation for the requested pool is already in progress.
10 One or more primary blocks could not be allocated.
20 A pool definition for the requested pool was not found in DFSSPM10.
24 IMODULE GETMAIN failed while attempting to allocate the pool header.
28 The size specified for the variable pool is zero.
2C IMODULE GETMAIN failed while attempting to allocate the variable pool.
30 IMODULE GETMAIN failed while attempting to allocate FAQE storage.
34 The accumulated size of the primary blocks to be allocated exceeds the maximum storage available to the pool.
44 IMODULE GETMAIN failed while attempting to allocate a work area.
A0 An invalid function code was passed to the storage manager.

Note: For return codes less than X'20', a pool header was allocated and buffers can be obtained from the pool. For return codes X'20' or greater, one or more pools could not be allocated.

DFSPOOL GET

The GET function allows the caller to obtain a buffer from one of the previously allocated storage pools.

Return code
Meaning

00 The buffer was successfully allocated.
04 The upper limit for the pool would have been exceeded if the request had been satisfied. Since the caller specified WAIT=NO, the storage manager returned immediately to the caller. The buffer was not allocated.
08 The upper limit for the pool would have been exceeded if the request had been satisfied. Since the caller specified WAIT=YES, the storage manager allowed the caller to wait and make additional attempts for storage. However, the caller waited for the maximum time, and the storage was still unavailable. The buffer was not allocated.
0C IMODULE GETSTOR failed while attempting to obtain a new block of storage. The return code contains the IMODULE return code in high two bytes and the storage manager return code in low two bytes.
20 The storage pool resides in private storage, but the caller is not running in the same address space.
28 Buffer request cannot be satisfied. Request size exceeds available storage.
24 The buffer request size was equal to or less than zero.
A0 An invalid function code was passed to the storage manager.
A4 An invalid pool name was passed to the storage manager.

DFSPOOL REL

The REL function allows the caller to return a buffer to an existing storage pool.

Return code	Meaning
00	The buffer was successfully released.
A0	An invalid function code was passed to the storage manager.
A4	An invalid pool name was passed to the storage manager.

Chapter 4. IMS return and function codes

IMS can issue various return codes and function codes.

Buffer handler return codes

Buffer handler return codes consist of a symbolic name, instruction, value, and meaning.

The following table contains the possible buffer handler return codes.

Table 2. Buffer handler return codes

Symbolic name	Instruction	Value or equated value	Meaning
PSTRTCDE	DC	1XL1'00'	Status of call
PSTCLOK	EQU	X'00'	Everything satisfactory
PSTGTDS	EQU	X'04'	Relative block number (RBN) beyond data set
PSTRDERR	EQU	X'08'	Permanent read error
PSTNOSPC	EQU	X'0C'	No more space in data set
PSTBDCAL	EQU	X'10'	Illegal call
PSTENDDA	EQU	X'14''	End of data set encountered *no record returned
PSTNOTFD	EQU	X'18'	Requested record cannot be found
PSTNWBLK	EQU	X'1C'	New block created in buffer pool
PSTNPLSP	EQU	X'20'	Insufficient space in pool
PSTTRMNT	EQU	X'24'	User must terminate. No space in pool
PSTDUPLR	EQU	X'28'	Logical record already in key sequenced data set (KSDS)
PSTWRERR	EQU	X'2C'	Permanent write error
PSTBUFIN	EQU	X'30'	Buffer invalidated
PSTBIDIN	EQU	X'34'	Unable to acquire BID/B
PSTPDERR	EQU	X'38'	Unable to locate DDIR/PDIR entry
PSTNOSTO	EQU	X'3C'	Storage not available

Return and function codes associated with the external subsystem support

Various conditions detected in the external subsystem support issues combinations of return codes (RC) and function codes (FC).

With the function code, the user can determine the IMS module name. The (RC) indicates the problem encountered by the module. Corrective action can then be taken, or, if help is required, contact your IBM support center.

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The question marks (??) in categories A, D, and E are substitutions for unsupported return codes received by the listed module. The description indicates the functional area that returned the unsupported return code (that is, an external subsystem exit).

For categories A and E, the question marks (??) represent return codes received from the IMS internal functions (that is, IMODULE).

For return codes not listed in Category C, see Chapter 3, "IMS system services return codes," on page 17 to resolve the code and determine the problem.

Category A - conditions detected by IMS modules that invoke external subsystem exits

IMS modules that invoke external subsystem exits issue codes to identify status or problems.

Table 3. Conditions detected by IMS modules that invoke external subsystem exits.

Function code	Return code	Module or ID	Description
X'0000'		DFSESD30	ERROR CODE
	X'20'		In the case of an ESS sub-function code or zero, abend 3049 is issued.
X'0005'		DFSESSO0	SIGNON
	X'??'		sign-on was unsuccessful. The external subsystem returned an unsupported return code.
	X'FF'		The required external subsystem sign-on exit is missing.
	X'FE'		The parameter list passed to DFSESS00, contained an invalid function code.
X'0006'		DFSESD50	SIGNOFF
	X'??'		Sign-off was unsuccessful. The external subsystem returned an unsupported return code.
	X'FF'		The required external subsystem sign-off exit is missing.
X'0007'		DFSESCT0	CREATE THREAD
	X'??'		CREATE THREAD was unsuccessful. The external subsystem returned an unsupported return code.
	X'FF'		The required external subsystem CREATE THREAD exit is missing.
	X'FE'		The parameter list passed to DFSESCT0, contained an invalid function code.
	X'FD'		The parameter list passed to DFSESCT0, contained an invalid parameter count.
X'0008'		DFSESD50	TERMINATE THREAD
	X'??'		TERMINATE THREAD was unsuccessful. The external subsystem returned an unsupported return code.
	X'FF'		The required external subsystem terminate thread exit is missing.
	X'FE'		The parameter list passed to DFSESD50, contained an invalid function code.

Table 3. Conditions detected by IMS modules that invoke external subsystem exits (continued).

Function code	Return code	Module or ID	Description
X'0009'		DFSESD50	TERMINATE IDENTIFY
	X'??'		TERMINATE IDENTIFY was unsuccessful. The external subsystem returned an unsupported return code.
	X'FF'		The required external subsystem TERMINATE IDENTIFY exit is missing.
X'000D'		DFSESAB0	ABORT AND CONTINUE
	X'??'		Abort and continue was unsuccessful. The external subsystem returned an unsupported return code.
	X'FF'		The required external subsystem abort and continue exit is missing.
X'000E'		DFSESP10	COMMIT PREPARE
	X'??'		COMMIT PREPARE was unsuccessful. The external subsystem returned an unsupported return code.
	X'FF'		The required external subsystem COMMIT PREPARE exit is missing.
X'000F'		DFSESP20	COMMIT CONTINUE
	X'??'		COMMIT PREPARE was unsuccessful. The external subsystem returned an unsupported return code.
	X'FF'		The required external subsystem commit prepare exit is missing.
X'0013'		DFSESD70	INITIALIZATION PHASE 1
	X'04'		Unable to IMODULE GETMAIN a work area.
	X'08'		Unable to IMODULE load DFSESI40. Probable DFSESL DD statement error.
	X'0C'		DFSESI40 or DFSESP10 failed in the loading of the external subsystem storage or modules.
	X'10'		Unable to open the library referenced by the DFSESL DD statement.
	X'??'	Resource ID 'IMOD-GM '	IMODULE GETMAIN failed. Refer to IMODULE return codes (Messages and Codes).
	X'??'	Resource ID 'IMOD-LD '	IMODULE load failed. Refer to IMODULE return codes (Messages and Codes).
	X'0C'	Resource ID 'DFSESL '	Unable to open the library referenced by the DFSESL DD statement.
	X'??'	Resource ID "DFSESI40"	DFSESI40 or DFSESP10 failed in the loading of the external subsystem storage or modules. The return code is returned by DFSESI40.
X'0014'		DFSESD80	INITIALIZATION PHASE 2
	X'??'		Initialization was unsuccessful. The external subsystem returned an unsupported return code.

Table 3. Conditions detected by IMS modules that invoke external subsystem exits (continued).

Function code	Return code	Module or ID	Description
X'0017'		DFSESS10	External Subsystem Startup Service
	X'04'		The external subsystem is not available at this time. A notify message was queued to the external subsystem.
	X'08'		The external subsystem is not available at this time. IMS is either waiting for the external subsystem notify message or subsystem connection (identify processing) is in progress and has not yet completed.
	X'0C'		The identify failed for either the global or local connection.
	X'10'		IMS is terminating either normally or abnormally.
	X'14'		The external subsystem is terminating.
	X'18'		External subsystem initialization exit indicated IMS should never identify due to a failure encountered by exit.
	X'1C'		DFSESS10 was unable to locate a required resource. When the resource is the external subsystem identify exit, a DFS3608 message is issued. For other resources, a DFS3620 message is issued.
	X'20'		The parameter list passed to DFSESS10 contained an invalid function code.
	X'24'		The external subsystem termination service was called to disconnect the external subsystem from IMS.
	X'28'		The external subsystem connection has been stopped or a stop is in progress.
X'0020'		DFSESD90	TRACE CALL
	X'0C'		The DFSTRACE macro could not provide a trace entry upon request.
	X'10'		Unable to obtain a quick save area using DFSBCB macro.
	X'14'		The storage address passed to DFSESD90 was invalid.
	X'20'		The parameter list passed to DFSESD90 contained an invalid function code.
X'0022'		DFSESD31	NON-MESSAGE DRIVEN ROLB FUNCTION
	X'20'		The parameter list passed to DFSESD31 contained an invalid function code.

Related information:

3049 (Messages and Codes)

Category B - conditions detected by external subsystem exits

External subsystem exits issue codes to report status or problems.

Table 4. Conditions detected by external subsystem exits.

Function code	Return code	Description
X'0200'		EXTERNAL SUBSYSTEM RESOLVE-IN-DOUBT DETECTING MODULE: EXTERNAL SUBSYSTEM RESOLVE-IN-DOUBT EXIT.
	X'20'	Resolve-in-doubt was unsuccessful. The external subsystem supplied exit encountered an invalid condition while processing the request. Such conditions include invalid save areas, protocol violations, invalid work areas, invalid parameter lists, and so on.
X'0201'		EXTERNAL SUBSYSTEM TERMINATION. DETECTING MODULE: EXTERNAL SUBSYSTEM TERMINATION EXIT.
	X'08'	Subsystem termination was unsuccessful. The external subsystem encountered a failure in the processing of the termination notification. IMS continues termination processing and honor future connection request.
	X'20'	Subsystem termination was unsuccessful. The external subsystem supplied exit encountered an invalid condition while processing the request. Such conditions include invalid save areas, protocol violations, invalid work areas, invalid parameter lists, and so on.
X'0202'		EXTERNAL SUBSYSTEM INITIALIZATION. DETECTING MODULE: EXTERNAL SUBSYSTEM INITIALIZATION EXIT.
	X'08'	Initialization was unsuccessful. IMS does not initiate a connection to the external subsystem. The control region ESET is marked unstartable and the /START SUBSYS command resets the condition.
	X'20'	Initialization was unsuccessful. The external subsystem supplied exit encountered an invalid condition while processing the request. Such conditions include invalid save areas, protocol violations, invalid work areas, invalid parameter lists, and so on.
X'0203'		EXTERNAL SUBSYSTEM TERMINATE IDENTIFY. DETECTING MODULE: EXTERNAL SUBSYSTEM TERMINATE IDENTIFY EXIT.
	X'08'	TERMINATE IDENTIFY was unsuccessful. The external subsystem in processing the request encountered an error. IMS continues termination processing as if the function completed normally.
	X'20'	TERMINATE IDENTIFY was unsuccessful. The external subsystem supplied exit encountered an invalid condition while processing the request. Such conditions include invalid save areas, protocol violations, invalid work areas, invalid parameter lists, and so on.
X'0281'		EXTERNAL SUBSYSTEM NORMAL CALL. DETECTING MODULE: EXTERNAL SUBSYSTEM NORMAL CALL EXIT.
	X'04'	Normal call was unsuccessful. A resource deadlock was detected by the external subsystem. IMS terminates the application program with abend 0777. All changes are backed out and the application is rescheduled.
	X'08'	Normal call was unsuccessful. A failure in the external subsystem occurred while process the request. IMS terminates the application with abend 3044.
	X'20'	Normal call was unsuccessful. The external subsystem supplied exit encountered an invalid condition while processing the request. Such conditions include invalid save areas, protocol violations, invalid work areas, invalid parameter lists, and so on, If an application is involved, it terminates with abend 3044.

Table 4. Conditions detected by external subsystem exits (continued).

Function code	Return code	Description
X'0283'		EXTERNAL SUBSYSTEM NOT OPERATIONAL. DETECTING MODULE: EXTERNAL SUBSYSTEM NOT OPERATIONAL EXIT (SNO).
	X'08'	SNO exit call was unsuccessful. IMS terminates the application program with abend code 3044. The transaction input is saved and all uncommitted changes are backed out.
	X'0C'	SNO exit call was unsuccessful. IMS terminates the application program with abend 3047 and discard the input.
	X'10'	SNO exit call was unsuccessful. IMS uses the z/OS format abend code returned by the SNO exit to abend the application. It depends on the abend code as to what happens during the IMS program ABORT. It is assumed that when this abend occurs the external subsystem has adequate documentation for installation use to aid in any necessary debugging.
	X'20'	SNO was unsuccessful. The external subsystem supplied exit encountered an invalid condition while processing the request. Such conditions include invalid save areas, protocol violations, invalid work areas, invalid parameter lists, and so on. If an application is involved, it is terminated with abend 3044.
X'0284'		EXTERNAL SUBSYSTEM ECHO. DETECTING MODULE: EXTERNAL SUBSYSTEM ECHO EXIT.
	X'20'	ECHO was unsuccessful. The external subsystem supplied exit encountered an invalid condition while processing the request. Such conditions include invalid save areas, protocol violations, invalid work areas, invalid parameter lists, and so on.
X'0285'		EXTERNAL SUBSYSTEM INITIALIZATION. DETECTING MODULE: EXTERNAL SUBSYSTEM INITIALIZATION EXIT. DEPENDENT REGION.
	X'08'	Initialization was unsuccessful. IMSdoes not initiate a connection to the subsystem for the life of the execution of this dependent region. The dependent region LESE is marked as never identify.
	X'20'	Initialization was unsuccessful. The external subsystem supplied exit encountered an invalid condition while processing the request. Such conditions include invalid save areas, protocol violations, invalid work areas, invalid parameter lists, and so on. If an application is involved, it is terminated with abend 3044.
X'0286'		EXTERNAL SUBSYSTEM IDENTIFY. DETECTING MODULE: EXTERNAL SUBSYSTEM IDENTIFY EXIT.
	X'04'	IDENTIFY was unsuccessful. The external subsystem sends the notify message when it is ready to connect.
	X'0C'	IDENTIFY was unsuccessful. The IDENTIFY process failed in the external subsystem.
	X'20'	Identify was unsuccessful. The external subsystem supplied exit encountered an invalid condition while processing the request. Such conditions include invalid save areas, protocol violations, invalid work areas, invalid parameter lists, and so on.
X'0287'		EXTERNAL SUBSYSTEM COMMAND. DETECTING MODULE: EXTERNAL SUBSYSTEM COMMAND EXIT.
	X'20'	Command was unsuccessful. The external subsystem supplied exit encountered an invalid condition while processing the request. Such conditions include invalid save areas, protocol violations, invalid work areas, invalid parameter lists, and so on.

Table 4. Conditions detected by external subsystem exits (continued).

Function code	Return code	Description
X'0288'		EXTERNAL SUBSYSTEM SIGNON. DETECTING MODULE: EXTERNAL SUBSYSTEM SIGNON EXIT.
	X'04'	Signon was unsuccessful. The external subsystem rejected the specified request. IMS invokes the not operational exit in the subsystem.
	X'08'	Signon was unsuccessful (temporary nature). The external subsystem was unable to complete the requested because of the unavailability of a required resource. IMS terminates the application program with abend 3048. IMS multiple transaction mode processing might get this return code when the user ID of the current message fails to sign on.
	X'0C'	Signon was unsuccessful (permanent nature). The request failed in the external subsystem. IMS terminates the application program with abend 3045.
	X'10'	Signon was unsuccessful. The request failed in the external subsystem because communication was broken. IMS terminates the application program with abend code 3044.
	X'14'	Signon was unsuccessful. The external subsystem was unable to complete the request because of a resource-definitional conflict between the two subsystems. IMS terminates the application program with abend 3047.
	X'18'	Signon was unsuccessful. The request was rejected because the RECOVERY TOKEN (NID) presented by IMS at sign-on exists in the external subsystem. This implies that one of the following conditions occurred: 1. Outstanding recovery was not resolved by the resolve-in-doubt exit. 2. IMS was cold started and the contents of the NID occurred once again. IMS increases the Origin Application Schedule Number (OASN) portion of the recovery token and invoke the sign-on exit again. The application program does not know that it happened, as in the deadlock abend 0777.
	X'20'	Signon was unsuccessful. The external subsystem supplied exit encountered an invalid condition while processing the request. Such conditions include invalid save areas, protocol violations, invalid work areas, invalid parameter lists, and so on. If an application is involved, it is terminated with abend 3044.
X'0289'		EXTERNAL SUBSYSTEM SIGNOFF. DETECTING MODULE: EXTERNAL SUBSYSTEM SIGNOFF EXIT
	X'08'	Sign-off was unsuccessful. The external subsystem encountered a failure. IMS terminates the dependent region connection with the external subsystem and permit other dependent regions to continue processing.
	X'20'	Sign-off was unsuccessful. The external subsystem supplied exit encountered an invalid condition while processing the request. Such conditions include invalid save areas, protocol violations, invalid work areas, invalid parameters lists, and so on. If an application program is involved, it is terminated with abend 3044.

Table 4. Conditions detected by external subsystem exits (continued).

Function code	Return code	Description
X'0290'		EXTERNAL SUBSYSTEM CREATE THREAD. DETECTING MODULE: EXTERNAL SUBSYSTEM CREATE THREAD EXIT.
	X'04'	CREATE THREAD was unsuccessful. The external subsystem rejected the specified request. IMS invokes the not operational exit in the subsystem.
	X'08'	CREATE THREAD was unsuccessful (temporary nature). The external subsystem was unable to complete the request because of unavailable required resources. IMS terminates the application with abend 3048.
	X'0C'	CREATE THREAD was unsuccessful (permanent nature). The request failed in the external subsystem. IMS terminates the application program with abend 3045.
	X'10'	CREATE THREAD was unsuccessful. The request failed in the external subsystem because communication has broken down. IMS terminates the application program with abend 3044.
	X'14'	CREATE THREAD was unsuccessful. The external subsystem was unable to complete the request because of a definitional conflict. IMS terminates the application program with abend 3047.
	X'20'	CREATE THREAD was unsuccessful. The external subsystem supplied exit encountered an invalid condition while processing the request. Such conditions include invalid save areas, protocol violations, invalid work areas, invalid parameters lists, and so on. If an application program is involved, it is terminated with abend 3044.
	X'24'	CREATE THREAD was unsuccessful. A resource deadlock was detected by the external subsystem. IMS terminates the application program with abend 0777.
X'0291'		EXTERNAL SUBSYSTEM TERMINATE THREAD. DETECTING MODULE: EXTERNAL SUBSYSTEM TERMINATE THREAD EXIT
	X'04'	TERMINATE THREAD with COMMIT OPTION was unsuccessful. The external subsystem failed during must-complete phase two commit processing. IMS terminates the dependent region connection with the external subsystem and permit other dependent regions to continue processing. Resolve-in-doubt processing. IMS terminates the application with abend 3046 (an abend variation where the input message has been processed and the resources committed). The reason for the abend is that all subsystems attached to the application are using a common recovery token and IMS must preserve it for resolve-in-doubt processing (BMP jobs must be resubmitted; they will resume processing after the commit point).
	X'04'	TERMINATE THREAD with ABORT OPTION was unsuccessful. The external subsystem processing of the request failed during an abort phase two commit processing. IMS terminates the dependent region connection with the external subsystem and permit other dependent regions to continue processing. Resolve-in-doubt processing is then performed. IMS terminates the application program with abend 3045 (BMP jobs must be resubmitted; they resume processing at the sync point before the incident).
	X'08'	Invalid terminate thread was requested and the terminate thread exit either detected an error with the requested information or considered the request invalid at this time. This return code is only valid when the commit option character string is "de".
	X'20'	TERMINATE THREAD was unsuccessful. The external subsystem supplied exit encountered an invalid condition while processing the request. Such conditions include invalid save areas, protocol violations, invalid work areas, invalid parameters lists, and so on. If an application program is involved, it is terminated with abend 3044.

Table 4. Conditions detected by external subsystem exits (continued).

Function code	Return code	Description
X'0292'		EXTERNAL SUBSYSTEM TERMINATE IDENTIFY. DETECTING MODULE: EXTERNAL SUBSYSTEM TERMINATE IDENTIFY EXIT.
	X'08'	TERMINATE IDENTIFY was unsuccessful. The external subsystem encountered a failure in the processing of the request. IMS continues connection termination processing without affecting other dependent region connections.
	X'20'	TERMINATE IDENTIFY was unsuccessful. The external subsystem supplied exit encountered an invalid condition while processing the request. Such conditions include invalid save areas, protocol violations, invalid work areas, invalid parameters lists, and so on. If an application program is involved, it is terminated with abend 3044.
X'0293'		EXTERNAL SUBSYSTEM ABORT AND CONTINUE. DETECTING MODULE: EXTERNAL SUBSYSTEM ABORT AND CONTINUE EXIT.
	X'04'	Abort and continue was unsuccessful. The external subsystem processing of the request failed during abort or failed in the phase two of commit processing. IMSl terminates the dependent region connection with the external subsystem and permit other dependent regions to continue processing. Resolve-in-doubt processing is then performed in the control region for the Residual Recovery Element (RRE) associated with this application. IMS terminates the application program with abend 3045 (BMP jobs must be resubmitted; they resume processing at the sync point before the incident).
	X'20'	Abort and continue was unsuccessful. The external subsystem supplied exit encountered an invalid condition while processing the request. Such conditions include invalid save areas, protocol violations, invalid work areas, invalid parameters lists, and so on. If an application program is involved, it is terminated with abend 3044.

Table 4. Conditions detected by external subsystem exits (continued).

Function code	Return code	Description
X'0294'		EXTERNAL SUBSYSTEM COMMIT PREPARE. DETECTING MODULE: EXTERNAL SUBSYSTEM COMMIT PREPARE EXIT.
	X'04'	COMMIT PREPARE was unsuccessful. The external subsystem is not prepared to perform commit processing. IMS invokes the subsystem supplied abort exit of all participating subsystems. The application program terminates and discard all uncommitted changes (as if an IMS DL1 ROLB was issued).
	X'08'	COMMIT PREPARE was unsuccessful. Prepare processing failed in the external subsystem. IMS invokes the subsystem supplied abort exit of all participating subsystem providing the subsystem is not terminating. The application program is terminated with abend 3044 and all uncommitted changes are backed out.
	X'10'	COMMIT PREPARE was unsuccessful. The external subsystem was unable to complete the request because of the unavailability of a resource. IMS terminates the application with abend 3055.
	X'18'	COMMIT PREPARE was unsuccessful. The request was rejected because the recovery token (NID) presented by IMS at COMMIT PREPARE exists in the external subsystem. This implies one of the following conditions occurred: 1. Outstanding recovery was not resolved by the resolve-in-doubt exit. 2. IMS was cold started and the contents of the NID occurred once again. IMS pseudoabends the application program with abend 3053 and backout all previous updates. The application is immediately rescheduled. The act of reschedule updates the OASN number to ensure that it is not a duplicate. The dependent region connection is reestablished whereupon the recovery token is presented to the external subsystem commit prepare exit again.
	X'20'	COMMIT PREPARE was unsuccessful. The external subsystem supplied exit encountered an invalid condition while processing the request. Such conditions include invalid save areas, protocol violations, invalid work areas, invalid parameters lists, and so on. If an application program is involved, it is terminated with abend 3044.
X'0295'		EXTERNAL SUBSYSTEM COMMIT CONTINUE. DETECTING MODULE: EXTERNAL SUBSYSTEM COMMIT CONTINUE EXIT.
	X'04'	Commit continue was unsuccessful. The external subsystem processing of the request failed during must-complete (phase two) commit processing. IMS terminates the dependent region connection with the external subsystem and permit other dependent regions to continue processing. Resolve-in-doubt processing are performed in the control region for the Residual Recovery Element (RRE) associated with the PST. IMS terminates the application with abend U3046 (an abend variation where the input message has been processed and the resources committed). The reason for the abend is that all subsystems attached to the application are using a common recovery token and IMS must preserve it for resolve-in-doubt processing (BMP jobs must be resubmitted; they will resume normal processing after the commit point).
	X'20'	COMMIT PREPARE was unsuccessful. The external subsystem supplied exit encountered an invalid condition while processing the request. Such conditions include invalid save areas, protocol violations, invalid work areas, invalid parameters lists, and so on. If an application program is involved, it is terminated with abend 3044.

Table 4. Conditions detected by external subsystem exits (continued).

Function code	Return code	Description
X'0297'		EXTERNAL SUBSYSTEM IDENTIFY. DETECTING MODULE: EXTERNAL SUBSYSTEM IDENTIFY EXIT.
	X'0C'	IDENTIFY was unsuccessful. The IDENTIFY process failed in the external subsystem.
	X'20'	Identify was unsuccessful. The external subsystem supplied exit encountered an invalid condition while processing the request. Such conditions include invalid save areas, protocol violations, invalid work areas, invalid parameter lists, and so on.

Related information:

- 0777 (Messages and Codes)
- 3044 (Messages and Codes)
- 3045 (Messages and Codes)
- 3046 (Messages and Codes)
- 3053 (Messages and Codes)

Category C - conditions detected by IMS common service modules

IMS common service modules can issue codes to report status or problems.

Table 5. Conditions detected by IMS common service modules.

Function code	Return code	Module or ID	Description
X'0302'		DFSESD40	SERVICE MODULE ROUTER ROUTINE
	X'04'		DFSESD40 attempted to IMODULE load a module.
	X'08'		DFSESD40 was requested to branch to an invalid module.
	X'0C'		Unable to open the library referenced by the DFSESL DD statement.
	X'10'		DFSESD40 failed in an attempt to IMODULE locate the DFSDPDIR.
	X'14'		The address of the local ESET was not in the DFSDPDIR.
	X'20'		The EEVTP passed to DFSESD40 was invalid.
X'0303'		DFSESGL0	SERVICE MODULE GLUE ROUTINE
	X'04'		The parameter list passed to DFSESGL0 requested an ILOG® request but not for log type X'55'.
	X'20'		The parameter list passed to DFSESG10 an invalid function code.
	X'1C'		Unable to IMODULE GETMAIN an area for an SSOB.
X'0307'		DFSFESP0	SYNC POINT MANAGER
	X'04'		DFSFESP0 was called with an unsupported request call.
	X'08'		Unable to find a global ESET that matches the subsystem name in the RRE which was being processed.

Category D - conditions detected by control region service modules

Control region service modules issue codes to report status or problems.

Table 6. Conditions detected by control region service modules.

Function code	Return code	Module or ID	Description
X'0400'	X'10'	DFSESI00	Unable to IMODULE load DFSESI80.
X'0401'		DFSESI20	DAUGHTER ITASK INITIALIZATION
	X'04'		Unable to IMODULE GETMAIN storage for a work area.
	X'08'		Unable to obtain a quick save area using the DFSBCB macro.
	X'0C'		Unable to create a dispatcher work area using the DFSCDSP macro.
	X'10'		Unable to IMODULE load DFSESI30.
	X'14'		Unable to create the termination ITASK using the DFSCIR macro.
	X'18'		Unable to create the daughter ITASK (DFSESI30) using the DFSCIR macro.
X'0402'		DFSESI30	DAUGHTER ITASK CONTROLLER
	X'10'		Unable to IMODULE load DFSESI50. (abend 3041)
	X'??'		The external subsystem exit identified by the message DFS3607I returned an unsupported return code. (Message DFS3607I)
X'0403'		DFSESI50	INITIALIZATION EXIT INVOCATION
	X'04'		Unable to IMODULE GETMAIN storage for the storage block DFSIWALE. (Abend 3041)
	X'08'		DFSESI40 or DFSESP10 failed in the loading of the external subsystem storage or modules. (Abend 3041)
	X'0C'		Unable to IMODULE GETMAIN storage for the DFSESL DCB. (Abend 3041)
	X'10'		Unable to IMODULE load DFSESI40. (abend 3041)
	X'??'		The external subsystem initialization exit returned an unsupported return code. (Message DFS3606I)
X'0404'		DFSESI60	RESOLVE-IN-DOUBT PROCESSOR
	X'08'		Unable to quit save area using DFSBCB macro. (abend 3041)
	X'??'		The external subsystem resolve-in-doubt exit returned an unsupported return code. (Message DFS3606I)
X'409'		DFSIESI0	MOTHER ITASK CONTROLLER
	X'04'		Unable to IMODULE load DFSESI00. (abend 3041)
	X'0C'		Unable to IMODULE load DFSESG10 (abend 3041)
	X'10'		Unable to IMODULE load DFSESD30 (abend 3041)
	X'04'		The external subsystem mother tasks (TCB) End of Task Exit routine (ETXR) is schedule and passed an invalid daughter task (TCB). (Abend 3043)

Table 6. Conditions detected by control region service modules (continued).

Function code	Return code	Module or ID	Description
X'0411'		DFSXESI0	MOTHER ITASK INITIALIZATION
	X'04'		Unable to IMODULE GETMAIN storage for the work area.
	X'08'		Unable to obtain a quick save area using the DFSBCB macro.
	X'0C'		Unable to create a dispatcher work area using the DFSCDSP macro.
	X'10'		Unable to IMODULE load DFSIESI0.
	X'14'		Unable to create the termination ITASK using the DFSCIR macro.
	X'18'		Unable to create the mother ITASK (DFSIESI0) using the DFSCIR macro.

Related information:

- DFS3606I (Messages and Codes)
- DFS3607I (Messages and Codes)
- 3041 (Messages and Codes)
- 3043 (Messages and Codes)

Category E - conditions detected by dependent region service modules

Dependent region service modules issue codes to report status or problems.

Table 7. Conditions detected by dependent region service modules.

Function code	Return code	Module or ID	Description
X'0503'		DFSESD10	DEPENDENT REGION - IMS IDENTIFY
	X'*nn*'	Resource ID "IMOD-GM "	IMODULE GETMAIN failed. Refer to "IMODULE return codes" on page 17.
	X'*nn*'	Resource ID "IMOD-LD "	IMODULE load failed. Refer to "IMODULE return codes" on page 17.
	X'04'	Resource ID "ESETP "	The Global ESET prefix was not found. Either SSM was not specified for the control region or DFSESI00 failed in the processing of the SSM member.
	X'08'	Resource ID "GESE "	Global ESET for the required external subsystem has not been defined.
	X'0C'	Resource ID "DFSESL "	Unable to open the library reference by the DFSESL DD statement.
	X'10'	Resource ID "PROCLIB "	An SSM PROCLIB member was specified for the dependent region, but the dependent region JCL did not include a PROCLIB DD statement.

Table 7. Conditions detected by dependent region service modules (continued).

Function code	Return code	Module or ID	Description
X'0504'		DFSESD20	DEPENDENT REGION - IMS SIGNON
	X'*nn*'	Resource ID "IMOD-GM "	IMODULE GETMAIN failed. Refer to "IMODULE return codes" on page 17.
	X'*nn*'	Resource ID "IMOD-LD "	IMODULE load failed. Refer to "IMODULE return codes" on page 17.
	X'*nn*'	Resource ID "DFSESI40"	DFSESI40 or DFSESP10 failed in the loading of the external subsystem storage or modules. The return code is returned by DFSESI40.
	X'*nn*'	Resource ID "WALE "	IMODULE GETMAIN failed. Refer to "IMODULE return codes" on page 17.
	X'*nn*'	Resource ID 'EZS '	Unable to obtain an EZS block through the service of the DFSBCB macro. The return code is returned by the DFSBCB macro.
	X'*nn*'	Resource ID X'DFSESL'	Unable to open the library that is referenced by the DFSESL DD statement.
X'0505'	X'*nn*'	DFSESD60	DEPENDENT REGION - IMS CREATE THREAD
	X'*nn*'	Resource ID "IMOD-GM "	IMODULE GETMAIN failed. Refer to "IMODULE return codes" on page 17.
X'0506'		DFSESPR0	EXTERNAL SUBSYSTEM PROGRAM REQUEST HANDLER
	X'04'		The local ESET passed to DFSESPR0 does not match a defined external subsystem. (Abend 3042)
	X'08'		The sign-on token that is passed to DFSESPR0 does not match the sign-on token that is passed in the DFSEEVTP for this region. (Abend 3042)
	X'0C'		The local ESET passed to DFSESPR0 has not been defined in the control region. (Abend 3042)
	X'10''		The address of the DFSEZS has not been set in the DFSIWALE. (Abend 3042)
	X'20'		Local ESET prefix does not exist. This condition can occur when this IMS region does not have access to an external subsystem such as Db2® for z/OS. (Abend 3042)
	X'24'		The local ESET passed to DFSESPR0 some unavailable resources. Refer to message DFS3620I. (Abend 3042)
	X'28'		A cell pool is not available. (Abend 3042)
	X'FF'		A required external subsystem exit was not provided. Refer to message DFS3608I. (Abend 3049)
	X'*nn*'		The external subsystem exit that is referenced in message DFS3607I returned an unsupported return code. (Abend 3049)

Table 7. Conditions detected by dependent region service modules (continued).

Function code	Return code	Module or ID	Description
X'0507'		DFSVES00	EXTERNAL SUBSYSTEM SVC ROUTER
	X'04'		The SSOB passed to DFSVES00 does not contain the address to a EEVTP.
	X'08'		The DFSDPDIR did not contain the address of a local ESET or it did not match the local ESET passed in the SSOB.
	X'0C'		The DFSLESE did not contain the address of a local ESET prefix or it did not match the local ESET prefix passed in the SSOB.
	X'14'		The local ESET prefix passed to DFSVES00 does not contain the address of a work area (DFSIWALE).
X'0508'		DFSEXM00	SYSTEM SERVICE ASSIST ROUTINE (DFSEXM2)
	X'04'		DFSEEVT contains no address for DFSLESE or DFSIWALE.
	X'08'		A storage allocation error for a message or log service request occurred.
	X'32'		Parameter list error. Either the PST address is zero, the PSTSOTKN is incorrect, or the DFSEEVT address is zero. For a message service request, either the message indicator is missing, the MSG/KEY call address is zero, or the message length is zero. For a log service request, the log length is zero.
X'0509'		DFSEXM00	SYSTEM SERVICE ASSIST ROUTINE (RCVXM2) There was an abend in the ESS service routine. Resolve the abends issued by the ESS. The ESS can be identified by using R7 at the time of abend 3042. R7 points to the EEVP. EEVP+X'C' points to the IWALE. IWALE+X'14' points to the 8-byte ESS name.
	X'24'		ESS service routine ended abnormally. This abend needs to be identified in the z/OS console or LOGREC entries.
	X'30'		ESS service routine ended abnormally. Possible IMS causes: DFSEEVT contains no address for DFSLESE or DFSIWALE.

Related information:

- DFS3602I (Messages and Codes)
- DFS3607I (Messages and Codes)
- DFS3608I (Messages and Codes)
- 3042 (Messages and Codes)
- 3049 (Messages and Codes)

End of memory codes from DFS0798I

Message DFS00798I detects an end of message (EOM) event.

Table 8. End of memory conditions detected by dependent region service modules

SSI call type	Return code	Reason code	Trace string	Module	Notes
EOM	0000	00000000	000000F134678CD0	DFSBCK00	Trace: - IDT allocated (F) - DFSISI00 found IDT entry (1) - DFSISI00 allocated SSOB/SSMX (3) - DFSBCK00 EOM section entered (4) - DFSBCK00 work storage allocated (6) - DFSBCK00 work storage initialized (7) - DFSBCK00 built ASK00 SSOB1 (DC, DBDC) (8) - DFSBCK00 called ASK00 TERM ID (C) - DFSBCK00 called VC200 KILLDEP (D) - DFSBCK00 EOM process complete (0) Conclusion: - EOM processing completed successfully - RC=0 / RSN=0 / TRC = 0
EOM	0000	00000000	000000F234678CD0	DFSBCK00	Trace: - IDT allocated (F) - DFSVCI00 found IDT entry (2) - DFSVCI00 allocated SSOB/SSMX (3) - DFSBCK00 EOM section entered (4) - DFSBCK00 work storage allocated (6) - DFSBCK00 work storage initialized (7) - DFSBCK00 built ASK00 SSOB1 (DC, DBDC) (8) - DFSBCK00 called ASK00 TERM ID (C) - DFSBCK00 called VC200 KILLDEP (D) - DFSBCK00 EOM process complete (0) Conclusion: - EOM processing completed successfully - RC=0 / RSN=0 / TRC = 0
EOM	0000	00000000	000000F134679CD0	DFSBCK00	Trace: - IDT allocated (F) - DFSISI00 found IDT entry (1) - DFSISI00 allocated SSOB/SSMX (3) - DFSBCK00 EOM section entered (4) - DFSBCK00 work storage allocated (6) - DFSBCK00 work storage initialized (7) - DFSBCK00 built ASK00 SSOB2 (DBCTL) (9) - DFSBCK00 called DASD0 TERM (using ASK00) (C) - DFSBCK00 called VC200 KILLDEP (D) - DFSBCK00 EOM process complete (0) Conclusion: - EOM processing completed successfully - RC=0 / RSN=0 / TRC = 0
EOM	0000	00000000	000000F234679CD0	DFSBCK00	Trace: - IDT allocated (F) - DFSISI00 found IDT entry (1) - DFSISI00 allocated SSOB/SSMX (3) - DFSBCK00 EOM section entered (4) - DFSBCK00 work storage allocated (6) - DFSBCK00 work storage initialized (7) - DFSBCK00 built ASK00 SSOB2 (DBCTL) (9) - DFSBCK00 called DASD0 TERM (through ASK00) (C) - DFSBCK00 called VC200 KILLDEP (D) - DFSBCK00 EOM process complete (0) Conclusion: - EOM processing completed successfully - RC=0 / RSN=0 / TRC = 0

Table 8. End of memory conditions detected by dependent region service modules (continued)

SSI call type	Return code	Reason code	Trace string	Module	Notes
EOM	0000	00000000	00000000F23467E0	DFSBCK00	Trace: - IDT allocated (F) - DFSVCI00 found IDT entry (1) - DFSVCI00 allocated SSOB/SSMX (3) - DFSBCK00 EOM section entered (4) - DFSBCK00 work storage allocated (6) - DFSBCK00 work storage initialized (7) - DFSBCK00 called VC200 TERMDEP (E) - DFSBCK00 EOM process complete (0) Conclusion: - EOM processing completed successfully - RC=0 / RSN=0 / TRC = 0 - Special DFSVCI00 TERMDEP process when IDT scan fails
EOM	0000	00000000	000000F13567ABD0	DFSBCK00	Trace: - IDT allocated (F) - DFSISI00 found IDT entry (1) - DFSISI00 allocated SSOB/SSMX (3) - DFSBCK00 ABB section entered (5) - DFSBCK00 work storage allocated (6) - DFSBCK00 work storage initialized (7) - DFSBCK00 acquired latch rcov awe (A) - DFSBCK00 enqueue latch rcov awe (B) - DFSBCK00 called VC200 KILLDEP (D) - DFSBCK00 EOM process complete (0) Conclusion: - EOM processing completed successfully - RC=0 / RSN=0 / TRC = 0
EOM	0004	00000101 00000102 00000103 00000104 00000105 00000106	0000000000000F13	DFSISI00	Trace: - IDT allocated (F) - DFSISI00 found IDT entry (1) - DFSISI00 allocated SSOB/SSMX (3) Steps: - DFSISI00 EOM found IDT, allocated SSOB/SSMX storage, called BCK00 Error: - DFSBCK00 not entered (next step) RC: - 4 = DFSISI00 issued message RSN (*xxxxyyyy*): - *xxxx* not used - *yyyy* is the return code from DFSVC200 0102 = VTDENTRY deleted - See DFSVC200 doc for more info Notes: - DFSISI00 is the normal EOM flow. - DFSISI00 is called for every End of Memory/End of Address Space SSI broadcast. If an IDT entry is found for the terminating address space, a call is made to DFSBCK00 using DFSVC200. - EOM broadcasts are run in the MASTER address space, and therefore, some IMS facilities are not available. - Complete cleanup path is: EOM SSI -> ISI00 -> VC200 -> BCK00 -> VC200 -> ASK00 (TRMID)

Table 8. End of memory conditions detected by dependent region service modules (continued)

SSI call type	Return code	Reason code	Trace string	Module	Notes
EOM	0004	00040008 00080008 000C0008 00100008 00140008	000000000000F134	DFSISI00	Trace: - IDT allocated (F) - DFSISI00 found IDT entry (1) - DFSISI00 allocated SSOB/SSMX (3) - DFSBCK00 EOM section entered (4) Steps: - DFSISI00 EOM found IDT, allocated SSOB/SSMX storage, called BCK00, BCK00 entered, EOM processing started Error: - DFSBCK00 GETMAIN failed (next step) RC: - 4 = DFSISI00 issued message RSN (*xxxxyyyy*): - *xxxx* is the return code from GETMAIN 0004 = program error (see GETMAIN information) - *yyyy* is the return code from DFSBCK00 0008 = DFSBCK00 EOM failed Notes: - Once work area storage has been allocated, all DFS078 messages are issued by DFSBCK00.
EOM	0004	0004000C 0008000C 000C000C 0010000C 0014000C	000000000000F135	DFSISI00	Trace: - IDT allocated (F) - DFSISI00 found IDT entry (1) - DFSISI00 allocated SSOB/SSMX (3) - DFSBCK00 ABB section entered (5) Steps: - DFSISI00 EOM found IDT, allocated SSOB/SSMX storage, called BCK00, BCK00 entered, ABB processing started Error: - DFSBCK00 GETMAIN failed (next step) RC: - 4 = DFSISI00 issued message RSN (*xxxxyyyy*): - *xxxx* is the return code from GETMAIN 0004 = program error (see the GETMAIN information) - *yyyy* is the return code from DFSBCK00 000C = DFSBCK00 ABB failed Notes: - Once work area storage has been allocated, all DFS078 messages are issued by DFSBCK00.
EOM	0008	00001004 00001008	000000000F134670 000000000F234670	DFSBCK00	Trace 1: - IDT allocated (F) - DFSISI00 found IDT entry (1) - DFSISI00 allocated SSOB/SSMX (3) - DFSBCK00 EOM section entered (4) - DFSBCK00 work storage allocated (6) - DFSBCK00 work storage initialized (7) - DFSBCK00 EOM process complete (0) Trace 2: - DFSVCI00 found IDT entry (2) - DFSVCI00 allocated SSOB/SSMX (3) - All other entries are identical to trace 1 Steps: - DFSISI00/VCI00 found IDT, allocated SSOB/SSMX storage, called BCK00, BCK00 entered, EOM started, BCK00 allocated storage, initialized storage Error: - DFSBCK00 IDT scan failed (next step) RC: - 8 = DFSBCK00 issued message RSN (*xxxxyyyy*): - *xxxx* not used - *yyyy* is DFSBCK00 reason code 1004 = IDT does not match SSMX 1008 = IDT not found

Table 8. End of memory conditions detected by dependent region service modules (continued)

SSI call type	Return code	Reason code	Trace string	Module	Notes
EOM	0008	0000100C	000000000F134670 000000000F234670	DFSBCK00	Trace 1: - IDT allocated (F) - DFSISI00 found IDT entry (1) - DFSISI00 allocated SSOB/SSMX (3) - DFSBCK00 EOM section entered (4) - DFSBCK00 work storage allocated (6) - DFSBCK00 work storage initialized (7) - DFSBCK00 EOM process complete (0) Trace 2: - DFSVCI00 found IDT entry (2) - DFSVCI00 allocated SSOB/SSMX (3) - All other entries are identical to trace 1 Steps: - DFSISI00/VCI found IDT, allocated SSOB/SSMX storage, called BCK00, BCK00 entered, EOM started, BCK00 allocated storage, initialized storage, scanned IDT Error: - DFSBCK00 SSOB2 build skipped (next step) RC: - 8 = DFSBCK00 issued message RSN (xxxxyyyy): - xxxx not used - yyyy is DFSBCK00 reason code 100C = DBCTL Term ID in effect
EOM	0008	xxxxyyyy	0000000F134678C0 0000000F234678C0	DFSBCK00	Trace 1: - IDT allocated (F) - DFSISI00 found IDT entry (1) - DFSISI00 allocated SSOB/SSMX (3) - DFSBCK00 EOM section entered (4) - DFSBCK00 work storage allocated (6) - DFSBCK00 work storage initialized (7) - DFSBCK00 built ASK00 SSOB1 (DC, DBDC) (8) - DFSBCK00 called ASK00 TERM ID (C) - DFSBCK00 EOM process complete (0) Trace 2: - DFSVCI00 found IDT entry (2) - DFSVCI00 allocated SSOB/SSMX (3) - All other entries are identical to trace 1 Steps: - DFSISI00/VCI00 found IDT, allocated SSOB/SSMX storage, called BCK00, BCK00 entered, EOM started, BCK00 allocated storage, initialized storage, scanned IDT, built SSOB, called ASK00 Error: - DFSBCK00 ASK00 TERM ID called failed RC: - 8 = DFSBCK00 issued message RSN (*xxxxyyyy*): - *xxxx* DFSASK00 abend code (R0 l/o nib) - *yyyy* DFSASK00/DFSVC200 return code (R15)

Table 8. End of memory conditions detected by dependent region service modules (continued)

SSI call type	Return code	Reason code	Trace string	Module	Notes
EOM	0008	xxxxyyyy	0000000F134679C0 0000000F234679C0	DFSBCK00	Trace 1: - IDT allocated (F) - DFSISI00 found IDT entry (1) - DFSISI00 allocated SSOB/SSMX (3) - DFSBCK00 EOM section entered (4) - DFSBCK00 work storage allocated (6) - DFSBCK00 work storage initialized (7) - DFSBCK00 built ASK00 SSOB2 (DBCTL) (9) - DFSBCK00 called DASD0 TERM (using ASK00) (C) - DFSBCK00 EOM process complete (0) Trace 2: - DFSVCI00 found IDT entry (2) - DFSVCI00 allocated SSOB/SSMX (3) - All other entries are identical to trace 1 Steps: - DFSISI00/VCI00 found IDT, allocated SSOB/SSMX storage, called BCK00, BCK00 entered, EOM started, BCK00 allocated storage, initialized storage, scanned IDT, built SSOB, called ASK00 Error: - DFSBCK00 DASD0 TERM ID called failed RC: - 8 = DFSBCK00 issued message RSN (*xxxxyyyy*): - *xxxx* DFSDASD0 abend code (R0 1/o nib) - *yyyy* DFSDASD0/DFSVC200 return code (R15)
EOM	000C	xxxxyyyy	000000000F134670	DFSVCI00	Trace: - IDT allocated (F) - DFSISI00 found IDT entry (1) - DFSISI00 allocated SSOB/SSMX (3) - DFSBCK00 ABB section entered (5) - DFSBCK00 work storage allocated (6) - DFSBCK00 work storage initialized (7) - DFSBCK00 EOM process complete (0) Steps: - DFSISI00 EOM found IDT, allocated SSOB/SSMX storage, called BCK00, BCK00 entered, ABB started, BCK00 allocated storage, initialized storage Error: - DFSBCK00 Get AWE failed (next step) RC: - C = DFSBCK00 issued message RSN (*xxxxyyyy*): - *xxxx* not used - *yyyy* is DFSBCB return code
EOM	0014	00000101 00000102 00000103 00000104 00000105 00000106	0000000000000F23	DFSVCI00	Trace: - IDT allocated (F) - DFSVCI00 found IDT entry (1) - DFSVCI00 allocated SSOB/SSMX (3) Steps: - DFSVCI00 INITSVC found IDT, allocated SSOB/SSMX storage, called BCK00 Error: - DFSBCK00 not entered (next step) RC: - 14 = DFSVCI00 issued message RSN (*xxxxyyyy*): - *xxxx* not used - *yyyy* is the return code from DFSVC200 0102 = VTDENTRY deleted - See the DFSVC200 information Notes: - DFSVCI00 is a special EOM flow. - Complete cleanup path is: Ctl rgn start -> VCI00 -> VC200 -> BCK00 -> VC200 -> ASK00 (TRMID)

Table 8. End of memory conditions detected by dependent region service modules (continued)

SSI call type	Return code	Reason code	Trace string	Module	Notes
EOM	0014	00040008 00080008 000C0008 00100008 00140008	000000000000F234	DFSVCI00	Trace: - IDT allocated (F) - DFSVCI00 found IDT entry (1) - DFSVCI00 allocated SSOB/SSMX (3) - DFSBCK00 EOM section entered (4) Steps: - DFSVCI00 SVC found IDT, allocated SSOB/SSMX storage, called BCK00, BCK00 entered, EOM processing started Error: - DFSBCK00 GETMAIN failed (next step) RC: - 14 = DFSVCI00 issued message RSN (xxxxyyyy): - xxxx is the return code from GETMAIN 0004 = program error (see the GETMAIN information) - yyyy is the return code from DFSBCK00 0008 = DFSBCK00 EOM failed Notes: - Once work area storage has been allocated, all DFS078 messages are issued by DFSBCK00.

Related reference:

z/OS: GETMAIN return and reason codes

Related information:

DFS078 (Messages and Codes)

Chapter 5. BPE codes

The Base Primitive Environment (BPE) issues two types of codes - abend codes and service return codes.

BPE abend codes

The Base Primitive Environment (BPE) issues abend codes when it terminates abnormally. These codes appear as user abends.

PBE can issue the following abend codes:

3400

Explanation: An error during early BPE initialization prevented BPE services from starting. Register 15 at the time of the termination contains a subcode that can be used to determine the reason for the abend. Subcodes are:

Subcode	Explanation
X'01'	BPEINIT0 could not establish an ESTAE recovery routine.
X'02'	BPE stack storage services initialization failed.
X'03'	A request to obtain a stack block for early BPE initialization failed.
X'04'	A lower-level service initialization module could not be loaded.
X'05'	A lower-level service initialization module could not complete the initialization of its service.
X'06'	An error occurred while parsing the BPE configuration PROCLIB member specified on the BPECFG= parameter in the z/OS startup parameters.
X'07'	The IMS component using BPE services (for example, CQS, OM, RM, or SCI) detected a problem during its early initialization and indicated to BPE that it should abend.
X'08'	An error occurred creating a z/OS name or token for the IMS component address space.
X'09'	A mismatch occurred between the BPE version used by the IMS component (for example, CQS, OM, RM, or SCI) and the version of the BPE modules.
X'0A'	The BPE SVC routine (BPESVC00) could not be installed.
X'0B'	The BPE resource manager (BPERSM00) could not be established.
X'0C'	The BPE address space was started on a machine that was not running in z/Architecture® mode. BPE requires z/Architecture mode.
X'0D'	The BPE address space was started on a z/OS release that does not support 64-bit virtual storage services. BPE requires 64-bit storage services.
X'0E'	The BPE address space was started on a machine that did not have the Long Displacement Facility hardware installed. BPE requires the Long Displacement Facility. If you are running BPE on an IBM eServer™ zSeries 900 (z900, machine type 2064), the machine must be at a GA2 level (microcode level 3G or later) to enable the Long Displacement Facility. For all other zSeries machine types, the Long Displacement Facility is always present.
X'0F'	BPE initialization module BPEINIT0 received control in a key other than key 7. BPE must run in key 7. Ensure that the module specified on the PGM= parameter of the EXEC statement of the job or started task for the address space was added to the z/OS program properties table (PPT), that the entry specifies key 7, and that all data sets in the JOBLIB or STEPLIB concatenation are APF-authorized.

System action: The address space is abnormally terminated.

Operator response: Take the appropriate action based on the subcode you received.

For subcodes X'01' through X'05' and X'07' through X'0B': The problem is one of the following:

- An environmental error, such as missing modules in IMS.SDFSRESL or a storage shortage in the address space.
- An internal error within BPE or the component using BPE.

Messages that further explain the reason for the error might precede this abend. Refer to the job log output from the failed job for explanatory messages.

If you cannot determine and correct an environmental cause for the problem, save any memory dump and SYSLOG information, and contact IBM Software Support.

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For subcode X'06': Although this abend can result from internal or environmental errors, its most probable cause is a problem with the BPE configuration PROCLIB member. If BPE cannot find or read the member, abend 3400 follows message BPE0002E, which indicates the problem. Correct the problem and restart the IMS component address space.

If there is an error parsing the member, this abend follows message BPE0003E, which indicates where in the member the error occurred. Correct the configuration member and restart the IMS component address space.

For subcode X'09': This abend occurs when the IMS component modules (for example, CQS modules beginning with CQS and BPE modules beginning with BPE) in your STEPLIB data sets are at different versions. This abend follows message BPE0013E, which indicates the different levels of the BPE modules. Ensure that you are running the correct level of BPE modules.

Source: BPE codes

Module: BPEINIT0

Related information:

- BPE0002E (Messages and Codes)
- BPE0003E (Messages and Codes)
- BPE0013E (Messages and Codes)

3401

Explanation: An error during the initialization of a new z/OS dispatchable unit (TCB or SRB) in the IMS component address space prevented the dispatchable unit (DU) from starting.

Register 15 at the time of the termination contains a subcode that can be used to determine the reason for the abend. Subcodes are:

Subcode	Explanation
X'01'	BPESYIN0 could not establish an ESTAE recovery routine.
X'02'	A request to obtain a stack block for the DU initialization failed.
X'03'	BPE could not initialize the BPE internal dispatcher for the new DU.
X'04'	A lower-level DU initialization module could not complete initialization because of an error or unexpected condition.
X'05'	BPE could not create an internal server that runs under the new DU.
X'06'	BPE could not load a lower-level DU initialization module, and therefore could not complete the initialization of the new DUs environment.
X'07'	BPE automatic TCB attach processing was unable to ATTACH a BPE-managed TCB (or schedule a BPE-managed SRB).

System action: If the DU being created is not a required DU, the IMS component address space continues to function; otherwise, the IMS component address space is abnormally terminated.

Operator response: The problem is one of the following:
- An internal error within BPE.
- An environmental error, such as missing modules in IMS.SDFSRESL, or a storage shortage in the address space.

Messages that further explain the reason for the error might precede this abend. Refer to the job log output from the failed job for explanatory messages.

If you cannot determine and correct an environmental cause for the problem, save any memory dump and SYSLOG information, and contact IBM Software Support.

Source: BPE codes

Module: BPESYIN0, BPESRIN0, BPESYAT0

3402

Explanation: An error occurred during the termination of a task control block (TCB) in the IMS component address space. Register 15 at the time of the termination contains a subcode that can be used to determine the reason for the abend. Subcodes are:

Subcode	Explanation
X'01'	A routine involved in the cleanup process for the terminating TCB encountered an error that prevented the cleanup from completing.
X'02'	A routine involved in the cleanup process for the IMS component address space encountered an error that prevented the cleanup from completing.
X'03'	BPE could not start required processes to terminate subtask TCBs under the TCB that was terminating.

System action: If the TCB being terminated is not a required TCB, the IMS component address space continues to function. If the TCB is required, or if the IMS component address space is in the process of being shut down, the IMS component address space is abnormally terminated.

Operator response: The problem is one of the following:
- An internal error within BPE.
- An environmental error, such as missing modules in IMS.SDFSRESL or a storage shortage in the address space

Messages that further explain the reason for the error might precede this abend. Refer to the job log output from the failed job for explanatory messages.

If you cannot determine and correct an environmental cause for the problem, save any memory dump and SYSLOG information, and contact IBM Software Support.

Source: BPE codes

Module: BPESYTR0

3403

Explanation: The BPE address space startup module BPEINI00 encountered an error that prevented a BPE address space from starting.

Abend 3403 is a standard abend issued by module BPEINI00 when it encounters a problem trying to start an IMS component address space using BPE services. At the time of the abend, register 15 contains a subcode that indicates the reason for the abend. Register 2 contains the address of the z/OS parameters passed to BPEINI00. Abend 3403 is preceded by message BPE0037E, which further explains the problem.

The following list contains the Register 15 subcodes:

Subcode
Explanation

X'01' The address space being started is not APF-authorized. All BPE and IMS component modules must be in data sets that are APF-authorized. In addition, module BPEINI00 must be bound with authorization code 1: SETCODE AC(1)

X'02' BPEINI00 was given control in a key other than 7. BPE must run in key 7. Ensure that BPEINI00 is correctly added to the z/OS PPT (program properties table).

X'03' Either BPEINI00 could not find the BPEINIT= keyword on the z/OS JCL startup parameters (PARM=), or the specified module name was missing or not valid. The BPEINIT= parameter is required. The parameter defines the name of the BPE startup parameter module to BPEINI00, which defines the type of IMS component address space to start.

X'04' The module specified by the BPEINIT= keyword on the z/OS JCL startup parameters (PARM=) could not be loaded.

X'05' The module specified by the BPEINIT= keyword on the z/OS JCL startup parameters (PARM=) was loaded into key 0 storage. This situation probably occurred due to being bound as reentrant. This module must be bound as non-reentrant.

X'06' BPEINI00 could not find a valid startup parameter data area (UCDB block) in the module specified by the BPEINIT= keyword on the z/OS JCL startup parameters.

X'07' BPEINI00 could not get storage for a copy of the z/OS input parameters.

System action: The address space terminates abnormally.

Operator response: If the error indicated by the subcode is due to environmental conditions (for example, incorrect authorization or invalid parameters), correct the indicated problem and restart the address space. Otherwise, save any job log and syslog information and contact IBM Software Support for assistance.

Source: BPE codes

Module: BPEINI00

Related information:

BPE0037E (Messages and Codes)

3404

Explanation: A severe error occurred during BPE thread dispatching. No further threads can be dispatched under the failing dispatchable unit (TCB or SRB). Register 15 at the time of the abend contains a subcode that can be used to determine the reason for the abend.

Subcodes are:

Subcode
Explanation

X'01' SRB SUSPEND error. BPE issued the z/OS SUSPEND macro to suspend a BPE-managed SRB. The SUSPEND macro returned an error return code that indicates that the SUSPEND could not be processed. The SRB cannot continue. Register 4 contains the return code from the SUSPEND macro.

X'02' SRB RESUME error. BPE issued the z/OS RESUME macro to resume a BPE-managed SRB. The RESUME macro returned an error return code that indicates that the RESUME could not be processed. The SRB cannot continue. Register 2 contains the return code from the RESUME macro.

System action: If the dispatchable unit (TCB or SRB) that terminated abnormally is not required (mandatory) for the address space to work, the IMS component address space continues to run. If the dispatchable unit is required, the IMS component address space is abnormally terminated.

Operator response: Save any dumps, the job log, and the console log, and contact IBM Software Support.

Source: BPE codes

Module: BPEDSPX0, BPEDSWT0, BPESRNQ0, BPESRSU0

3405

Explanation: BPE uses abend code 3405 to terminate unresponsive SRBs during TCB abnormal termination, and to terminate the BPE job step TCB when the functional recovery routine (FRR) of an SRB is entered in an unexpected environment. See the subcodes for details.

Subcodes are:

Subcode	Explanation
X'01'	During abnormal address space termination, BPE attempted to terminate all BPE-managed SRBs, but one or more SRBs did not terminate. BPE abends such SRBs with ABENDU3405 subcode X'01' before it continues with abnormal termination. An SRB that receives this abend might be in a loop, and unable to respond to the original request from BPE to terminate. Another possibility on highly used systems is that the SRB was not dispatched to terminate in a timely manner because of CPU resource constraints. In this case, receiving one or more ABENDU3405 subcode X'01' abends might or might not indicate an actual problem.
X'02'	An abend under a BPE-managed SRB caused the functional recovery routine (FRR) of an SRB to be entered while holding the CPU lock (disabled for interrupts). This situation is unexpected. The FRR can do only limited cleanup processing. BPE issues message BPE0052E, and then issues a z/OS CALLRTM macro with ABENDU3405 subcode X'02' to abnormally terminate the BPE job step (JSTP) TCB.

System action: For subcode X'01': The SRB that is abended with the ABENDU3405 terminates abnormally, and BPE address space abnormal termination processing continues. If the original abend that caused the abnormal termination was an ABEND222 (z/OS cancel command with no dump), no SRB that is abended with an ABENDU3405 will generate a dump. Otherwise, the first SRB that is abnormally terminated with an ABENDU3405 will generate a dump to aid in problem diagnosis.

For subcode X'02': The SRB whose FRR was entered with the CPU lock held abnormally terminates the BPE job step TCB and then terminates. No dump is generated by the SRB. However, the error is recorded in SYS1.LOGREC. The BPE job step TCB generates a dump of the address space when it receives the ABENDU3405.

Operator response: Save any dumps, the job log, the console log, and the SYS1.LOGREC, and contact IBM Software Support.

Source: BPE codes

Module: BPESRPG0, BPESYFR0

4095

Explanation: BPE issues this abend once for each TCB in the address space when an unrecoverable termination occurs and it is necessary to abnormally terminate the address space.

Subcodes are:

Subcode	Explanation
X'00'	A BPE TCB terminated abnormally, and its end-of-task exit routine (ETXR) was given control. BPE issues ABEND4095 with subcode X'00' in the ETXR routine to propagate the abend up to the parent TCB.
X'01'	A BPE SRB terminated abnormally, and its functional recovery routine (FRR) was given control. BPE issues a z/OS CALLRTM macro with ABEND4095 subcode X'01' to abnormally terminate the BPE job step (JSTP) TCB when it determines that the address space cannot continue running after the SRB abend.

System action: The IMS component address space is abnormally terminated.

Operator response: BPE issues this abend after one of the address space TCBs has an unrecoverable abend. It is used to abnormally terminate the remaining TCBs; it is not itself part of the original problem. Examine the job log output for the first TCB to terminate abnormally with a code other than 4095 in order to determine the cause of the subsequent 4095 abends.

Source: BPE codes

Module: BPESRFR0

BPE service return codes

The Base Primitive Environment (BPE) can issues return codes.

These return codes include the following:

BPEATTCH codes

The attach a task control block (TCB) encountered a problem.

Return code
Explanation

X'00000004'
The TCB index passed to BPEATTCH was not a valid index.

X'00000008'
No TCB type of the requested type is defined to BPE.

X'0000000C'
A new TCB of the indicated type could not be attached because no entries were available for it in the BPE TCB table. The maximum number of TCBs of this type is already attached.

X'00000010'
The z/OS ATTACH for the new TCB failed.

X'00000014'
The caller is a non-thread running under the parent TCB of the TCB that was requested to be attached. This environment is not valid for the BPEATTCH call.

X'00000020'
Internal processing error: The enqueue of an AWE to the TCB attach processor for the requested that TCB type failed.

X'00000024'
Internal processing error: The BPEWAIT for a response from the TCB attach processor for the requested TCB failed.

X'00000028'
Internal processing error: The routine called by BPEATTCH enqueued an AWE to the TCB attach processor for the requested TCB. However, the DDB address it saved in the AWE was invalid, and the attach processor rejected the attach request.

X'0000002C'
Internal processing error: The routine called by BPEATTCH enqueued an AWE to the TCB attach processor for the requested TCB. However, the TCB attach processor rejected the AWE because it contained an invalid function code.

X'00000030'
Internal processing error: BPEATTCH was unable to obtain a DQCB (Dispatcher Queue Control Block) for the new TCB. The BPECBGET call for the DQCB failed.

X'00000034'
The IEAMSCHD call to schedule the SRB for a MODE=SRB or MODE=CONDSRB dispatchable unit failed.

X'00000038'
BPEATTCH was unable to obtain a dispatcher work area (DWA) control block for a new SRB. The BPECBGET call to get the DWA block failed.

X'000000F8'
The requested function is not present in the BPE system at execution time. This is likely due to a mismatch between the macro and the module.

X'000000FC'
The parameter list version generated by the macro is not supported by the called service routine. This is likely due to a mismatch between the macro and the module.

BPEAWSRV codes

BPE service BPEAWSRV issues codes to identify problems.

Return code
Explanation

X'00000004'
The CREATE request for an AWE server was successful for at least one, but not all, of the requested AWE servers.

X'00000008'
Unable to create a thread for an AWE server. The Thread CREATE service, BPETHDCR, failed.

X'0000000C'
Unable to obtain an AQCB block for an AWE server being created.

X'00000010'
The BPE TCB token, that passed the TCBTKN parameter for an AWE server CREATE request, was not a valid token.

X'00000020'
AQHE passed to create routine was not a valid AQHE. This is likely an internal processing error.

X'00000024'
BPEAWSRV could not determine the TCB under which it should create the server. The TCB is determined by the value of TCBTKN on this macro, or by the value of the TCBTYPE on the BPEAWDEF macro when the queue server is defined. If neither of these parameters are coded, then the server create function does not know under what TCB to create the server thread.

X'00000028'
If AWEIDX was specified, the value passed was not a valid AWE server index. If TYPE was specified, the type indicated was not a valid AWE server type according to the AWE server definition module. For BPE AWE servers, macro BPEAWIX and module BPEAQHT0 are probably out of sync. For user-product AWE servers, the user-product type definition macro and module are probably out of sync.

X'0000002C'
The NUMTHDS parameter specified an invalid number of threads. It must specify a number from 1 to 255.

X'000000F8'
The requested function is not present in the BPE system at execution time. This is likely due to a macro/module mismatch.

X'000000FC'
The parameter list version generated by the macro is not supported by the called service routine. This is likely due to a macro/module mismatch.

BPEBPCRE codes

A problem occurred when creating a buffer pool.

Return code
Explanation

X'00000004'
The value specified on the INCREMENT parameter was zero or negative.

X'00000008'
The value specified on the MINBUF parameter was zero or negative.

X'0000000C'
The value specified on the MAXBUF parameter was less than the MINBUF value.

X'00000010'
The value specified on the PRIMARY parameter was negative.

X'00000014'
The value specified on the UPPERLIMIT parameter was less than the PRIMARY or MAXIMUM values.

X'00000018'
The subpool specified on SP was invalid or not supported.

X'0000001C'
The buffer format specified on the FORMAT parameter is not a valid format for the current version of the buffer create service.

X'00000020'
Either the pointer to the 4-character buffer pool type string was zero, or the string was all blanks or all nulls.

X'00000024'
A buffer pool of the type specified on the TYPE parameter has already been created. The token of the already-existing pool is returned in the location indicated by the TOKEN parameter.

X'00000040'
A BPEGETM call failed for control block storage for the new buffer pool.

X'00000044'
A BPEGETM call failed for the primary allocation of buffer storage.

X'00000048'
BPELOAD failed for one or more of the BPE buffer manager service modules for the requested pool format.

X'0000004C'
A BPELAGET call failed when trying to get the buffer pool create/destroy latch.

X'00000050'
An abend occurred in buffer pool create processing. The buffer pool was not created.

X'000000F8'
The requested function is not present in the BPE system at execution time. This is likely due to a macro/module mismatch.

X'000000FC'
The parameter list version generated by the macro is not supported by the called service routine. This is likely due to a macro/module mismatch.

BPEBPGET codes

A problem occurred when getting a buffer from a buffer pool.

Return cCode
Explanation

X'00000004'
No buffer could be obtained because the pool is at its upper limit.

X'00000008'
No buffer could be obtained because a BPEGETM call for buffer storage failed.

X'00000020'
The value specified on the SIZE parameter was zero or negative.

X'00000024'
The value specified on the PREFIX was not between 0 and 256.

X'00000028'
A nonzero value was specified on the PREFIX parameter, but the buffer pool was not created with FORMAT=PREFIX.

X'0000002C'
The address of the word to receive the returned buffer address (BUFFERPTR) was not valid (it was in the first 4 K of storage).

X'00000030'
The token passed to BPEBPGET was not a valid token for any BPE-managed buffer pool.

X'00000034'
A page-fixed buffer with a length greater than 100 pages was requested. BPEBPGET limits page-fixed buffers to 100 pages (409,600 bytes) or fewer.

X'000000F8'
The requested function is not present in the BPE system at execution time. This is likely due to a macro/module mismatch.

X'000000FC'
The parameter list version generated by the macro is not supported by the called service routine. This is likely due to a macro/module mismatch.

BPECBGET codes

A problem occurred getting a control block.

Return Code
Explanation

X'00000004'
A bad CBTE address was passed to the CB get routine. The get routine validates that the CBTE address it is passed has the character string `CBTE`as the first word of the block. If it does not, this return code is passed back to the caller. This is likely an internal systems error of some kind.

X'00000008'
Storage was unavailable to satisfy the request.

X'000000F8'
The requested function is not present in the BPE system at execution time. This is likely due to a macro/module mismatch.

X'000000FC'
The parameter list version generated by the macro is not supported by the called service routine. This is likely due to a macro/module mismatch.

BPECMSRV codes

A problem occurred when submitting a command for processing.

Return code
Explanation

X'00000020'
The command was rejected by the command action routine and was not processed.

X'00000024'
The command failed.

X'00000028'
Unknown command.

X'0000002C'
Missing command verb.

X'00000040'
Bad command pointer. The address of the command passed to BPECMSRV was zero.

X'00000044'
Bad command length. The length of the command passed to BPECMSRV was zero.

X'00000048'
Bad BPEWPRNT exit parameter list length. The length of an exit parameter list passed to BPECMSRV was zero or negative.

X'0000004C'
The BPECMSRV caller was not running as a BPE thread.

X'00000060'
BPE was unable to get the necessary working storage to process the command.

X'00000064'
BPE was unable to create a thread to process the command.

X'00000068'
BPE could not process the command because a BPEPOST call to start the command processing thread failed.

X'0000006C'
BPE could not process the command because a BPELAGET call for a latch to serialize the command failed.

X'00000070'
The command action module that processed the command returned an undefined return code to BPE. The result of the command processing is not known.

X'000000F8'
The requested function is not present in the BPE system at execution time. This is likely due to a macro to module mismatch.

X'000000FC'
The parameter list version generated by the macro is not supported by the called service routine. This is likely due to a macro to module mismatch.

BPEGETM codes

A problem occurred when issuing a GETMAIN storage command.

Return code
Explanation

X'00000004'
An invalid or unsupported subpool was specified.

X'00000008'
A zero (or negative) length was requested.

X'00000010'
Unable to obtain the requested 31-bit storage. The caller requested 31-bit storage, but only 24-bit storage was available.

X'0000000C'
Unable to obtain the requested storage (MVS™ GETMAIN failed).

X'000000F8'
The requested function is not present in the BPE system at execution time. This problem is likely due to a macro/module mismatch.

X'000000FC'
The parameter list version generated by the macro is not supported by the called service routine. This problem is likely due to a macro/module mismatch.

BPELAGET codes

A problem occurred when getting a latch.

Return code
Explanation

X'00000004'
The latch was not obtained because it was owned in exclusive mode by another caller (WAIT=NO only).

X'00000008'
The latch was not obtained because it was owned in shared mode by one or more callers (WAIT=NO only).

X'0000000C'
A request for a latch in shared mode was not granted because there was a waiter for the latch in exclusive mode (WAIT=NO only).

X'00000010'
The latch was successfully obtained in exclusive mode, and was transferred from another thread to the current thread.

X'00000020'
The latch was not obtained because the caller already owns the latch in exclusive mode.

X'00000024'
The latch was not obtained because the latch services module was unable to WAIT the caller. This problem is typically due to an error in the environment of the caller: either the caller is not in TCB mode, or the ECB is already WAITing.

X'00000028'
A request was not granted for a latch in shared mode because the latch had been transferred to the ECB of the caller by another thread. For this reason the request must be in exclusive mode.

X'000000F8'
The requested function is not present in the BPE system at execution time. This problem is likely due to a macro/module mismatch.

X'000000FC'
The parameter list version generated by the macro is not supported by the called service routine. This problem is likely due to a macro/module mismatch.

BPELAREL codes

A problem occurred when getting a control block.

Return code
Explanation

X'00000004'
The latch was not released because it is owned in exclusive mode by the caller.

X'00000008'
The latch was not released because it is owned in exclusive mode by another caller.

X'0000000C'
The latch was not released because it is owned in shared mode by one or more other callers.

X'00000010'
The latch was not released because it is not owned.

X'00000014'
The latch was not transferred because the event control block (ECB), to which the latch was to be transferred, was waiting to get the latch in shared mode.

X'00000018'
The latch was released (MODE=EX), but a protocol error might have occurred. The latch had been transferred to the ECB of the caller from a different ECB, but the caller had never accepted the latch.

X'000000F8'
The requested function is not present in the BPE system at execution time. This is likely due to a macro or module mismatch.

X'000000FC'
The parameter list version generated by the macro is not supported by the called service routine. This is likely due to a macro or module mismatch.

BPELOAD codes

A problem occurred when loading a module.

Return code
Explanation

X'00000004'
For a list-form load (MODLIST), at least one of the modules in the list had an error.

X'0000000C'
Specified module was not found.

X'00000010'
BLDL for module failed. This error is most likely due to an internal error with BLDL, such as an out-of-storage condition.

X'00000014'
Load of module failed. The module was found in the library, but LOAD returned a nonzero return code.

X'00000018'
A BPE SRB-mode caller specified TCB=CURRENT. SRB-mode callers must specify TCB=JSTP.

X'00000028'
TCB=JSTP required an AWE to be queued to JSTP TCB for LOAD processing, and the AWE enqueue failed.

X'00000030'
Internal failure in load processing.

X'000000F8'
The requested function is not present in the BPE system at execution time. This problem is likely due to a macro/module mismatch.

X'000000FC'
The parameter list version generated by the macro is not supported by the called service routine. This problem is likely due to a macro/module mismatch.

BPELOADC codes

A problem occurred when attempting to load, call, or delete a module.

Return code
Explanation

X'00000004'
The LOAD and call of the module were successful, but the subsequent DELETE of the module failed. The return code that the module passed back in register 15 is in the word or register specified by MODRC.

X'00000008'
The module specified on EP or EPLOC could not be loaded. The contents of the word or register specified by MODRC is undefined.

X'000000F8'
The requested function is not present in the BPE system at execution time. This problem is likely due to a macro/module mismatch.

X'000000FC'
The parameter list version generated by the macro is not supported by the called service routine. This problem is likely due to a macro/module mismatch.

BPEPARSE codes

A problem occurred when parsing data.

Return code
Explanation

X'00000004'
The parser definition grammar passed on PADEF was not a valid BPEPADEF grammar.

X'00000008'
The control block storage passed on CBSTG was not large enough to contain the control blocks that must be built to contain the parsed input data. Issue BPEPARSE again with a larger amount of CBSTG storage. The data in the CBSTG area is incomplete, and should not be used.

X'0000000C'
The CBSTG address passed to the parsing service was zero.

X'00000010'
The input data address passed to the parsing service was zero.

X'00000014'
An internal error occurred in the parsing service.

X'00000040'
An invalid keyword was detected in the input data.

X'00000044'
An unknown positional parameter was encountered in the input.

X'00000048'
A keyword parameter was specified with only an equal sign (KEYWORD=value), but the keyword was defined as having a sublist of values. Sublists can only be specified in parenthesis. An equal sign can only be used by itself (that is, with no parentheses) if a keyword has a single value.

X'0000004C'
The input ended before all of a sublist or keyword had been parsed.

X'00000050'
A keyword was encountered (KEYWORD or KEYWORD=) when a value was expected.

X'00000054'
An input number being parsed was out of the range allowed for its output field length. For decimal numbers, the numbers must be less than or equal to 255, 65535, 16777215, and 2147483647 for 1, 2, 3, and 4 byte fields. For hexadecimal numbers, the number might not have digits more than 2 times the number of bytes in the output field.

X'00000058'
A parameter value defined as decimal contained non-decimal digits.

X'0000005C'
A parameter value defined as hexadecimal contained non-hexadecimal digits.

X'00000060'
A parameter value defined as a key value parameter had an unknown key value.

X'00000064'
A keyword parameter was seen multiple times and was not defined as being repeatable (REPEAT=YES on BPEPADEF).

X'00000068'
A parameter defined with REQUIRED=YES on BPEPADEF was not found in the input data (omitted).

X'0000006C'
A character parameter value was longer than the defined output field length, and the parameter definition did not specify TRUNC=YES on BPEPADEF to allow truncation.

X'00000070'
A keyword was coded specifying a null value. A non-null value is required.

X'00000074'
An unexpected right parenthesis was encountered in the input data.

X'00000078'
A parser directive was found within a sublist.
X'0000007C'
The parser encountered an invalid parser directive.
X'00000080'
The parser encountered an invalid parser directive value.
X'00000084'
The parser encountered a parser directive, but it expected the value of a `keyword=` parameter.
X'000000F8'
The requested function is not present in the BPE system at execution time. This problem is likely due to a macro/module mismatch.
X'000000FC'
The parameter list version generated by the macro is not supported by the called service routine. This problem is likely due to a macro/module mismatch.
X'00000088'
An expected closing parenthesis was not found to match an open parenthesis in the input data.

BPERDPDS codes

A problem occurred when reading a PDS member.

Return code
Explanation
X'00000004'
The member name address passed to the read PDS routine was 0.
X'00000008'
The output buffer pointer address passed to the read PDS routine was 0.
X'0000000C'
The output buffer length word address passed to the read PDS routine was 0.
X'00000010'
The value specified on the RIGHTMAR parameter was either negative or not less than the actual LRECL of the data set.
X'00000014'
The DD name address passed to the read PDS routine was 0, and PDS=NO was coded.
X'00000018'
BPERDPDS was called in SRB mode. SRB mode is not supported.
X'00000040'
OPEN failed for the PDS.
X'00000044'
The PDS specified was not in fixed format.
X'00000048'
The member specified on the MEMBER parameter was not in the PDS.
X'0000004C'
A BSAM READ for the specified member failed.
X'00000050'
Unable to obtain storage for a buffer to hold the PDS data.
X'00000054'
The data set specified had an unsupported RECFM (for example, RECFM=U or RECFM=VBS).
X'000000F8'
The requested function is not present in the BPE system at execution time. This problem is likely due to a macro/module mismatch.

X'000000FC'
The parameter list version generated by the macro is not supported by the called service routine. This problem is likely due to a macro/module mismatch.

BPESTART codes

A problem occurred trying to start the Base Primitive Environment (BPE) limited function services. This service is a subset of BPE used in some IMS address spaces. Use the return code to determine the problem.

Return code
Explanation

X'00000020'
The services were not able to get storage for the BPE limited function services control blocks.

X'00000024'
The LOAD failed for the module BPEZLFS0.

X'00000028'
An invalid vector table in the module BPEZLFS0 was found.

X'0000002C'
The services were unable to create a BPE name token.

X'00000030'
The services were unable to load the BPESPRNT exit module specified on the SPEXIT parameter.

X'00000034'
The services were unable to get storage for the BPESPRNT exit module work area.

X'00000038'
The BPEWPRNT exit module specified on the WPEXIT parameter was not able to be loaded.

X'0000003C'
The services were not able to get storage for the BPEWPRNT exit module work area.

X'00000040'
The LOAD failed for the hash table service module BPEZHT00.

X'00000044'
An invalid vector table in module BPEZHT00 was found.

BPESVC codes

The Base Primitive Environment supervisor call (BPE SVC) encountered a problem.

Return code
Explanation

X'00000004'
The BPE SVC routine was unable to GETMAIN storage for an internal work area. R0 = return code from GETMAIN.

X'00000008'
The BPE SVC routine could not establish a recovery environment using the MVS ESTAE macro. R0 = return code from ESTAE.

X'0000000C'
The BPE SVC routine could not locate its main control block (the BPESVCA block). This problem is likely due to errors initializing the BPE SVC routine or other BPE system services.

X'00000010'
An invalid SVC function code was passed to the BPE SVC routine in register 0. R0 contains the invalid function code.

X'00000014'
The BPE SVC function requested requires the caller to be authorized (supervisor state and key 0-7), and the caller was not authorized.

X'00000018'
An abend occurred in the BPE SVC module BPESVC00. R0 contains the abend code.

X'0000001C'
The address for the name of the named function was zero (REGISTER, DEREGISTER, CALL).

X'00000020'
The BPE SVC module was unable to get a SYSTEM level ENQ on the resource SYSZBPE SVCNFHTB, which is required in order to serialize the named function hash table. R0 = the return code from the ENQ macro.

X'00000024'
The named function indicated could not be found (QUERY, REGISTER, DEREGISTER, CALL). Check that you have run the OTMA callable interface (C/I) SVC initialization job (DFSYSVI0). It much be run after each IPL.

X'00000028'
The BPE SVC is not installed.

X'00000040'
The PSW (program status word) key indicated for the named function being registered was not in the range 0-7. Named function routines must run in a system key (REGISTER).

X'00000044'
The BPE SVC routine could not obtain storage for an SVC Function Block (SVCF) for the function being registered. R0 = return code from GETMAIN (REGISTER).

X'00000048'
The named function being registered is already registered and the REPLACE parameter did not allow it to be replaced (REGISTER).

X'00000060'
The named function that was requested to be called requires the caller to be authorized (supervisor state, key 0-7), and the caller was not authorized (CALL).

X'00000064'
The BPE SVC routine could not obtain work area storage for the named function routine to be called. R0 = return code from GETMAIN (CALL).

X'00000080'
The STOKEN address passed to the EOMCLEANUP function was zero (EOMCLEANUP).

X'000000FC'
The parameter list version generated by the macro is not supported by the called service routine. This problem is likely due to a macro/module mismatch.

BPESVCI0 codes

Problem occurred when initializing the BPE SVC module.

Return code
Explanation

X'00000004'
Unable to load INIT routine BPESVCI0 to initialize the BPE SVC.

X'00000008'
ESTAE create failed for ESTAE for BPESVCI0. R0 = return code from ESTAE.

X'0000000C'
BLDL failed for BPE SVC module. R0 = return code from BLDL.
X'00000010'
GETMAIN failed for storage for the SVC module. R0 = return code from GETMAIN.
X'00000014'
LOAD failed for the SVC module. R0 = return code from LOAD.
X'00000018'
Exclusive ENQ on resource name SYSZBPE SVCUPDTE failed. R0 = return code from ENQ.
X'0000001C'
Exclusive ENQ on SYSZSVC TABLE failed. R0 = return code from ENQ.
X'00000020'
Unable to find MVS ECVTCTBL (CVT to CVTECVT to ECVTCTBL = 0). The z/OS system must be at least SP 4.2.0, with APARs OW13312 and OW13315 applied.
X'00000024'
GETMAIN failed for BPE Global Function Vector Table (BPEGFVT) block. R0 = return code from GETMAIN.
X'00000028'
GETMAIN failed for SVC control area (SVCA) block. R0 = GETMAIN return code.
X'0000002C'
SVCUPDTE failed for the BPE SVC. R0 = SVCUPDTE return code.
X'00000040'
An ABEND occurred while initializing the SVC. R0 = the abend code.
X'000000FC'
The parameter list version generated by the macro is not supported by the called service routine. This problem is likely due to a macro/module mismatch.

BPETCBSW codes

A problem occurred during switch execution to a new task control block (TCB).

Return code
Explanation
X'00000000'
The thread was successfully switched.
X'00000004'
An invalid TCB token was passed on TCBTKN.
X'00000008'
An invalid TCB index was passed on TCBIDX.
X'0000000C'
An invalid TCBT address was passed.
X'00000010'
The caller is not running under a BPE thread.
X'00000014'
The TCB specified by TCBTKN (or TCBTKNPTR) does not exist.
X'00000018'
A non-pool TCB type with multiple TCBs was specified on either TCBTYPE or TCBIDX.
X'000000F8'
The requested function is not present in the BPE system at run time. This situation is likely due to a macro or module mismatch.

X'000000FC'
The parameter list generated by the macro is not supported by the called service routine. This situation is likely due to a macro or module mismatch.

BPETHDCR codes

A problem occurred when creating a thread.

Return code
Explanation

X'00000004'
Create failed: An invalid BPE TCB token was passed on the TCBTKN parameter.

X'00000008'
Create failed: A bad TCB index value was passed on the TCBIDX parameter.

X'0000000C'
Create failed: A zero routine address was passed on the ROUTINE parameter.

X'00000010'
Create failed: A bad TCB table entry address was passed into the thread create routine. The BPETHDCR macro determines the TCBT address based on whichever of the TCBIDX, TCBTKN, or TCBTYPE parameters is specified. Ensure that this parameter is correctly coded.

X'00000014'
Create failed: Unable to get storage for a Thread Control Block (THCB) for the thread.

X'00000018'
Create failed: Unable to get stack storage for the thread.

X'0000001C'
Create failed: The initial POST of the thread failed.

X'00000020'
Create failed: Unable to load the requested thread module.

X'000000F8'
The requested function is not present in the BPE system at execution time. This problem is likely due to a macro/module mismatch.

X'000000FC'
The parameter list version generated by the macro is not supported by the called service routine. This problem is likely due to a macro/module mismatch.

BPETIMER codes

A problem occurred when issuing a timer request.

Return code
Explanation

X'00000004'
FUNC=TIMER request was canceled.

X'00000008'
The request was canceled because the timer service has been shut down.

X'0000000C'
FUNC=CANCEL request failed because no outstanding timer request with a matching token could be found.

X'00000010'
The timer AWE enqueued to the timer service contained an invalid function code.

X'00000014'
The FUNC=TIMER request indicated that the expiration value was specified as TOD. The current version of timer services does not support TOD=.

X'00000018'
The DINTVL parameter contained a non-decimal digit.

X'00000020'
The minutes field in the DINTVL parameter was greater than 59. It must be between 0 and 59.

X'00000024'
The seconds field in the DINTVL parameter was greater than 59. It must be between 0 and 59.

X'00000028'
The FUNC=TIMER request could not be processed because the timer service could not get storage for a timer queue element (TQUE) for the request.

X'0000002C'
The BPETIMER request failed: MVS STIMERM service returned a nonzero return code.

X'00000080'
Unable to obtain an AWE from control block services (BPECBGET) to initiate timer request. Register 0 contains the return code from BPECBGET. No timer request was issued.

X'00000084'
Unable to enqueue initiate timer request. AWE enqueue to timer server failed. R0 contains the return code from BPEAWSRV FUNC=ENQ. The state of the AWE is indeterminate. It is probably on an AWE queue, but it might be processed.

X'000000F8'
The requested function is not present in the BPE system at execution time. This problem is likely due to a macro/module mismatch.

X'000000FC'
The parameter list version generated by the macro is not supported by the called service routine. This problem is likely due to a macro/module mismatch.

BPETRSRV codes

A problem occurred when requesting trace services.

Return code
Explanation

X'00000004'
There is no trace table of the requested type defined to BPE.

X'00000008'
Input trace token was not valid or was not for a trace table of the indicated type. (FUNC=DELETE, GETUDATA, SETUDATA)

X'0000000C'
The trace table specified was not defined as a trace type that supports multiple trace tables. The CREATE and DELETE functions might be issued only for trace types that were defined as multiple types. See BPETRDEF and BPETRIX for further information. (FUNC=CREATE and DELETE)

X'00000010'
The user data address passed on USERDATA was invalid (less than 00001000). (FUNC=GETUDATA and SETUDATA)

X'00000014'
The trace table specified does not support user data (UDATALEN was not

specified or specified zero on the trace table BPETRDEF definition). (FUNC=GETUDATA and SETUDATA)

X'00000030'
Unable to get the storage required for a trace table header entry for the new trace table. (FUNC=CREATE)

X'00000034'
Unable to get the storage required for the new trace table. (FUNC=CREATE)

X'000000F8'
The requested function is not present in the BPE system at execution time. This problem is likely due to a macro/module mismatch.

X'000000FC'
The parameter list version generated by the macro is not supported by the called service routine. This problem is likely due to a macro/module mismatch.

BPEUXRF0 codes

A problem occurred when loading user exits.

Return code
Explanation

X'00000001'
Could not read BPE PROCLIB (Reason code = BPERDPDS RC)

X'00000002'
Could not read user-product PROCLIB (Reason code = BPERDPDS RC)

X'00000003'
BPEGETM failed for BPE parse data area (Reason code = BPEGETM RC)

X'00000004'
BPEGETM failed for BPE parse data area (Reason code = BPEGETM RC)

X'00000005'
BPEPARSE failed for BPE exit list PROCLIB member (Reason code = BPEPARSE RC)

X'00000006'
BPEPARSE failed for user prod exit list PROCLIB member (Reason code = BPEPARSE RC)

X'00000010'
BPECBGET failed for a UIXB block (Reason code = BPECBGET RC)

X'00000011'
BPELAGET failed for global user exit latch (UXRF_Lhdr) (Reason Code = BPELAGET RC)

X'00000012'
User exit refresh failed due to abend in refresh processing (Reason code = abend code)

X'00000013'
BPECBGET failed for a static work area for a user exit module (Reason code = BPECBGET RC)

X'00000014'
BPEGETM failed for storage for a user exit module (Reason code = BPEGETM RC)

X'00000015'
BLDL failed for a user exit module (Reason code = BLDL RC)

X'00000016'
LOAD failed for a user exit module (Reason code = LOAD RC)

Chapter 6. CQS codes

The Common Queue Server (CQS) can issue various codes.

CQS abend codes

When the Common Queue Server (CQS) terminates abnormally, it issues an abend code. These codes appear as user abends.

The following are the abend codes CQS can issue:

0001

Explanation: A failure occurred during CQS address space initialization.

Subcode
Explanation

X'00000004'
The CQS address space initialization module CQSINIT0 was not authorized to run in key 7.

System action: CQS address space initialization terminates abnormally with this abend code.

System programmer response: Ensure that:
- Module name CQSINIT0 is defined in the program properties table (PPT) to run in key 7.
- CQSINIT0 is linked into SDFSRESL with AC(1).

Source: CQS codes

0010

Explanation: A failure occurred during CQS initialization. Refer to the abend subcode for the cause of the failure. Message CQS0001E, which is issued before this abend, displays associated return codes and information related to the failure.

Subcode
Explanation

X'00000004'
Storage allocation failure for the CQS anchor block.

X'00000008'
Storage allocation failure for the BPEPARSE work area.

X'0000000C'
Storage allocation failure for a CQS structure block.

X'00000010'
Storage allocation failure for CQSLRRT.

X'00000030'
Error while reading the CQSIPxxx PROCLIB member.

X'00000034'
Error while reading the CQSSLxxx PROCLIB member.

X'00000038'
Error while reading the CQSSGxxx PROCLIB member.

X'00000050'
Error while parsing the CQS execute parameters. Refer to error message BPE0003E to determine the parsing error.

X'00000054'
Error while parsing the CQSIPxxx PROCLIB member. Refer to error message BPE0003E to determine the parsing error.

X'00000058'
Error while parsing the CQSSLxxx PROCLIB member. Refer to error message BPE0003E to determine the parsing error.

X'0000005C'
Error while parsing the CQSSGxxx PROCLIB member. Refer to error message BPE0003E to determine the parsing error.

X'00000070'
Error while validating the structure parameters. One CQS0001E error message is issued for each error.

X'00000080'
Unable to create structure trace table.

X'00000084'
Unable to perform module preload. One CQS0001E error message is issued for each load failure.

X'00000088'
Unable to load and call a lower-level initialization module.

X'000000A0'
Unable to create PUT buffer pool.

X'000000A4'
Unable to create RETRIEVE buffer pool.

X'000000E0'
Unable to initialize z/OS cross-system coupling facility (XCF) communications.

X'000000E4'
Unable to initialize client-to-CQS communications.

X'00000100'
Unable to establish ENF 35 exit.

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X'00000104'
Unable to establish ENF 38 exit.
X'00000108'
Unable to establish ENF 48 exit.
X'00000204'
The TM certificate is missing from the LM repository or is unable to initialize usage based pricing.
X'00000300'
Initialization encountered an invalid TCB type.
X'00000310'
Unable to load restart parent thread routine, CQSIST00.
X'00000314'
Unable to load restart child thread routine, CQSIST10.
X'00000318'
Unable to load checkpoint parent thread, CQSICHK0.
X'0000031C'
Unable to load ENF thread routine, CQSIENF0.
X'00000320'
Unable to load overflow parent thread, CQSIOFL0.
X'00000324'
Unable to load request parent thread routine, CQSIRQS0.
X'00000360'
Unable to create STRM thread for restart parent task, (STRM) TCB.
X'00000364'
Unable to create STRD thread for restart child task, (STRD) TCB.
X'00000368'
Unable to create CHKP thread for checkpoint task, (CHKP) TCB.
X'0000036C'
Unable to create ENF thread for ENF task, (ENF) TCB.
X'00000370'
Unable to create OFLM thread for overflow task, (OFLM) TCB.
X'00000374'
Unable to create RQST thread for request parent task, (RQST) TCB.
X'00000400'
Unable to attach restart child, (STRD) TCB.
X'00000404'
Unable to attach log task, (LOG) TCB.
X'00000480'
Unable to create AWE queue server XESE.
X'00000484'
Unable to create AWE queue server XEST.
X'00000488'
Unable to create AWE queue server LOG.
X'0000048C'
Unable to create AWE queue server STRU.
X'00000490'
Unable to create AWE queue server STE1.
X'00000494'
Unable to create AWE queue server STE2.
X'00000498'
Unable to create AWE queue server STE3.
X'00000500'
Unable to attach checkpoint daughter (CHKD) TCB.
X'00000504'
Unable to attach system checkpoint write (CSTW) TCB.
X'00000580'
Unable to create AWE create queue server CHKP.
X'00000584'
Unable to create AWE queue server CSYS.
X'00000588'
Unable to create AWE queue server CSTR.
X'0000058C'
Unable to create AWE queue server CSTW.
X'00000680'
Unable to create AWE queue server LENF.
X'00000700'
Unable to attach overflow child (OFLD) TCB.
X'00000780'
Unable to create queue server for overflow processing.
X'00000800'
Unable to attach PUT request (RQPT) TCB.
X'00000804'
Unable to attach retrieve request (RQRT) TCB.
X'00000808'
Unable to attach request (RQOT) TCB.
X'00000880'
Unable to create AWE queue server CONN.
X'00000884'
Unable to create AWE queue server QRY.
X'00000888'
Unable to create AWE queue server BRWS.
X'0000088C'
Unable to create AWE queue server DEL.
X'00000890'
Unable to create AWE queue server INFM.
X'00000894'
Unable to create AWE queue server MOVE.
X'00000898'
Unable to create AWE queue server PUT.
X'0000089C'
Unable to create AWE queue server READ.
X'000008A0'
Unable to create AWE queue server RCVR.
X'000008A4'
Unable to create AWE queue server RSYN.
X'000008A8'
Unable to create AWE queue server UNLK.
X'000008AC'
Unable to create AWE queue server UPD.

Source: CQS codes

Related information:

BPE0003E (Messages and Codes)

CQS0001E (Messages and Codes)

0014

Explanation: A failure occurred during structure initialization and restart. Refer to the abend subcode for the cause of the failure. Message CQS0014E or CQS0001E, which might be issued before this abend, displays associated return codes and information related to the failure.

Subcode
Explanation

X'00000004'
Storage allocation failure for the PUT hash table.

X'00000008'
Storage allocation failure for the read hash table.

X'0000000C'
Storage allocation failure for the browse hash table.

X'00000010'
Storage allocation failure for the move hash table.

X'00000014'
Storage allocation failure for the delete hash table.

X'00000018'
Storage allocation failure for the rebuild hash table.

X'0000001C'
Storage allocation failure for the inform hash table.

X'00000020'
Storage allocation failure for the queue type table.

X'00000024'
Storage allocation failure for the CQS log block.

X'00000028'
Storage allocation failure for structure statistics block.

X'0000002C'
Storage allocation failure for overflow hash table.

X'00000080'
Unable to load and call structure connection module CQSIST20.

X'00000084'
Error during load or call of CQSIST30.

X'00000088'
Error during load or call of CQSIST40.

X'0000008C'
Unable to switch to the STRM thread.

X'00000090'
Unable to switch to the STRD thread.

X'000000A0'
Unable to initialize connection to the z/OS system log.
If the error was due to an IXGCONN error, register 2 contains the return code and reason code from the IXGCONN request. The first halfword contains the return code and the second halfword contains the reason code.

Refer to z/OS: IXGCONN macro return and reason codes for additional information about the return and reason code errors from IXGCONN.

X'000000A4'
Storage allocation failure for CQSBRWSE timer AWE.

X'000000A8'
Unable to initialize CQSBRWSE timer.

X'000000AC'
Storage allocation failure for overflow timer AWE.

X'000000B0'
Unable to initialize overflow timer.

X'00000200'
Structure connection failed for one of the following reasons:

- The IXLCONN request failed.

  Register 6 contains the return code and register 7 contains the reason code from the IXLCONN request.
- The IXLCONN request succeeded, but the structure attributes were not acceptable to CQS.

  See message CQS0014E for the reason. Register 6 and register 7 contain zeros, since the IXLCONN request succeeded. CQS disconnects from the structure before abending.

X'00000204'
Unable to lock the control list header. Register 6 contains the return code and register 7 contains the reason code from the IXLLIST REQUEST=LOCK request.

X'00000220'
CQS allocated the primary structure during coupling facility connection (IXLCONN) processing. The coupling facility allocated a primary structure smaller than the minimum allocation size specified by STRMIN= size in the CQS global structure definition PROCLIB member. The CQS0014I message is issued before this abend.

X'00000224'
Unable to create or read the CQSGLOBAL control list entry. Register 6 contains the return code and register 7 contains the reason code from the IXLLIST REQUEST=WRITE or READ request.

X'00000228'
One or more global structure parameters specified as a CQS execution parameter, in the CQSIPxxx PROCLIB member, or in the CQSSGxxx PROCLIB member did not match

the values defined in the structure by the CQS that allocated the structure.

X'0000022C'
Unable to create or read the CQSLOCAL control list entry. Register 6 contains the return code and register 7 contains the reason code from the IXLLIST REQUEST=WRITE or READ request.

X'00000234'
Unable to read the CQSSTRCHKPTINPRG control list entry. Register 6 contains the return code and register 7 contains the reason code from the IXLLIST REQUEST=READ request.

X'00000238'
Unable to read the CQSRECOVER control list entry. Register 6 contains the return code and register 7 contains the reason code from the IXLLIST REQUEST=READ request.

X'00000244'
Unable to read or delete the CQSLOGFULL control list entry. Register 6 contains the return code and register 7 contains the reason code from the IXLLIST request. Message CQS0014E is issued to provide additional error information.

X'00000260'
Unable to unlock the control list header. Register 6 contains the return code and register 7 contains the reason code from the IXLLIST REQUEST=UNLOCK request.

X'00000264'
Storage allocation failed for the overflow queue name table.

X'00000268'
The coupling facility level is down level.

X'0000026C'
Unable to create or read the CQSGLOBALCONN control list entry.

X'00000270'
An IXLLIST REQUEST=MONITOR_EVENTQ failed.

X'00000274'
Unable to get the structure quiesce latch.

X'00000278'
Unable to release the structure quiesce latch.

X'00000300'
Storage allocation failure for CQSLOCAL data entry buffer.

X'00000304'
Storage allocation failure for checkpoint data set control record buffer.

X'00000308'
Storage allocation failure for structure recovery data set control record buffer.

X'00000330'
Data set allocation failure for checkpoint data set.

X'00000334'
Unable to open checkpoint data set.

X'00000338'
Unable to read from checkpoint data set.

X'0000033C'
Unable to write to checkpoint data set.

X'00000340'
Unable to close checkpoint data set.

X'00000344'
Unable to deallocate checkpoint data set.

X'00000348'
Invalid checkpoint data set. See message CQS0015E, which is issued for this error.

X'00000360'
Data set allocation failure for structure recovery data set (SRDS). If a structure checkpoint (CQS0220I) or structure recovery (CQS0240I) is in progress, this error might be timing related. Structure checkpoint and structure recovery allocate the SRDS. The SRDSs remain allocated until the structure process is complete. During this time, if another CQS attempts to initialize, it might find the SRDS already allocated. CQS initialization waits and then retries the allocation. If, after several tries, the data sets are still allocated, initialization abends. In this case, restart the CQS address space.

X'00000364'
Unable to open structure recovery data set.

X'00000368'
Unable to read structure recovery data set.

X'0000036C'
Unable to write to structure recovery data set.

X'00000370'
Unable to close structure recovery data set.

X'00000374'
Unable to deallocate structure recovery data set.

X'00000390'
Unable to recover primary structure. See message CQS0242E for the rebuild failure reason.

X'00000394'
Unable to recover overflow structure. See message CQS0242E for the rebuild failure reason.

X'000003A0'
Overflow initialization failed. Message CQS0001E is issued to provide additional error information.

X'000003A8'
Unable to move queues from primary to overflow structure. Message CQS001E is issued to provide additional error information.

X'000003B0'
Unable to delete the log stream during structure cold start processing.

X'000003B4'
Unable to write the initial log record in the log stream during structure cold start processing.

Source: CQS codes

Related reference:

z/OS: IXGCONN macro return and reason codes

Related information:

CQS0001E (Messages and Codes)

CQS0014E (Messages and Codes)

CQS0242E (Messages and Codes)

0018

Explanation: An error occurred during CQS restart processing. Message CQS0018E is issued to indicate which structure encountered the error. For certain errors, message CQS0001E is also issued to provide additional information. Abend 0018 subcodes are:

Subcode
Meaning

X'00000004'
BPELAGET failure.

X'00000008'
BPECBGET AWE failure.

X'0000000C'
BPEAWSRV enqueue failure.

X'00000010'
BPELOAD failure.

X'00000014'
BPETHDCR failure.

X'00000040'
Error during restart phase 1. Register 2 contains additional error information from the process that detected the error.

X'00000044'
Error during restart 'Phase 1 Done'. Register 2 contains additional error information from the READ or MOVE process.

X'00000048'
Error during restart 'Phase 1 Abort'. Register 2 contains additional error information from the PUT, READ, MOVE or DELETE process.

X'00000060'
Error during restart phase 2. Registers 2 through 5 contain additional error information.
- R2 contains the return code from the PUT process.
- R3 contains the return code from the READ process.
- R4 contains the return code from the MOVE process.
- R5 contains the return code from the DELETE process.

Only those processes that encounter an error return a nonzero value. The processes that are successfully completed return a zero value.

X'00000080'
Error during cold start. Registers 2 through 5 contain additional error information.
- R2 contains the return code from the PUT process.
- R3 contains the return code from the READ process.
- R4 contains the return code from the MOVE process.
- R5 contains the return code from the DELETE process.

Only those processes that encounter an error return a nonzero value. The processes that are successfully completed return a zero value.

System action: CQS terminates abnormally.

System programmer response: Determine the reason for the failure, correct the problem, and restart CQS. Additional information for abend subcodes X'00000040' through X'00000080' can be found in CQS restart and rebuild reason codes. If you are unable to resolve the problem, save the SYSLOG and dump, and call IBM Software Support for help.

Source: CQS codes

0020

Explanation: CQS issued the CQS0031A or CQS0032A message to allow the operator to enter the log token from the most recent system checkpoint. The operator entered CANCEL to terminate CQS restart processing.

Subcode
Explanation

X'00000004'
The operator replied CANCEL to message CQS0031A.

X'00000008'
The operator replied CANCEL to message CQS0032A.

X'0000000C'
The operator replied CANCEL to message CQS0034A.

Source: CQS codes

Related information:

CQS0031A (Messages and Codes)

CQS0032A (Messages and Codes)

CQS0034A (Messages and Codes)

0100

Explanation: A failure occurred during z/OS cross-system extended services (XES) exit processing. The subcode gives the reason for the error.

Subcode
Explanation

X'00000004'
CQS initiated an IXLUSYNC request to quiesce the structure. An error occurred while attempting to get the latch, so the structure could not be quiesced.

X'00000008'
A BPEBPGET error occurred.

X'0000000C'
A BPECBGET error occurred.
X'00000010'
A BPEAWSRV enqueue error occurred.
X'00000014'
A BPEAWSRV CREATE error occurred.
X'00000018'
A control entry read error occurred.
X'0000001C'
A QNAME table update error occurred.

System action: CQS terminates abnormally.

System programmer response: Restart CQS.

Source: CQS codes

0104

Explanation: A failure occurred during CQS log processing. Refer to the abend subcode for the cause of the failure.

Subcode
Explanation
X'00000004'
CQS log processing received a return and reason code from the z/OS system logger indicating that z/OS was unable to process work for the log stream. CQS must wait for an ENF 48 signal. When the ENF 48 was received, it indicated that CQS must reconnect to the z/OS log stream. The connection to the log stream failed.

Register 2 contains the return code and reason code from the IXGCONN request. The first half word contains the return code and the second half word contains the reason code. Register 3 contains the return code from the CQS log connect service.
X'00000008'
The CQS log record router encountered error during the structure recovery process. The recovery process could not continue. The user chose to abend CQS.

System action: CQS terminates abnormally.

System programmer response: For subcode X'00000004': Determine the reason for the IXGCONN failure, correct the problem, and restart CQS.

For subcode X'00000008': Delete the log streams and reinitialize the SRDSs to force CQS to cold start.

Source: CQS codes

Related tasks:

CQS structure cold start (Operations and Automation)

0372

Explanation: An error occurred trying to initialize a nonrecoverable CQS queue structure after a failure of the original structure. CQS is unable to complete the structure cold start processing to allow the new nonrecoverable structure to be used.

When a nonrecoverable structure fails, CQS attempts to allocate a new structure and initialize it to be an empty CQS queue structure. All messages are lost when a nonrecoverable structure fails. An abend 0372 is issued when an error occurs trying to perform this initialization of the new structure.

System action: CQS terminates abnormally.

System programmer response: If the failed structure or the newly rebuild structure is still allocated, manually delete it. Restart CQS to allow CQS initialization to cold start the structure. To delete the structure, first ensure that all CQSs using that structure are stopped. Then delete the structure by using the following z/OS command:

SETXCF FORCE,STR,STRNAME=*structurename*

Source: CQS codes

0373

Explanation: Common Queue Server (CQS) terminated abnormally after the failure of a non-recoverable queue structure or loss of connectivity to a non-recoverable queue structure. This abend is issued for one of the following reasons:

- CQS cold started the non-recoverable queue structure that is issued by CQSs that were not the rebuild master.
- CQS connected to the structure and detected that a rebuild was in progress.
- CQS connected to the structure after the structure was cold started, and detected that the logical instance version number of the structure is changed from the last time CQS connected to the structure.

When a recoverable structure fails, CQS attempts to recover the structure from the structure recovery data set (SRDS) and the z/OS log stream. CQS allocated a new structure and places the data objects from the SRDS and log into the new structure. For a nonrecoverable structure (one defined with RECOVERABLE=NO in the CQSSGxxx PROCLIB member), there is no log stream to recover from. Instead, CQS allocates the new structure and cold starts it, that is, initializes it as an empty CQS structure.

After cleaning up the failed structure and cold starting it, CQS then abends with a CQS abend 0373. This is required because CQS cannot allow active clients to use the new empty structure until they have gone through

CQS resynchronization processing, which occurs during client reconnect processing after CQS is restarted.

This abend is issued with no dump requested, therefore the system disruption caused by multiple dump requests is minimized when all CQSs abends at the same time after a structure failure or cold start.

Analysis:

The subcodes have the following meanings:

Subcode
Explanation

X'00000004'
CQS completed the rebuild processing that cold started a failed non-recoverable queue structure. This CQS was a participant in the rebuild process, but was not the rebuild master.

X'00000008'
CQS received reason code IXLRSNCODESPECIALCONN (RC=04, RSN=0407), with indicators that a rebuild was in progress when the CQS connected to a non-recoverable queue structure that previously failed. CQS abends to force resynchronization with its clients at restart. It does not participate in the ongoing rebuild.

X'0000000C'
CQS received the reason code IXLRSNCODESPECIALCONN (RC=04, RSN=0407), with indicators that a rebuild was in progress when the CQS connected to a non-recoverable queue structure that CQS previously lost connectivity to. CQS abends to force resynchronization with its clients at restart. It does not participate in the ongoing rebuild.

X'00000010'
CQS was connected to a non-recoverable queue structure and then was disconnected. When CQS is reconnected to the structure, CQS determines that the structure has a new logical instance version number, as the result of, for example, a cold start. The CQS abends to force resynchronization with its clients at restart.

System action: The CQS abends.

System programmer response: Restart CQS. CQS connects to the new empty structure and performs the resynchronization processing when its clients reconnect to it. All the messages that were on the original failed structure are lost, because the structure was defined as non-recoverable.

Source: CQS codes

0374

Explanation: The Common Queue Server (CQS) terminated abnormally following the cold start of a non-recoverable queue structure after the original structure failed. The CQS that issued this CQS abend was the rebuild master of the cold start.

When a recoverable structure fails, CQS attempts to recover the structure from the structure recovery data set (SRDS) and the z/OS log stream. CQS allocates a new structure and places the data objects from the SRDS and the log into the new structure. However, for a non-recoverable structure (which is a structure with RECOVERABLE=NO specified in the CQSSGxxx member of the IMS PROCLIB data set), there is no log stream to recover from. Instead, CQS allocates a new structure and cold starts it as an empty CQS structure.

After the failed structure is cleaned up and cold started, the CQS that is the rebuild master abends with this abend code. This is required because CQS cannot allow active clients to use the new empty structure before they go through CQS resynchronization processing, which occurs during client reconnection after CQS is restarted.

Only the CQS that is the rebuild master issues this CQS abend. Other CQSs that are not the rebuild master issue CQS abend 0373. 0374 is issued with a dump requested for diagnostics. The 0373 abend code is issued with no dump requested.

Analysis:

Subcode
Explanation

X'00000004'
CQS that was the rebuild master completed the rebuild processing that cold started a failed non-recoverable queue structure.

System action: CQS terminates abnormally.

System programmer response: Restart CQS. CQS connects to the new empty structure and resynchronizes with its clients when the clients reconnect to it. All the messages that were on the original failed structure are lost, because the structure was defined as non-recoverable.

Source: CQS codes.

CQS restart and rebuild reason codes

When a structure rebuild or the Common Queue Server fails, CQS issues messages and abend codes. During a restart or rebuild, CQS also issues reason codes.

These CQS restart and rebuild reason codes are associated with CQS messages and CQS abend codes. Table 9 on page 77 provides additional diagnostic information that is common for one or more CQS messages or abends.

General guidelines for rebuild errors: Follow these general steps to address any rebuild failure you encounter:

- If a structure copy initiated by the operator failed, no action needs to be taken to restore access to the structure. The structure is still viable and you still have access. Analyze why the structure copy failed, to determine whether you must take action to prevent subsequent rebuild failure.
- If a structure rebuild was initiated because of a link failure and the structure rebuild failed, try to restore the link to restore access to the structure. The structure is still viable. Analyze why the structure rebuild failed, to determine whether you must take action to prevent subsequent rebuild failure.
- Analyze the reason code that appears in the structure rebuild or CQS restart error messages. Consult the CQS Restart and Rebuild Reason Code Table below to analyze the error reason code. Review the “System Programmer Action” column in the table for suggestions on additional actions to take. If the additional action is a note, see the "System Programmer Action Notes" table for details.
- If you are unable to resolve the problem, copy the SYSLOG, dump all the CQS address spaces (specifically the rebuild master CQS address space), retain the CQS log records and the IMS log records, and call the IBM Support Center for help.

These reason codes are in the format ***ttssrrrr***:

tt One-byte log type, which identifies the type of log record being processed or the CQS process that was running at the time of the error.

Code	Meaning
X'00'	CQSLRR00 detected the error
X'03'	Client connect process or client connect log record
X'07'	Put process or Put log record
X'08'	Read process or Read log record
X'0B'	Move process or Move log record
X'0D'	Delete process or Delete log record
X'43'	Structure rebuild process or structure rebuild log record
X'44'	Structure overflow process or structure overflow log record

ss One byte log subtype. If a log record was being processed when the failure occurred, this field is nonzero. When the field is zero, then the restart or rebuild process was not currently processing a log record. Log record subtypes are defined in the log record DSECTs. See *IMS Version 13 System Programming APIs* to determine how to locate log record DSECTs.

rrrr Two-byte reason code.

The following reason codes are used when the *tt* field is X'00'.

Code **Meaning**

X'0004'

The CQS log record router called the CQS logger to start reading a series of log records. The CQS logger determined that the read start value is zero.

X'0008'

The CQS log record router called the CQS logger to start reading a series of log records. The CQS logger determined that the read stop value is zero.

X'000C'

The CQS log record router called the CQS logger to start reading a series of log records. No log record was found that met the search criteria.

X'000E'

Structure recovery is rejected because the resource structure does not support structure recovery. Resource structures do not support checkpoint and therefore cannot support structure recovery.

X'000F'

Structure recovery was rejected for a structure that does not support structure recovery.

If a link to a structure is lost and no CQS has access to the structure to perform structure copy, then CQS attempts to perform structure recovery. CQS rejects the structure recovery for a structure that does not support structure recovery, such as a resource structure. To make the structure available again, either restore the link or cause a structure failure to initiate structure repopulation.

X'0010'

The CQS log record router passed the CQS logger an invalid subfunction.

X'0014'

The CQS log record router called the CQS logger and received an internal log error return code.

The reason codes shown in Table 9 are used when the *tt* field is X'03', X'07', X'08', X'0B', X'0D', X'43', or X'44'. Table 9 lists the possible reason codes that might appear on CQS restart or structure rebuild error messages. The table includes the meaning of each reason code, plus suggested system programmer actions to take. Table 10 on page 82 gives further details about the system programmer action to take.

Table 9. CQS restart and rebuild reason codes

Code	Meaning	System programmer action (see Table 10 on page 82 for details)
X'0001'	IXL request error accessing the structure.	Retry rebuild (1).
X'0002'	Structure full.	Enlarge structure (3).
X'0003'	Rebuild structure initialization error.	Evaluate message CQS0014E, which contains the specified structure initialization error. Retry rebuild (1).
X'0004'	Structure failure.	For the CQS restart error, try bringing CQS back up. For rebuild error, retry rebuild (1).
X'0005'	Control list header get lock error.	Retry rebuild (1).
X'0006'	Control list header release lock error.	Retry rebuild (1).
X'0007'	CQSRECOVER control list entry create error.	Retry rebuild (1).

Table 9. CQS restart and rebuild reason codes (continued)

Code	Meaning	System programmer action (see Table 10 on page 82 for details)
X'0008'	CQSRECOVER control list entry update error.	Retry rebuild (1).
X'0009'	CQSGLOBALCONN control list entry read error.	Retry rebuild (1).
X'000A'	CQSGLOBALCONN control list entry write error.	Retry rebuild (1).
X'000B'	Rebuild structure connect error. None of the CQSs could connect to the rebuild structure.	Adjust CF usage (2).
X'000C'	Rebuild structure connect error. This CQS could not connect to the rebuild structure.	Retry rebuild (1).
X'000D'	Rebuild structure connect error. There was no suitable coupling facility to allocate the structure based on preference list and structure size specified in the active CFRM policy. This problem also can be caused by a coupling facility failure due to problems increasing the structure size (STRSIZE).	Adjust CF usage (2).
X'000E'	Structure rebuild has timed out, most likely because the rebuild master abended.	None. CQS automatically attempts the rebuild again.
X'0010'	CQSTBL SCAN request error.	Shut down CQS (4).
X'0011'	CQSTBL SCANEND request error.	Shut down CQS (4).
X'0012'	CQSTBL FIND request error.	Shut down CQS (4).
X'0013'	CQSTBL FINDFRST request error.	Shut down CQS (4).
X'0014'	CQSTBL ADD request error.	Shut down CQS (4).
X'0015'	CQSTBL DELETE request error.	Shut down CQS (4).
X'0016'	CQSTBL DELETEALL request error.	Shut down CQS (4).
X'0017'	Table storage allocate error (BPECBGET).	Shut down CQS (4).
X'0018'	CQSTBL UNLOCK request error.	Shut down CQS (4).
X'0019'	CQSTBL FIND or DELETE request error for move table.	Shut down CQS (4).
X'001A'	CQSTBL FIND request error.	Shut down CQS (4).
X'0020'	GETMAIN storage allocate error (BPEGETM).	Shut down CQS (4).
X'0021'	GETMAIN storage free error (BPEFREEM).	Shut down CQS (4).
X'0022'	Control block storage allocate error (BPECBGET).	Shut down CQS (4).
X'0023'	Control block storage release error (BPECBREL).	Shut down CQS (4).
X'0024'	Latch get error (BPELAGET).	Shut down CQS (4).
X'0025'	Latch release error (BPELAREL).	Shut down CQS (4).
X'0026'	AWE queue server create error.	Shut down CQS (4).
X'0027'	AWE enqueue to a queue server error.	Shut down CQS (4).
X'0028'	Buffer pool storage allocate error (BPEBPGET).	Shut down CQS (4).

Table 9. CQS restart and rebuild reason codes (continued)

Code	Meaning	System programmer action (see Table 10 on page 82 for details)
X'0029'	Buffer pool storage release error (BPEBPREL).	Shut down CQS (4).
X'0030'	Rebuild phase 2 error reading log records (CQSLRR00).	Shut down CQS (4).
X'0040'	CQSLHS request error.	Shut down CQS (4).
X'0041'	CQSLOG WRITE request error.	Retry CQS restart (5).
X'0042'	Operator-initiated rebuild rejected because overflow threshold or scan is in progress.	Retry rebuild command after the overflow process completes.
X'0043'	PUT table update error (CQSPTTRQ).	Shut down CQS (4).
X'0044'	READ table delete error (CQSRDDEL).	Shut down CQS (4).
X'0045'	Data Object Entry allocate storage error (BPEBPGET).	Shut down CQS (4).
X'0046'	Table invalid status error.	Shut down CQS (4).
X'0047'	Client queues scan error.	Retry CQS restart (5).
X'0048'	Private queues scan error.	None. Not used.
X'0049'	Data object delete error (CQSDLOBJ).	Retry rebuild (1).
X'004A'	Primary structure data object delete error.	Retry CQS restart (5).
X'004B'	Overflow structure data object delete error.	Retry CQS restart (5).
X'004C'	Data object move error (CQSMOV10).	Retry rebuild (1).
X'004D'	Data object move from client queue to private queue error.	None. Not used.
X'004E'	Data object move from private queue to client queue error.	None. Not used.
X'004F'	Data object move from one private queue to another private queue error.	Retry CQS restart (5).
X'0050'	Primary structure move queue data object undo move error.	Retry CQS restart (5).
X'0051'	Overflow structure move queue data object undo move error.	Retry CQS restart (5).
X'0052'	Data object internal unlock error (CQSMOV10).	Retry CQS restart (5).
X'0053'	CQSSTR00 parameter list contains an invalid function code.	Shut down CQS (4).
X'0054'	CQSSTR10 AWE contains an invalid function code.	Retry rebuild (1).
X'0055'	Delete log record contains an invalid queue type value.	Retry rebuild (1).
X'0056'	Rebuild data object entry value is invalid.	None. Not used.
X'0057'	Structure recovery data set read error.	Retry rebuild (1).
X'0058'	Structure recovery data record move failed because it exceeds the size of the buffer.	Retry rebuild (1).

Table 9. CQS restart and rebuild reason codes (continued)

Code	Meaning	System programmer action (see Table 10 on page 82 for details)
X'0059'	Structure recovery data set 1 open error.	See CQS0054E to determine why OPEN failed. Correct the problem, then retry rebuild.
X'005A'	Structure recovery data set 2 open error.	See CQS0054E to determine why OPEN failed. Correct the problem, then retry rebuild.
X'005B'	Rebuild table data object entry not found.	Retry rebuild (1).
X'005C'	Data object move across structures failed due to data object delete error.	Retry rebuild (1).
X'005D'	Data object move across structures failed due to data object write error.	Retry rebuild (1).
X'005E'	Structure recovery data sets are invalid and CQS cannot rebuild from the beginning of the log. The structure is unavailable until it can be rebuilt or cold started. Structure recovery data sets are invalid when they are inaccessible, empty, or do not contain a structure checkpoint log token.	In order to make the structure available again you can try one of the following: • Initiate another structure rebuild, if the structure recovery data set problem is temporary. • Cancel CQS, restore the structure recovery data sets, then restart CQS to warmstart the structure. • Cancel CQS, then restart CQS, to cold start the structure.
X'0060'	CQSOVFLW FUNC=GETSTRUC request error.	Shut down CQS (4).
X'0061'	Overflow structure control list header lock error.	Shut down CQS (4).
X'0062'	Overflow structure control list header unlock error.	Shut down CQS (4).
X'0063'	CQSOVERFLOW control list entry read error.	Retry rebuild (1).
X'0064'	CQSOVERFLOW control list entry write error.	Retry rebuild (1).
X'0065'	CQSOVERFLOW control list entry delete error.	None. Not used.
X'0066'	CQSOVERFLOWQNAME control list entry read error. The rebuild structure or rebuild structure link might have failed.	Retry rebuild (1).
X'0067'	CQSOVERFLOWQNAME control list entry write error.	Retry rebuild (1).

Table 9. CQS restart and rebuild reason codes (continued)

Code	Meaning	System programmer action (see Table 10 on page 82 for details)
X'0068'	CQSOVERFLOWQNAME control list entry delete error.	Retry rebuild (1).
X'0069'	CQSOVERFLOWQNMA control list entry write error.	Retry rebuild (1).
X'006A'	CQSOVERFLOWQNMA control list entry delete error.	Retry rebuild (1).
X'006B'	CQSOVERLOWQNMR control list entry write error.	Retry rebuild (1).
X'006C'	CQSOVERFLOWQNMR control list entry delete error.	Retry rebuild (1).
X'00E0'	CQS rebuild master lost connectivity. This rebuild is terminated by CQS taking over the role of rebuild master.	None. CQS initiates a new rebuild.
X'00E1'	IXLEERSP EVENT=DISCFAILCONN request error.	Retry rebuild (1).
X'00E2'	Rebuild stopped by the operator.	None. The operator intentionally stopped the rebuild.
X'00E3'	Rebuild structure full.	Enlarge structure (3).
X'00E4'	Rebuild structure connectivity lost.	Retry rebuild (1).
X'00E5'	Old structure connectivity lost during rebuild.	Retry rebuild (1).
X'00E6'	Rebuild structure failed.	Retry rebuild (1).
X'00E7'	Old structure failed during rebuild.	Retry rebuild (1).
X'00E9'	Rebuild table for a unrecoverable data object not found.	Retry rebuild (1).
X'00EA'	Rebuild data object entry has an invalid log sequence number of zero.	Retry rebuild (1).
X'00EB'	CQS rebuild master failed.	Retry rebuild (1).
X'00EC'	This reason code is issued for one of the following reasons: • A CQS failed before the rebuild master was decided, so the rebuild master is unknown. The structure rebuild process is being taken over for an unknown failed master. The rebuild is terminated by a CQS that detects the failed CQS. That CQS automatically initiates a new rebuild. The remaining CQSs compete for the role of rebuild master. • The structure recovery data set required by rebuild is already in use. • The structure is already quiesced for structure checkpoint, overflow, or rebuild of the other structure of the pair.	If rebuild is not automatically initiated by CQS, retry rebuild (1).

Table 9. CQS restart and rebuild reason codes (continued)

Code	Meaning	System programmer action (see Table 10 for details)
X'00ED'	Rebuild phase 3 processing error. Two rebuild data object entries contain the same log sequence number. The log sequence numbers must be unique.	Retry rebuild (1).
X'00EE'	Overflow structure rebuild stopped because primary structure rebuild is in progress.	None. CQS initiates a new overflow structure rebuild.
X'00F0'	Data object put error.	Retry rebuild (1).
X'00F1'	Data object move error.	Retry rebuild (1).
X'00F2'	Data object read error.	Retry rebuild (1).
X'00F3'	Log record route error.	Retry rebuild (1).
X'00F4'	Browse table error.	Shutdown CQS (4).
X'00F5'	Client connect status access error.	Retry rebuild (1).
X'00FF'	Unknown error.	Retry rebuild (1).
X'0070	Structure recovery for a RECOVERABLE=NO overflow structure occurred.	None. CQS performs a cold start automatically.
X'0071'	CQS is skipping the structure recovery of a RECOVERABLE=NO overflow structure.	None. CQS performs a cold start automatically.
X'0072'	An error was encountered during the cold start of a RECOVERABLE=NO.	Delete the structures, and cold start CQS.
X'0080'	The structure size or the element-to-entry ratio of the rebuild structure does not match the structure attributes from SRDS.	None. CQS initiates another rebuild with valid structure attributes reading from the SRDS.

Table 10. System programmer action notes

System programmer action note	Detailed action
Retry rebuild (1)	Retry rebuild, in case the rebuild structure failure was caused by an additional failure during rebuild such as rebuild structure failure or rebuild structure link failure. Retry rebuild by issuing the following command: `SETXCF START,REBUILD,STRNAME=`*`strname`* • If rebuild still fails, cancel this CQS with a dump and save the memory dump. Restart a CQS, if no CQSs are up. Retry rebuild. • If rebuild still fails, select another CQS to cancel with a memory dump (saving the memory dump), until a rebuild succeeds or there are no more active CQSs. Restart a CQS and retry rebuild. • If rebuild still fails, consider structure cold start. Send any CQS dumps you collect to IBM.

Table 10. System programmer action notes (continued)

System programmer action note	Detailed action

Adjust CF usage (2)	Structure rebuild was unable to allocate the CQS rebuild structure on any of the CFs in the CFRM policy preference list. Analyze CF usage, make adjustments to accommodate the CQS rebuild structure, then retry rebuild:
	• Analyze CF usage by doing the following:
	– Display the preference list for the structure by issuing the following command:
	`D XCF,STRUCTURE,STRNAME=strname`
	– Display what structures are allocated on each CF in the preference list of the structure and how much space they take up by issuing the following command for each CF:
	`D XCF,CF,CFNAME=cfname`
	• Adjust CF usage by trying one or more of the following:
	– Make room on the CF by decreasing the structure size of other structures, if possible. Issue the following alter command to decrease the structure size of any structure with available free space:
	`SETXCF START,ALTER,STRNAME=strname,SIZE=size`
	– Copy structures to another CF. Issue the following command to copy another structure to another CF to make room on this CF for the CQS structure:
	`SETXCF START,REBUILD,STRNAME=strnameanother`
	Then issue the following command to retry rebuild for this structure:
	`SETXCF START,REBUILD,STRNAME=strnamethis`
	– Change the CFRM policy CF preference list for the CQS structure, so the CQS structure is rebuilt on a coupling facility with adequate space. Stop the CFRM policy by issuing the following command:
	`SETXCF STOP,POLICY,TYPE=CFRM,POLNAME=name`
	Activate new CFRM policy with different preference list by issuing the following command:
	`SETXCF START,POLICY,TYPE=CFRM,POLNAME=name`
	• Retry rebuild:
	– Retry rebuild by issuing the following command:
	`SETXCF START,REBUILD,STRNAME=strname`

Enlarge structure (3)	Stop the CFRM policy by issuing the following command:
	`SETXCF STOP,POLICY,TYPE=CFRM,POLNAME=name`
	Activate the new CFRM policy defined with a larger structure size by issuing the following command:
	`SETXCF START,POLICY,TYPE=CFRM,POLNAME=name`
	Retry rebuild by issuing the following command:
	`SETXCF START,REBUILD,STRNAME=strname`

Shutdown CQS (4)	Cancel this CQS with a memory dump, save the memory dump, and contact IBM support for help. Restart a CQS, if none are up. Retry rebuild.
Retry CQS restart (5)	Retry CQS restart by starting CQS again. If CQS restart fails, consider CQS cold start.

Note: It is possible for *ttssrrrr* to be zero if a module was called and passed an invalid restart or rebuild phase value. This error, however, should not occur.

CQS service return codes

The Common Queue Server (CQS) issues service return codes.

These service return codes include the following:

CQSDSS00

Explanation: Data Set Service problem occurred.

Return code
Explanation

X'00000004'
The service was passed an invalid parameter.

X'00000008'
The service encountered an internal error.

X'0000000C'
For the GETCTRL or POINT service, the record does not exist.

X'00000010'
For the GET service, the end of the data set was reached.

X'00000014'
The GET, POINT, 2ND PUTCTRL requests are not allowed during initial load of the data set.

X'00000018'
The VSAM request resulted in a warning return code.

X'0000001C'
The VSAM request resulted in an error return code other than warning. Refer to the CQS0054E message to determine why the VSAM request failed.

X'00000020'
The service encountered an abend, and the retry routine was driven.

Source: CQS codes

CQSDYNA0

Explanation: Dynamic Allocation Service problem occurred.

Return code
Explanation

X'00000004'
The service was passed an invalid function code.

X'00000008'
The service was passed an invalid data set status.

X'0000000C'
The dynamic allocation service failed because the data set is already allocated to either this CQS or another CQS.

X'00000010'
The DYNALLOC request resulted in an error return code. Refer to the CQS0050E message to determine why the DYNALLOC request failed.

Source: CQS codes

Related information:

CQS0050E (Messages and Codes)

CQSISCI0

Explanation: A problem occurred when initializing Structure Call Interface

Return code
Explanation

X'00000020'
The structured call interface initialization encountered an unexpected error while attempting to retrieve a z/OS Name/Token (using BPEIEANT).

X'00000024'
The structured call interface initialization was unable to create a z/OS Name/Token (using BPEIEANT).

X'00000028'
The structured call interface initialization was unable to create a z/OS Name/Token (using BPEIEANT) because the Name/Token already existed. This usually occurs when another CQS with the same SSN was started at the same time and has already built a Name/Token.

X'0000002C'
The structured call interface initialization was unable to retrieve information (via BLDL) about a module it was attempting to load.

X'00000030'
The structured call interface initialization was unable to get the STOKEN (via ALESERV) for this CQS.

X'00000034'
The structured call interface initialization was unable to get the TTOKEN (via TCBTOKEN) for the CQS job step TCB.

X'00000038'
The structured call interface initialization was unable to allocate storage (via GETMAIN) for the CGIB.

X'0000003C'
The structured call interface initialization was unable to allocate storage (via GETMAIN) for the CGCT.

X'00000040'
The structured call interface initialization was unable to allocate storage (via GETMAIN) for a linkage routine.

X'00000044'
The structured call interface initialization was unable to allocate storage (via BPEGETM) for the RVVT.

X'00000048'
The structured call interface initialization was unable to allocate storage (via STORAGE) for the CXSH.
X'0000004C'
The structured call interface initialization was unable to load a module (via LOAD).
X'00000050'
The structured call interface initialization was unable to load a module (via BPELOAD).
X'00000054'
The structured call interface initialization was unable to add a resource manager (via RESMGR).
X'00000060'
The structured call interface initialization was unable to do a BLDL for the SVC module.
X'00000064'
The structured call interface initialization was unable to allocate storage (via GETMAIN) for the SVC module.
X'00000068'
The structured call interface initialization was unable to load the SVC module (via LOAD).
X'0000006C'
The structured call interface initialization issued a BPESVC REGISTER that failed.
X'00000080'
The structured call interface initialization was unable to allocate storage, using BPEGETM, for the interface buffer manager control blocks.
X'00000084'
The structured call interface initialization was unable to load the interface buffer manager module CQSRQBM0, using BPEGETM.
X'00000088'
The structured call interface initialization was unable to allocate storage, using BPEGETM, for the interface buffer pool.

Source: CQS codes

CQSIXCF0

Explanation: A problem occurred when initializing XCF communications.

Return code
Explanation
X'00000020'
The initialization XCF service was unable to allocate storage (via BPEGETM) for control blocks.
X'00000024'
The initialization XCF service was unable to allocate storage (via BPEGETM) for an XCF answer area.
X'00000028'
The initialization XCF service was unable to join the XCF group. There is already a CQS in the group with this subsystem name.
X'0000002C'
The initialization XCF service was unable to join the XCF group.
X'00000030'
The initialization XCF service was unable to obtain information about the other members of the XCF group (via IXCQUERY).
X'00000034'
The initialization XCF service was unable to add all current members of the XCF group to its XCFM table.

Source: CQS codes

CQSLOG10

Explanation: A problem occurred when connecting to the CQS log.

Return code
Explanation
X'00000004'
The CQS log connect process issued an MVS IXGCONN request that failed. The log stream name is invalid. The log stream name is defined to CQS in the CQSSGxxx PROCLIB member. Ensure the log stream name is defined correctly to both CQS and z/OS.
X'00000010'
An error occurred while switching to the BPE JSTP TCB.
X'00000014'
An error occurred while switching to the CQSLOG10 caller's home TCB.
X'00000018'
The function code passed to CQSLOG10 is invalid.
X'00000020'
The CQS log connect process issued an MVS IXGCONN request that failed.
X'00000028'
The CQS log connect process issued an MVS IXGCONN request that failed. The return code indicated the caller should wait for an ENF 48 signal, but the caller did not want to wait.

Source: CQS codes

CQSLOG20

Explanation: A problem occurred when writing the log record.

Return code
Explanation
X'00000004'
The address of the log record passed to CQSLOG20 is not valid.
X'00000008'
The length of the log record passed to CQSLOG20 is not valid.

X'0000000C'
The log stream is full and the caller will not wait for the log stream to become available.
X'00000020'
The CQS log write process issued an MVS IXGWRITE request that failed.

Source: CQS codes

CQSLOG40

Explanation: A problem occurred when deleting log records.

Return code
Explanation
X'00000004'
The log token passed to CQSLOG40 is either not valid or the log record it represents is no longer in the log stream.
X'0000001C'
The subfunction code passed to CQSLOG40 is not valid.
X'00000020'
The CQS log delete process issued an MVS IXGDELET request that failed.

Source: CQS codes

CQSLOGP0

Explanation: The purge of CQS batched log records terminated abnormally.

Return code
Explanation
X'00000000'
The purge was successful. All unwritten batched log records were purged to the z/OS log.
X'00000008'
At least one set of batched log records could not be purged because the z/OS log stream was not available.
X'00000010'
At least one set of batched log records could not be purged because the computed length of the log record was invalid. The reason code contains the last bad record length.
X'00000018'
At least one set of batched log records could not be purged because the IXGWRITE call to purge them received a non-zero return code. The reason code contains the last non-zero IXGWRITE return code in the high halfword, and the reason code in the low halfword.

Source: CQS codes

CQSMOV10

Explanation: A problem occurred during the CQSREAD resynchronization process.

Return code
Explanation
4 Structure or connection failure.
8 Lock token is invalid.
12 Queue name is invalid.
16 Internal error.
20 CQSMOV1P parameter value error.
24 No data object exists.
28 Queue full on structure.
30 Object lost due to rebuild.
34 Successful, but Read Table scan ended because of log full.

Source: CQS codes

CQSOFL50

Explanation: A problem occurred with overflow services (functions Overflow initialization and Move Queues to Overflow Structure).

Return code
Explanation
X'00000008'
The service was passed an invalid function code.
X'0000000C'
The overflow service encountered an internal error.
X'00000010'
The overflow service issued an BPETHDCR request that failed.
X'00000014'
The overflow service was unable to allocate storage (via BPEBPGET) for a buffer.
X'00000018'
The overflow service was unable to obtain the lock on control list header.
X'0000001C'
The overflow service was unable to release the lock on control list header.
X'00000020'
The overflow service was unable to read a control list entry.
X'00000024'
The overflow service was unable to write a control list entry.
X'00000028'
The overflow service issued an IXLLIST READLIST request that failed.
X'0000002C'
The overflow service issued an IXLLIST WRITE request that failed.
X'00000030'
The overflow service was unable to obtain structure quiesce latch.

X'00000034'
The overflow service was unable to release structure quiesce latch.

X'00000038'
The overflow service issued an CQSLOG request that failed.

X'0000003C'
The overflow service issued an internal overflow service request that failed.

X'00000040'
The overflow service received a nonzero return code from BPE AWE services.

X'00000044'
The overflow service attempted to translate a queue type into a list header. The CQS service CQSLHS indicated the queue type was invalid.

X'00000048'
The overflow service failed to delete a control list entry.

X'0000004C'
A structure recovery was done for either the primary or overflow structure.

X'00000050'
A structure copy was done for either the primary or overflow structure.

X'00000054'
A structure failure occurred, and a rebuild was done.

X'00000058'
A structure failure occurred and a rebuild was not done.

X'0000005C'
An attempt to schedule a client exit was not successful.

X'00000060'
A BPECBGET for a control block failed.

X'00000064'
No queues were moved to the overflow structure during phase 2 of threshold processing. Threshold processing will not occur again until one of the following occurs:
- CQS is no longer in overflow mode, if CQS was already in overflow mode before the current threshold process started.
- The overflow structure is rebuilt.
- CQS issues the CQS0206I message for the primary structure.

X'00000068'
A structure connection was lost.

X'0000006C'
A full condition was detected on the primary structure.

X'00000070'
A full condition was detected on the overflow structure.

Source: CQS codes

CQS control list entries

CQS uses control list entries to manage the list structure, such as managing structure checkpoint, structure recovery, and overflow.

A list entry is a z/OS term for a piece of data on a coupling facility list structure list. A control list entry is a list entry that CQS writes to the control list header (list header number = 0).

The following list describes the CQS control list entries:

CQSGLOBAL (global list entry)
- Contains the global information for connecting to the structure.
- Created by the CQS that allocates the structure.

CQSGLOBALCONN (global client connect entry)
- Contains the client connect information that pertains to all clients.

CQSLOCAL (local list entry)
- Contains CQS local information, such as log token of the last system checkpoint.
- One CQSLOCAL exists for each CQS connected to the structure.

CQSSTRCHKPT (structure checkpoint list entry)
- Contains log token and time stamp of the last two structure checkpoints.

CQSSTRCHKPTINPRG (structure checkpoint in progress list entry)
- Indicates that structure checkpoint is in progress.

CQSLOGFULL (log full processing list entry)
- Contains information about log-full processing that is in progress.

CQSOVERFLOW (overflow list entry)
- Indicates whether a structure is in overflow mode.

- Might indicate that the structure is in the overflow threshold processing mode.

CWSOVERFLOWQNAME (overflow queue name list entry)

- Contains a list of queue names in overflow mode.

CQSOVERFLOWQNMA (overflow queue name adds list entry)

- Contains the names of queues that have been added to overflow during the current threshold process.

CQSOVERFLOWQNMR (overflow queue names removed list entry)

- Contains the names of the queues that have been removed from overflow during the current overflow scan process.

CQSRECOVER (recover list entry)

- Indicates that structure copy or recovery is in progress.

Chapter 7. CSL codes

The Common Service Layer (CSL) issues codes from various subcomponents.

ODBM abend codes

When Open Database Manager (ODBM) encounters certain problems, ODBM terminates abnormally and the Common Service Layer (CSL) issues an abend code. These codes appear as user abends.

The ODBM abend codes include:

0010

Explanation: Open Database Manager (ODBM) initialization encountered an error that prevented the ODBM address space from starting. Message BPE0006I is issued with this abend as `0010-xxxxxxx`, where *xxxxxxx* is the abend subcode. When the abend is issued, Register 15 contains a code that identifies the reason for the abend. This abend might be accompanied by message CSL0001E or CSL0002E, which further explain the problem.

The following list describes the abend subcodes and their meanings:

Codes
Explanation

X'010'
The CSLDANCH block could not be allocated.

X'014'
The BPEPARSE work area could not be allocated.

X'018'
The CSLDPLEX block could not be allocated.

X'01C'
The CSLDCMDE block could not be allocated.

X'020'
The ORRS TCB token table could not be allocated.

X'080'
An error occurred while reading the CSLDIxxx member.

X'0C0'
An error occurred while parsing the ODBM run time parameter.

X'0C4'
An error occurred while parsing the CSLDIxxx member

X'100'
An error occurred during parameter validation of the CSLDIxxx or ODBM parameters.

X'180'
An error occurred while preloading a module.

X'184'
An error occurred during a call to BPELOAD.

X'1C8'
The BPE buffer pool create service (BPEBPCRE) encountered an error while attempting to create the output buffer pool.

X'200'
A CSLZARM0 error occurred, which is an Automatic Restart Manager error.

X'204'
A CSLZLIC0 error occurred. An invalid function code was passed to CSLZLIC0.

X'300'
When attempting to process the configuration member (CSLDCxxx), the BPEPARSE work area storage could not be obtained.

X'304'
The CSLDCxxx member could not be read.

X'308'
When processing the CSLDCxxx member, a parsing error occurred for the GLOBAL section.

X'30C'
When processing the CSLDCxxx member, a parsing error occurred for the LOCAL section.

X'310'
When processing the CSLDCxxx member, a duplicate ODBM() name was defined in the LOCAL section.

X'314'
When processing the CSLDCxxx member, no ODBM() name was defined in the LOCAL section.

X'318'
When processing the CSLDCxxx member, no DATASTORE() name was defined in the LOCAL section for a given ODBM() name.

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X'31C'
When processing the CSLDCxxx member, an invalid DATASTORE() name was defined in the LOCAL section for a given ODBM() name.

X'320'
When processing the CSLDCxxx member, an invalid ALIAS() name was defined in the LOCAL section for a given DATASTORE() name.

X'324'
When processing the CSLDCxxx member, a duplicate DATASTORE() name was defined in the LOCAL section for a given ODBM() name.

X'328'
When processing the CSLDCxxx member, a duplicate ALIAS() name was defined in the LOCAL section for a given DATASTORE() name.

X'32C'
When processing the CSLDCxxx member, the datastore control block (CSLDDSCB) storage could not be obtained for a given DATASTORE() name.

X'330'
When processing the CSLDCxxx member, the CSLDPRP control block storage could not be obtained for a given DATASTORE() name.

X'334'
When processing the CSLDCxxx member, the alias control block (CSLDALCB) storage could not be obtained for a given DATASTORE() name.

X'400'
The TCB type is unknown.

X'440'
An error occurred while CSLDIN10 was attempting to load.

X'4C0'
An error occurred while ODBM attempted to create an ODBM thread.

X'4D0'
CSLDTOT0 failed to load.

X'4D4'
An error occurred while ODBM attempted to create an RQCR thread.

X'4D8'
The ODBA CIMS CONNECT call failed during ODBM initialization. ODBM abend 0010–4D8 is preceded by message CSL4005W. When this abend is issued:
- Register 2 contains the AIB return code
- Register 3 contains the AIB reason code
- Register 4 contains the AIB error extension

X'4DC'
DRA initialization failed because a subsystem identified in the LOCAL_DATASTORE_CONFIGURATION SECTION of the CSLDCxxx member of the IMS.PROCLIB was not found.

X'500'
An asynchronous work element (AWE) could not be created for server REGR.

X'504'
An AWE could not be created for server DMIR.

X'508'
An AWE could not be created for server ODBS.

X'50C'
An AWE could not be created for server ODBR.

X'510'
An AWE could not be created for server CMDR.

X'530'
A PLEX TRACE table could not be created.

X'534'
The APSB thread hash table could not be created.

X'538'
SCI registration (CSLSCREG) failed.

X'53C'
The SCI Ready function (CSLSCRDY) failed.

X'540'
The CSLDSTT statistics block could not be allocated.

System action: The address space terminates abnormally.

Operator response: If the error indicated by the abend subcode is due to environmental conditions (for example, invalid parameters), correct the indicated problem and restart the address space. Otherwise, save the job log and system log information, and contact IBM Software Support for assistance.

Source: CSL ODBM codes

Module: CSLDIN00, CSLDIN10, CSLDIT00, CSLDTMA0, CSLDCF00

Related information:

CSL0001E (Messages and Codes)

CSL0002E (Messages and Codes)

CSL4005W (Messages and Codes)

0400

Explanation: The CSL Open Database Manager (ODBM) encountered a processing error. When the abend is issued, Register 15 contains a code that identifies the reason for the abend:

Codes
Explanation

X'100'
ODBM encountered an invalid address for the

Distributed Relational Database Architecture™ (DRDA) output response area.

X'104'
ODBM encountered an abend while copying output to the caller-provided storage during the processing of an APSB call that uses the request protocol.

X'108'
ODBM encountered an abend while copying output to the caller-provided storage during the processing of an APSB call that uses the message protocol.

X'10C'
ODBM encountered an abend while copying output to the caller-provided storage during the processing of a DL/I call that uses the request protocol.

X'110'
ODBM encountered an abend while copying output to the caller-provided storage during the processing of a DL/I call that uses the message protocol.

System action: The offending CSL ODBM processing thread terminates abnormally.

System programmer response: If the abend occurs during ODBM thread processing, the ODBM thread-dependent region terminates abnormally, but ODBM continues to run.

Programmer response: This problem is an internal error. Contact IBM Software Support for assistance.

Source: CSL ODBM codes

Module: CSLDDMO0

0411

Explanation: The CSL Open Database Manager (ODBM) encountered an error interfacing with recoverable resource management services (RRMS). When the abend is issued, Register 15 contains a code that identifies the reason for the abend. Register 2 contains all the return codes from the service that was invoked.

The following list describes the abend subcodes and their meanings:

Codes
Explanation

X'01'
ODBM failed to obtain storage for the CSLDRRSB control block. Register 2 contains the BPEGETM return code.

X'02'
ODBM failed to obtain storage for an internal work area in module CSLDRRS1. Register 2 contains the STORAGE OBTAIN return code.

X'03'
An ODBM call to RRS/MVS ATRIRLN failed. Register 2 contains the ATRIRLN return code.

X'07'
The system operator replied CANCEL to WTOR message CSL4001A. CSL4001A was issued because RRS was not active when ODBM started and ODBM is currently configured to require RRS.

X'08'
An ODBM call to RRS/MVS ATRISLN failed. Register 2 contains the ATRISLN return code.

X'09'
An ODBM call to RRS/MVS ATRIBRS failed. Register 2 contains the ATRIBRS return code.

X'0A'
An ODBM call to RRS/MVS ATRIRNI failed. Register 2 contains the ATRIRNI return code.

X'0B'
An ODBM call to RRS/MVS ATRIRRI failed. Register 2 contains the ATRIRRI return code.

X'0E'
An ODBM call to CRGSEIF for registration with the context services exit manager failed. Register 2 contains the CRGSEIF return code.

X'0F'
An ODBM call to CRGSEIF for registration with the RRS exit manager failed. Register 2 contains the CRGSEIF return code.

X'11'
An ODBM call to RRS/MVS ATRIERS failed. Register 2 contains the ATRIERS return code.

X'1B'
An ODBM RRMS NOTIFICATION exit routine failed.

X'23'
An ODBM call to CRGGRM for registration with RRS as a resource manager failed. Register 2 contains the CRGGRM return code.

X'2B'
ODBM failed to load an RRMS callable service into the ODBM internal vector table. Register 2 contains the BPELOAD return code. Register 6 contains the address of the name of the RRMS callable service that failed to load.

System action: The CSL Open Database Manager (ODBM) terminates abnormally.

System programmer response: If this abend occurs during initialization, ODBM terminates abnormally. If the abend occurs during ODBM thread processing, the ODBM thread-dependent region terminates abnormally, but ODBM continues to run.

Programmer response: If this problem is an internal error, such as an RRS/MVS service failure, first make

sure that RRS/MVS was active on your system. Then contact IBM Software Support for assistance.

Source: CSL ODBM codes

Module: CSLDRRS1

Related information:

CSL4001A (Messages and Codes)

OM abend codes

When Operations Manager (OM) encounters a problem, abend codes are issued by the Common Service Layer (CSL). These codes appear as user abends.

The OM abend codes include:

0010

Explanation: OM initialization encountered an error that prevented the OM address space from starting. Message BPE0006I is issued with this abend as `0010-xxxxxxx`, where *xxxxxxx* is the abend subcode. When the abend is issued, Register 15 contains a code that indicates the reason for the abend. This abend might be accompanied by message CSL0001E or CSL0002E, which further explain the problem.

The following list describes the abend subcodes and their meanings:

Code	Meaning
X'010'	The CSLOANCH block could not be allocated.
X'014'	The BPEPARSE work area could not be allocated.
X'018'	The CSLOPLEX block could not be allocated.
X'080'	An error occurred while reading the CSLOIxxx member.
X'0C0'	An error occurred while parsing the OM run time parameter.
X'0C4'	An error occurred while parsing the CSLOIxxx member
X'100'	An error occurred during parameter validation of the CSLOIxxx or OM exec parameters.
X'180'	An error occurred while preloading a module.
X'184'	An error occurred during a call to BPELOAD.
X'1C0'	The BPE buffer pool create service (BPEBPCRE) encountered an error while attempting to create the command buffer pool.
X'1C4'	The BPE buffer pool create service (BPEBPCRE) encountered an error while attempting to create the grammar buffer pool.
X'1C8'	The BPE buffer pool create service (BPEBPCRE) encountered an error while attempting to create the output buffer pool.
X'200'	A CSLZARM0 error occurred, which is an Automatic Restart Manager error.
X'204'	A CSLZLIC0 error occurred, which is a License Manager Authorization error.
X'400'	The TCB type is unknown.
X'440'	An error occurred while CSLOIN10 was attempting to load.
X'4C0'	An error occurred while OM attempted to create an RQST thread.
X'4D0'	CSLOTOT0 failed to load.
X'4D4'	An error occurred while OM attempted to create an RQCR thread.
X'4E0'	The RACROUTE REQUEST-LIST request failed.
X'500'	An asynchronous work element (AWE) could not be created for server RQST.
X'504'	An AWE could not be created for server RQOC.
X'508'	An AWE could not be created for server RQCR.
X'50C'	An AWE could not be created for server RQCR.
X'510'	An AWE could not be created for server RQOU.
X'514'	An AWE could not be created for server RQQY.
X'51C'	An AWE could not be created for server RQRG.
X'530'	A PLEX TRACE table could not be created.
X'534'	The command instance hash table or the command registration hash table (the verb hash table) could not be created.
X'538'	SCI registration (CSLSCREG) failed.
X'53C'	The SCI Ready function (CSLSCRDY) failed.
X'540'	The CSLOSTT statistics block could not be allocated.

System action: The address space terminates abnormally.

Operator response: If the error indicated by the abend subcode is due to environmental conditions (for example, incorrect authorization or invalid parameters), correct the indicated problem and restart the address space. Otherwise, save job log and system log information and contact IBM Software Support for assistance.

Source: CSL OM codes

Module: CSLOIN00, CSLOIN10, CSLOIT00, CSLOPL10

Related information:

BPE0006I (Messages and Codes)

0104

Explanation: A failure occurred during Operations Manager (OM) log processing. An abend subcode

accompanies this abend and provides details of the cause of the failure.

The following list describes the abend subcodes and their meanings:

Subcode
Meaning

X'00000004'
OM log processing received a return and reason code from the z/OS system logger indicating that z/OS was unable to process work for the log stream. OM must wait for an ENF 48 signal. When the ENF 48 was received, it indicated that OM must reconnect to the z/OS log stream. The connection to the log stream failed. Register 2 contains the return code and reason code from the IXGCONN request. The first halfword contains the return code and the second halfword contains the reason code. Register 3 contains the return code from the OM log connect service.

System action: OM terminates abnormally.

System programmer response: For subcode X'00000004', determine the reason for the IXGCONN failure, correct the problem, and restart OM.

Source: CSL OM codes

Related reference:

z/OS: IXGCONN macro return and reason codes

RM abend codes

When a problem occurs with the Resource Manager (RM), an abend code is issued by the Common Service Layer (CSL). These codes appear as user abends.

These abend codes include the following:

0010

Explanation: Resource manager (RM) initialization encountered an error that prevented the RM address space from starting. Message BPE0006I is issued with this abend as `0010-`*`xxxxxxx`*, where *xxxxxxx* is the abend subcode. When the abend is issued, Register 15 contains a code that indicates the reason for the abend. This abend might be accompanied by message CSL0001E or CSL0002E, which further explain the problem.

The following list describes the abend subcodes and their meanings:

Code **Meaning**

X'00000010'
Storage allocation failed for the RM anchor block (CSLRANCH).

X'00000014'
Storage allocation failed for the BPEPARSE work area.

X'00000018'
Storage allocation failed for the IMSplex block (CSLRPLEX).

X'0000001C'
The command extension block, CSLRCMDE, could not be allocated.

X'00000080'
An error occurred while reading the CSLRIxxx PROCLIB member.

X'000000C0'
An error occurred while parsing RM run time parameters. One CSL0001E message is issued for each run time parameter in error. For more information about determining what the parsing error is, see message BPE0003E.

X'000000C4'
An error occurred while parsing the CSLRIxxx PROCLIB member. One CSL0001E message is issued for each parameter in error. For more information about determining what the parsing error is, see message BPE0003E.

X'00000100'
An error occurred during parameter validation of the CSLRIxxx or RM execution parameters.

X'00000180'
There is an invalid parameter in the CSLRIxxx PROCLIB member or an invalid RM run time parameter. One CSL0001E message is issued for each parameter in error.

X'00000184'
A lower-level RM initialization module could not be loaded or called.

X'00000188'
BPELOAD failed to load the RM command modules.

X'000001C0'
The update buffer pool could not be created.

X'000001C4'
The query buffer pool could not be created.

X'00000200'
The Automatic Restart Manager (the CSLZARM0 routine) could not be initialized.

X'00000204'
Authorization could not be obtained for the license manager (the CSLZLIC0 routine).

X'00000300'
Initialization of RM failed because a higher-level RM is enabled to use the IMSRSC repository.

X'00000400'
The TCB type is unknown.

X'00000440'
The RQST TCB initialization routine (CSLRIN10) could not be loaded.
X'000004C0'
The RQST thread for the request mother TCB (RQST) could not be created.
X'000004D0'
The RM process timeout routine (CSLRTOT0) could not be loaded.
X'000004D4'
The TOUT thread for the process request TCB (RQPR) could not be created.
X'00000508'
RM-to-CQS communications could not be initialized.
X'0000050C'
An AWE for the queue server STRE could not be created.
X'00000510'
An AWE for the queue server DEL could not be created.
X'00000514'
An AWE for the queue server PRCS could not be created.
X'00000518'
An AWE for the queue server QRY could not be created.
X'0000051C'
An AWE for the queue server REG could not be created.
X'00000520'
An AWE for the queue server UPD could not be created.
X'00000524'
RM-to-SCI communications could not be initialized.
X'00000528'
PLEX trace tables or repository trace table could not be created.
X'0000052C'
SCI could not be notified that RM is ready for work.
X'00000530'
The RQDL thread for the request mother TCB (RQST) could not be created.
X'00000534'
The RQPR thread for the request mother TCB (RQST) could not be created.
X'00000538'
The RQQY thread for the request mother TCB (RQST) could not be created.
X'0000053C'
The RQUP thread for the request mother TCB (RQST) could not be created.
X'00000540'
Storage allocation failed for the resource type block (CSLRRTYP).
X'00000544'
Storage allocation failed for the RM statistics block (CSLRSTT).
X'00000548'
An AWE for the queue server CMD could not be created.
X'00000549'
An AWE for the queue server NTF could not be created.
X'0000054C'
The process hash table could not be created.
X'00000550'
The resource structure could not be connected.
X'00000554'
The RM global resource block (CSLRGBL) could not be created or updated on the resource structure.
X'00000558'
The IMSplex name defined to this RM does not match the IMSplex name defined by RMs that have already successfully joined the IMSplex.
X'0000055C'
There are an invalid number of RMs in the IMSplex. If no resource structure is defined, only one RM is allowed in the IMSplex.
X'00000560'
SCI could not be queried about the other RMs in the IMSplex.
X'00000564'
The structure type is invalid. RM attempted to connect to a structure that is not defined as a resource structure to CQS. The structure defined to RM in the CSLRIxxx PROCLIB member must be defined to CQS as a resource structure in the CQSSGxxx PROCLIB member.
X'00000568'
The RM global resource block (CSLRPGBL) could not be read, created, or updated on the resource structure.
X'00000570'
An AWE for the queue server PRCI could not be created.
X'00000574'
An AWE for the queue server PRCT could not be created.
X'00000578'
An AWE for the queue server PRCR could not be created.
X'00000630'
Repository request hash table could not be created.
X'00000631'
An AWE for the repository services could not be created.
X'00000632'
An AWE for the repository services could not be enqueued.
X'00000633'
An attempt to get a buffer for the CQS request failed.
X'00000634'
There is an XCF group mismatch between RM

initialization member CSLRIxxx and the repository global entry in the resource structure.

X'00000635'
An attempt to get a repository internal block failed.

X'00000636'
An attempt to get a buffer for the repository request failed.

System action: RM address space initialization terminates abnormally.

Operator response: If the error indicated by the abend subcode is due to environmental conditions (for example, incorrect authorization or invalid parameters), correct the indicated problem and restart the address space. Otherwise, save job log and system log information and contact IBM Software Support for assistance.

Source: CSL RM codes

Module: CSLRIN00, CSLRIN10, CSLRIT00, CSLRPL10, CSLRL20

Related information:

- BPE0006I (Messages and Codes)
- CSL0001E (Messages and Codes)
- CSL0002E (Messages and Codes)

SCI abend codes

When the Structured Call Interface (SCI) encounters a problem, abend codes are issued by the Common Service Layer (CSL). These codes appear as user abends.

0010

Explanation: SCI initialization encountered an error that prevented the SCI address space from starting. Message BPE0006I is issued with this abend as `0010-`*`xxxxxxx`*, where *xxxxxxx* is the abend subcode. When the abend is issued, Register 15 contains a code that indicates the reason for the abend. This abend might be accompanied by message CSL0001E or CSL0002E, which further explain the problem.

Subcodes issued by CSLSFRC0

X'00000604'
An SCI with the same name is already active on the OS image.

Subcodes issued by CSLSIN00

Subcode
Explanation

X'00000010'
An error occurred while allocating a CSLSANCH control block.

X'00000014'
An error occurred while allocating a BPEPARSE work area control block.

X'00000018'
An error occurred while allocating a CSLSPLEX control block.

X'00000080'
An error occurred while reading the CSLSIxxx PROCLIB member.

X'000000C0'
An error occurred while parsing the SCI Execute parameters.

X'000000C4'
An error occurred while parsing CSLSIxxx.

X'00000100'
An error occurred in parameter validation.

X'00000140'
An error occurred in the Trace Table Create action.

X'00000180'
An error occurred in the Module Preload action.

X'00000184'
An error occurred while issuing the BPELOADC macro.

X'000001C0'
An error occurred in the CSLSCQRY Buffer Pool Create action.

X'00000200'
Error in the module CSLZARM0.

X'00000204'
An error occurred in the module CSLZLIC0.

X'00000280'
An error occurred while issuing an ENFREQ 38 Request.

Subcodes issued by CSLSING0

Subcode
Explanation

X'00000600'
A Name or Token Retrieve error occurred.

X'00000604'
An SCI with the same name is already active on the OS image.

X'00000608'
An error occurred in SGBL allocation.

X'0000060C'
An error occurred in obtaining SGRT storage.

X'00000610'
An error occurred in releasing SGRT storage.

X'00000614'
An ALESERV extract error occurred.

X'00000618'
A TCBTOKEN error occurred.

X'0000061C'
An error occurred in the BLDL macro for an interface module.
X'00000620'
An error occurred while loading an interface module.
X'00000624'
An error occurred while loading a cross memory module.
X'00000628'
An ETCRE error occurred.
X'0000062C'
An error occurred in the BLDL macro call for an SVC module.
X'00000630'
An error occurred while obtaining storage for an SVC module.
X'00000634'
An error occurred while loading an SVC module.
X'00000638'
A BPESVC error occurred.
X'0000063C'
An error occurred when adding a resource manager.
X'00000640'
An error occurred in the BLDL macro for a stub module.
X'00000644'
An error occurred when obtaining storage for a stub module.
X'00000648'
An error occurred while loading a stub module.

Subcodes issued by CSLSINP0
X'00000700'
A BPEIEANT RETRIEVE error occurred.
X'00000704'
BPECBGET for an RMBR block encountered an error.
X'00000708'
BPECBGET for a TYPL block encountered an error.
X'00000070C'
A BPEHTADD error occurred for a name table.
X'00000710'
A BPEHTADD error occurred for a token table.
X'00000714'
A BPEGETM error occurred for a type table.
X'00000718'
A BPEHTCRE error occurred for a name table.
X'0000071C'
A BPEHTCRE error occurred for a token table.
X'00000720'
STORAGE(OBTAIN) for a PGBL block encountered an error.
X'00000724'
A BPEIEANT CREATE error occurred.
X'00000728'
A CSLSCREG `func(REGISTER)` error occurred.
X'0000072C'
The IMSplex is being managed by an SCI with a different name on the same z/OS image. An IMSplex can be managed by only a single SCI on a z/OS image.
X'00000730'
The IMSplex was previously managed by an SCI with a different name on the z/OS image. In order to manage the IMSplex with the new SCI, you must bring up an SCI using the old name with the FORCE=(ALL,SHUTDOWN) startup parameter. This will clean up the global blocks left by the previous SCI and allow you to manage the IMSplex using an SCI with a different name.
X'00000734'
STORAGE(OBTAIN) for CMBR failed.
X'00000738'
ALESERVE SEARCH failed.
X'0000073C'
ALESERV ADD failed.
X'00000740'
A CSLSCRDY `func(READY)` error occurred.
X'00000744'
An error occurred when adding SCI to the type table.
X'00000748.'
A BPEHTCRE error occurred for a type table.
X'0000074C'
An IXCSETUS error was encountered.
X'00000750'
A BPELAGET error was encountered when obtaining the non-reachable chain latch.
X'00000754'
A BPELAREL error was encountered when releasing the non-reachable chain latch.
X'00000780'
A BPETHDCR error was encountered when creating the INPO thread.
X'00000784'
A BPRWAIT error was encountered waiting for the INPO thread.
X'000007B0'
A BPELAGET error was encountered when obtaining the XCFC latch.
X'000007B4'
A BPELAREL error was encountered when releasing the XCFC latch.

Subcodes issued by CSLSPL10
X'00000780'
A BPETHDCR error was encountered creating the INPO thread.
X'00000784'
A BPEWAIT error was encountered waiting for the INPO thread.

Subcodes issued by CSLSPLR0

X'000007A0'
A BPECBGET error was encountered while obtaining an RMBR block.

X'000007A4'
A BPEHTADD error was encountered when adding to the token hash table.

X'000007A8'
A BPEHTADD error was encountered when adding to the name hash table.

X'000007AC'
An error was encountered when adding to the type table.

Subcodes issued by CSLSIS00

Subcode
Explanation

X'00000504'
An IPLX create thread error occurred.

X'0000508'
An error occurred while loading CSLTOT0.

X'0000050C'
An RQTO create thread error occurred.

X'00000510'
An error occurred while loading CSLSSRT0.

X'00000514'
An SRTO create thread error occurred.

Subcodes issued by CSLSIT00 and CSLSIT10

Subcode
Explanation

X'00000400'
An unknown TCB type error occurred.

X'00000440'
An error occurred while loading CSLSIS00.

X'00000444'
A SCIM create thread error occurred.

X'00000448'
A XCFP create thread error occurred.

X'0000044C'
An INTF create thread error occurred.

Subcodes issued by CSLSXCG0

X'00000800'
An SCI with the same name already is active in the IMSplex.

X'00000804'
A BPEGETM error was encountered.

X'00000808'
A IXCJOIN error was encountered while attempting to join the XCF group.

X'0000080C'
A BPECBGET error was encountered.

System action: SCI terminates abnormally.

Programmer response: Determine the reason for the failure. Message CSLS0001E or CSLS0002E is issued to provide additional diagnostic information. If you are unable to resolve the problem, save the SYSLOG and dump, and contact IBM Software Support for assistance.

Source: CSL SCI codes

Module: CSLSIN00, CSLSIT00, CSLSIT10, CSLSIS00, CSLSINP0, CSLPL10, CSLPLR0, CSLSXCG0, CSLING0, CSLSFRC0

Related information:

BPE0006I (Messages and Codes)

CSL0001E (Messages and Codes)

CSL0002E (Messages and Codes)

CSL return and reason codes

The Common Service Layer (CSL) issues return and reason codes in association with Common Service Layer messages. Error logs are issued in XML.

For information about the tags used in the CSL output, see XML tags returned as CSL OM responses (System Programming APIs).

To distinguish return codes from different components, each component uses a unique set of return codes on CSL macro calls. The first two characters identify the component that generated the return code. The last six characters of a return code have the same meaning between components:

IMS control region
00

Structured Call Interface
01

Operations Manager
02

Resource Manager
03

ODBM
04
IMS Connect
0C

The first two characters are used to determine where to find the documentation on the return and reason code values:
- IMS command return and reason codes are in DFSCMDRR.
- Structured Call Interface (SCI) return and reason codes are in CSLSRR.
- Operations Manager (OM) return and reason codes are in CSLORR.
- Resource Manger (RM) return and reason codes are in CSLRRR.
- ODBM return and reason codes are in CSLDRR.
- IMS Connect (ICON) return and reason codes are in HWSHRR.
- For DBRC command return and reason codes, look at DSPIXL in the IMS.SDFSMAC data set.

CSLZ return codes might be generated by SCI, OM, or RM so each return code is unique. CSLZ reason codes are the same regardless of the component generating the reason code and are documented in CSLZRR.

All of the preceding macros can be found in the IMS.SDFSMAC data set.

CSLOMCMD return and reason codes

The CSLOMCMD request can issue return and reason codes to explain how it ran.

For a list of these codes, see the CSLOMCMD: command request (System Programming APIs).

CLSOMREG return and reason codes

The CLSOMREG macro request can issue return and reason codes, and completion codes.

For a list of these codes, see CSLOMREG: command registration request (System Programming APIs).

REXX SPOC return and reason codes

REXX SPOC return and reason codes describes return and reason codes issued from the REXX Single Point of Control (SPOC). The return and reason codes are character values, not hexadecimal values. The `X` at the end of the code is for easier reading.

IMSSPOC commands, IMS commands, and the CSLULGTS command can set special variables. These variables are IMSRC and IMSREASON. See those variables if the standard REXX return code is non-zero.

The REXX SPOC also produces the return codes from CSLSCREG or CSLOMCMD.

Table 11. REXX SPOC API return and reason codes

Return code	Reason code	Meaning
00000000X	00000000X	The request completed successfully.

Table 11. REXX SPOC API return and reason codes (continued)

Return code	Reason code	Meaning
08000004X	00001000X	The command is still running.
08000008X	00002000X	The wait value is missing or invalid.
	00002008X	An IMSplex value is missing or invalid.
	00002012X	The STEM name is missing or invalid.
	00002016X	The token name is missing or invalid.
	00002020X	There are too many parameters.
	00002024X	The request token was not found.
	00002028X	The CART value is missing or invalid.
	00002030X	The option was not recognized.
	00002044X	An invalid value was specified.
08000010X		An environmental error occurred.
08000014X	00004000X	A GETMAIN failure occurred.

Chapter 8. Codes for IMS commands routed through OM

All IMS commands that are routed from the Operations Manager (OM) can issue return and reason codes and completion codes.

The codes are defined in the DFSCMDRR macro. The DFSCMDRR macro can be found in the IMS.SDFSMAC data set.

Return and reason codes for commands to OM

Commands that are routed to the Operations Manager (OM) can issue return and reason codes to help you identify the source of a problem.

The error might be in the command processing client, or it might be in TSO SPOC, SCI, or OM if it occurred before the command was sent to the command processing client. The high-order byte of the return code helps you identify the address space that returned the error for the command. After you determine the address space that returned the error, you can further investigate the return and reason codes returned for the command from the source macro.

The following table helps you identify the error return and reason codes and the macros. The macros can be found in the IMS.SDFSMAC data set.

Table 12. Identifying error return and reason codes and corresponding macros

High-order byte in return code	Address space that returned the error	Macro name for identifying the return and reason codes
X'00'	IMS	DFSCMDRR
X'01'	Structured Call Interface (SCI)	CSLSRR
X'02'	Operations Manager (OM)	CSLORR
X'03'	Resource Manager (RM)	CSLRRR
X'04'	Open Database Manager (ODBM)	CSLDRR
X'08'	Single Point of Control (SPOC)	CSLUXRR
X'0C'	IMS Connect	HWSHRR

Completion codes

Completion codes are generated in list format as the command output for each resource on which the command ran.

These completion codes are preceded by a return and reason code of RC=X'00000000' RN=X'00000000', RC=X'0000000C' RN=X'00003000' or RC=X'0000000C' RN=X'00003004'.

These completion codes are character representations of hexadecimal numbers.

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Table 13. Completion codes for IMSplex command routed through OM

Completion code	Meaning
C' 0'	The request was successful.
C' 1'	The command that was issued is not applicable to this IMS.
C' 2'	The command was not attempted by this IMS.
C' 3'	IMS is already in the requests online change state.
C' 4'	The online change phase is incomplete on this IMS.
C' 8'	The command is complete for some.
C' C'	The command is complete for none.
C' 10'	The resource name is invalid.
C' 11'	There is a duplicate resource name.
C' 14'	The resource is not a partition name.
C' 18'	The partition was deleted by OLC.
C' 1C'	The resource is a partitioned secondary index.
C' 20'	The INIT OLREORG issued, OLR is already in progress.
C' 24'	No OLR is in progress.
C' 28'	No DMB loaded. Need to schedule a PSB that references the database.
C' 30'	The command is invalid for the transaction that was dynamically built for shared queues.
C' 31'	Command is invalid for a DEDB.
C' 32'	Command is invalid for an MSDB.
C' 33'	Command is invalid for a HALDB master.
C' 34'	The command is invalid for a CPIC transaction.
C' 38'	The command is invalid for BMP.
C' 3C'	There is no load balancing. MAXRGN is invalid.
C' 40'	PARLIM cannot be changed.
C' 44'	The transaction is busy. The command is rejected.
C' 45'	The transaction has an invalid SID#.
C' 50'	CQS is unavailable.
C' 51'	No resource structure exists.
C' 52'	The resource structure is full.
C' 53'	No resource manager (RM) address space exists.
C' 54'	No SCI address space exists.
C' 55'	No FASTPATH installed.
C' 56'	Full Function (DLI) DB + Local Storage Option + XRF Tracker.
C' 57'	No queue structure.
C' 58'	IMS is not using RM services (RMENV=N).
C' 60'	A GETMAIN storage error occurred.
C' 61'	A DFSBCB storage error occurred.
C' 62'	A HIOP storage error occurred.
C' 63'	A WKAP storage error occurred.

Table 13. Completion codes for IMSplex command routed through OM (continued)

Completion code	Meaning
C' 64'	A GETSTOR storage error occurred.
C' 65'	DMB pool storage error.
C' 66'	DMB pool full.
C' 70'	A module load error occurred.
C' 71'	A module locate error occurred.
C' 72'	A randomizer load error occurred.
C' 80'	A data set error occurred.
C' 81'	DBRC error.
C' 90'	An internal error occurred.
C' 91'	A time-out error occurred.
C' 92'	Command processing error.
C' 94'	An RM request error occurred.
C' 95'	An SCI request error occurred.
C' 98'	A CQS request error occurred.
C' A0'	Dynamic allocation failed.
C' A1'	The database is authorized by batch.
C' A2'	The database is authorized by another IMS.
C' A3'	The authorization change failed.
C' A4'	The database is not registered to DBRC.
C' A5'	Prevent further DBRC authorizations of database.
C' A6'	Invalid database record in the RECON data set.
C' A7'	The DBRC UNAUTH failed for CHNGAUTH.
C' A8'	Invalid database record in the RECON data set.
C' A9'	Database authorization error.
C' AA'	Database in use - BMP.
C' AB'	Database in use - DBCTL long thread.
C' AC'	Fastpath area held - long busy wait.
C' AD'	Dynamic unallocation failed.
C' AE'	Dynamic allocation error.
C' AF'	Database in use by a dependent region in OLC wait.
C' B0'	A resource definition error occurred.
C' B1'	A resource state error occurred.
C' B2'	An IMS state error occurred.
C' C1'	OLR DDIR missing or DFSPNT zero.
C' C2'	OLR already owned.
C' C3'	OLR partition STOPPED/LOCKED/DBDUMPED.
C' C4'	OLR partition being recovered.
C' C5'	OLR partition access not UPDATE/EXCLUSIVE.
C' C6'	OLR scheduling failed.
C' C7'	OLR partition not authorized.

Table 13. Completion codes for IMSplex command routed through OM (continued)

Completion code	Meaning
C' C8'	OLR master database STOPPED/LOCKED/DBDUMPED.
C' C9'	OLR master database access not UPDATE/EXCLUSIVE.
C' CA'	OLR set ownership failed.
C' CB'	The partition is not in specified status.
C' CC'	OLR already active for the partition.
C' CD'	HALDB OLR attempted for an RSR-covered HALDB.
C' CE'	HALDB OLR cannot access all the data in the partition because an EEQE exists.
C' D0'	Database CLOSE error.
C' D1'	Database WRITE error.
C' D2'	The database needs backout.
C' D3'	The database or area needs recovery.
C' D4'	The database needs image copy.
C' D5'	The database has no backouts.
C' D6'	The database is in use.
C' D7'	The database I/O prevention not complete.
C' D8'	The database backouts are pending.
C' D9'	The database OPEN failed.
C' DA'	The database being recalled from HSM.
C' DB'	The partition OPEN failed.
C' DC'	HALDB partition build failure.
C' DD'	HALDB partition INIT failure.
C' DE'	ACBLIB read failure.
C' DF'	Database directory INIT failure.
C' E0'	Database or area in recovery.
C' E2'	The parallel database OPEN not complete.
C' EE'	Database backout error.
C' EF'	Database is in error.
C' F0'	No area lock.
C' F1'	Area not stopped.
C' F2'	Preload is active for area.
C' F3'	Unresolved indoubts for area.
C' F4'	Allocation failed.
C' F5'	Area needs recovery.
C' F6'	ADS number discrepancy.
C' F7'	Area is not loaded into CF.
C' F8'	Area has I/O tolerated CI.

Chapter 9. DL/I status codes

During DL/I processing, the system reports the events that occur with DL/I codes by issuing status codes.

For information about DL/I status codes, see the following topics:

Related reference:

Chapter 20, "AIB return and reason codes set by IMS," on page 243

About DL/I status codes

DL/I operations issue codes to report status or problems.

The status code tables briefly explain each status code and list the calls for which you can receive each status code. The tables also include a column of numbers representing the category of each status code; the numbers and the corresponding explanations are below.

Subsections:

- "Categories of DL/I status codes"
- "Database calls" on page 106
- "Message calls" on page 112
- "System service calls" on page 115

Categories of DL/I status codes

The numbers in the category column of the status codes tables refer to the following categories of status codes:

1. Those indicating exceptional but valid conditions. The call is completed.
2. Those indicating warning or information-only status codes on successful calls (for example, GA and GK). If the call requested data, IMS returns the data to the I/O area. The call is completed.
3. Those indicating warning status codes on successful calls when data is not returned to the I/O area. The call is completed.
4. Those indicating improper user specifications. Most status codes are in this category. The call is not completed.
5. Those indicating system, I/O, or security errors encountered during the execution of I/O requests. The call is not completed.
6. Those indicating unavailable data.
7. The call could not be completed because the LOCKTIME value has been exceeded for an IRLM lock request.

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Database calls

Table 14. Database calls.

PCB-Status-Code	CLSE-GSAM	DEQ	GU-GHU	GUR	GN-GHN	GNP-GHNP	DLET-REPL	IRST-LOAD	IRST-ADD	FLD	POS	OPEN-GSAM	QUERY	REFRESH	TERM	Category	Description
AB		X	X	X	X	X	X	X	X	X	X			X		4	Segment I/O area required; none specified in call. Only applies to full-function DEQ calls.
AC			X	X	X	X	X	X	X							4	Hierarchic error in SSAs.
AD		X	X	X	X	X	X	X	X	X	X			X		4	Function parameter incorrect. Only applies to full-function DEQ calls.
AF			X	X	X											4	GSAM detected invalid variable-length record.
AG											X					4	Unqualified POS I/O area too small.
AH								X	X							4	Required SSA missing. Options list not specified in SETO call.
AI			X	X	X	X	X	X	X							5	Data management OPEN error.
AJ		X	X	X	X	X	X	X	X	X						4	Incorrect parameter format in I/O area; incorrect SSA format; incorrect command used to insert a logical child segment. I/O area length in AIB is invalid; incorrect class parameter specified in Fast Path Q command code.
AK			X	X	X	X		X	X	X	X					4	Invalid SSA field name.
AM			X	X	X	X	X	X	X	X	X					4	Call function not compatible with processing option, segment sensitivity, transaction code, definition, or program type.
AO			X	X	X	X	X	X	X		X					5	I/O error: OSAM, BSAM, or VSAM.
AT							X	X	X							4	User I/O area too long.
AU			X	X	X	X	X	X	X							4	SSAs too long.
BA			X	X	X	X	X		X							6	Call could not be completed because data was unavailable.

Table 14. Database calls (continued).

PCB-Status-Code	CLSE-GSAM	DEQ	GU-GHU	GUR	GN-GHN	GNP-GHNP	DLET-REPL	IRST-LOAD	IRST-ADD	FLD	POS	OPEN-GSAM	QUERY	REFRESH	TERM	Category	Description
BB			X	X	X	X	X		X							6	Call could not be completed because data was unavailable and updates are backed out only since the last commit point.
BC		X														6	Call could not be completed because of a deadlock occurrence; updates are backed out only since the last commit point.
BD			X	X	X	X	X		X							7	The call could not be completed because the value specified on LOCKTIME was exceeded for an IRLM lock request.
DA							X			X						4	Segment key field or nonreplaceable field has been changed.
DE				X												4	GUR calls can be issued only with the AIB interface.
DJ							X									4	No preceding successful GHU or GHN call or an SSA supplied at a level not retrieved.
DX							X									4	Violated delete rule.
EM											X						Normally for a utility.
FA			X	X						X						4	MSDB arithmetic overflow error occurred.
FC											X					4	POS call for direct dependent segments only.
FD			X	X	X	X	X	X	X	X						3,6	Deadlock occurred or external subsystem failure during CHKP or SYNC call.
FE										X						4	FSA error, not field name.
FF									X							3	No space in MSDB.
FG										X						4	Combination of FE and FW codes.

Table 14. Database calls (continued).

PCB-Status-Code	CLSE-GSAM	DEQ	GU-GHU	GUR	GN-GHN	GNP-GHNP	DLET-REPL	IRST-LOAD	IRST-ADD	FLD	POS	OPEN-GSAM	QUERY	REFRESH	TERM	Category	Description
FH			X	X	X	X	X	X	X		X					3	Area unavailable or area changed status between update call and CHKP or SYNC.
FI			X	X	X	X	X	X	X		X					4	I/O area not in user dependent region.
FM			X	X	X	X		X	X		X					4	Randomizing routine return code = 4.
FN										X						4	FSA error, field name.
FP							X		X	X						4	Invalid hexadecimal or decimal data.
FR			X	X	X	X	X	X	X	X	X					5	Total buffer allocation exceeded.
FS								X								3	DEDB areas are full.
FT			X	X	X	X	X	X			X					4	Too many SSAs on call.
FV										X						3	MSDB verify that condition failed.
FW		X	X	X	X	X	X	X	X	X	X					2	More resources needed than normally allowed. For the DEQ call, Fast Path was not able to release any buffers. Consider issuing a COMMIT.
FY			X	X	X	X	X	X	X	X	X					4	Attempt to read sequential data preceding the current position.
GA					X	X										2	Crossing hierarchical boundary.
GB					X											1	End of database.
GC			X	X	X			X			X					3	Crossing unit of work (UOW) boundary.
GD									X							1	Call did not have SSAs for all levels above insert and has lost segment position.
GE			X	X	X	X			X							1	Segment not found.

Table 14. Database calls (continued).

PCB-Status-Code	CLSE-GSAM	DEQ	GU-GHU	GUR	GN-GHN	GNP-GHNP	DLET-REPL	ISRT-LOAD	ISRT-ADD	FLD	POS	OPEN-GSAM	QUERY	REFRESH	TERM	Category	Description
GG			X	X	X	X										5	Segment contains invalid pointer.
GK					X	X										2	Crossing segment boundaries on same level.
GL		X														4	Invalid user log code. Only applies to full-function DEQ calls.
GP						X			X		X					4	No parentage established.
HT											X						Normally for a utility.
II									X							3	Segment exists.
IX									X							4	Violated insert rule.
L2									X							1	The area lock failed.
LB								X								1	Segment being loaded exists in database.
LC								X								4	Key field of segments out of sequence.
LD								X								4	No parent for this segment has been loaded.
LE								X								4	Sequence of sibling segments not the same as DBD sequence.
LF								X								4	An attempt was made to load a logical child segment in either a HALDB PHDAM or PHIDAM database.
LS									X							1	Work might be backed out because sufficient CI space was not preallocated for the area, or the SDEP CI lock failed.
NA													X	X		6	A database was unavailable.
NE							X									3	DL/I call issued by index maintenance cannot find segment.

Table 14. Database calls (continued).

PCB-Status-Code	CLSE-GSAM	DEQ	GU-GHU	GUR	GN-GHN	GNP-GHNP	DLET-REPL	IRST-LOAD	IRST-ADD	FLD	POS	OPEN-GSAM	QUERY	REFRESH	TERM	Category	Description
NI							X	X	X							1	Index maintenance found duplicate segments in the index or it detected an index maintenance open error.
NO							X	X	X							5	I/O error: OSAM, BSAM, or VSAM.
NU													X	X		6	A database was unavailable for update.
OS											X						Normally for a utility.
RX							X									4	Violated replace rule.
SD			X		X	X										4	SSA of command code O and position and length against a Fast Path secondary index database is not allowed.
SF			X		X	X				X						4	Altered segment cannot be accessed with field-level sensitivity until altered ACB member is activated by online change.
TH													X			4	No PSB was scheduled (command-level only).
TI									X							4	Invalid path to segment (command-level only).
			X	X	X	X	X		X						X	5	DL/I not active (command-level only).
			X	X	X	X	X	X	X							5	Invalid system DIB (command-level only).
TO							X									4	Path replace error (command-level only).
TP			X	X	X	X	X	X	X							4	Invalid number for PCB or invalid processing option (command-level only).
TR		X	X	X	X	X	X		X		X				X	4	CICS® XDLIPRE user exit determined the preceding request should not be run.

Table 14. Database calls (continued).

PCB-Status-Code	CLSE-GSAM	DEQ	GU-GHU	GUR	GN-GHN	GNP-GHNP	DLET-REPL	IRST-LOAD	IRST-ADD	FLD	POS	OPEN-GSAM	QUERY	REFRESH	TERM	Category	Description
TY			X	X	X	X	X	X	X							5	Database not open (command-level only).
TZ			X	X	X	X	X		X			X				5	Length of segment greater than 64 KB.
UC								X								1	Checkpoint taken (Utility Control Facility (UCF) status code).
US								X								1	Stop (UCF status code).
UX								X								1	Checkpoint and stop (UCF status code).
V1							X	X	X							4	Segment length not within limits of DBDGEN.
V2			X	X	X	X	X	X	X			X			X	4	Segment length invalid (command-level only).
V3			X	X	X	X			X							4	Field length missing or invalid (command-level only).
V4			X	X	X	X	X	X	X							4	Length of variable-length segment invalid (command-level only).
V5			X	X	X	X	X		X							4	Offset if invalid (command-level only).
V6			X	X	X	X	X		X							4	Concatenated key length invalid (command-level only).
XX			X	X	X			X	X							5	Internal GSAM error.
bb1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1	No status code returned. Proceed.

Note:

1. bb indicates blank.

Message calls

Table 15. Message calls.

PCB-status-code	AUTH	GU	GN	ISRT	CHNG	CMD	GCMD	PURG	SETO	Category	Description
AA				X	X					4	CHNG call for alternate response PCB can specify only logical terminal destination; transaction code destination specified.
AB	X	X	X	X	X	X	X			4	Segment I/O area required; none specified in call.
AD		X	X	X	X	X	X	X	X	4	Function parameter invalid.
AH									X	4	Required SSA missing. Options list not specified in SETO call.
AJ									X	4	Invalid parameter format in I/O area; invalid SSA format; invalid command used to insert a logical child segment. I/O area length in AIB is invalid.
AL	X	X	X	X	X	X	X	X		4	Call using I/O PCB in batch program.
AP	X	X	X	X	X	X	X	X		4	Specifying more than four user call parameters for a TP PCB is not valid.
AR					X				X	4	Error in option list related to IMS option keyword.
AS					X				X	4	The PRTO= option contained invalid data set processing options.
AT	X			X				X		4	User I/O area too long.
AX	X			X	X				X	5	System error. Call not completed successfully.
AY				X						4	Alternate response PCB referenced by ISRT call has more than one physical terminal assigned for input purposes. Notify master terminal operator.
AZ								X		4	The conversational program has issued a PURG call to PCB that cannot be purged.
A1	X			X	X					4	AUTH call attempted with invalid generic class name or error occurred during attempt to set destination name specified in the CHNG or ISRT call.
A2					X					4	Call attempted with invalid PCB (PCB not modifiable or ISRT operation already done).
A3				X				X		4	Call attempted to a modifiable TP PCB with no destination set.
A4	X			X	X					4	Security violation detected during processing of either an AUTH call, a CHNG call, or an ISRT on a conversational response.

Table 15. Message calls (continued).

PCB-status-code	AUTH	GU	GN	ISRT	CHNG	CMD	GCMD	PURG	SETO	Category	Description
A5				X				X		4	Format name specified on second or subsequent message ISRT or PURG.
A6				X						4	Output segment size limit exceeded on call.
A7				X						4	Number of output segments inserted exceeded the limit by one. Any further queue manager calls are prohibited to prevent message queue overflow.
A8				X						4	ISRT to alternate response PCB followed ISRT to I/O PCB or vice versa.
A9				X						4	Alternate response PCB referenced by call requires that the source physical terminal receive the output response.
CA						X				4	No such command. No command responses produced.
CB						X				4	Command, as entered, not allowed for AOI. No command responses produced.
CC						X				2	Command ran. One or more command responses produced.
CD						X				4	Entered command violates security. No command responses produced.
CE		X								2	Transaction rescheduled after CMD call. Commit point had not been reached.
CF		X								2	Message on queue before IMS was last started.
CG		X								2	Transaction originated from AOI exit routine.
CH						X				5	AOI detected system error; CMD request not processed. Reissue CMD call.
CI		X								2	Transaction on queue before IMS last started. Transaction rescheduled. Commit point not reached.
CJ		X								2	Transaction from AOI exit routine. Message rescheduled. Commit point not reached.
CK		X								2	Transaction from AOI exit routine. Message on queue before IMS last started.
CL		X								2	Transaction from AOI exit routine. Message on queue before IMS last started. Message rescheduled. Commit point had not been reached.
CM						X				3	Command ran. No command response produced.
CN						X				4	IOASIZE= parameter on PSBGEN macro does not meet minimum requirement for CMD call.

Table 15. Message calls (continued).

PCB-status-code	AUTH	GU	GN	ISRT	CHNG	CMD	GCMD	PURG	SETO	Category	Description
E1				X	X					4	The DFSMSCE0 user routing exit rejected the CHNG or ISRT call.
E2				X	X					4	The DFSMSCE0 user routing exit rejected the CHNG or ISRT call.
E3				X	X					4	The DFSMSCE0 user routing exit rejected the CHNG or ISRT call.
FF		X								3	No space in MSDB.
FH		X								3	DEDB inaccessible.
FI			X	X	X					4	I/O area not in user dependent region.
FS		X								3	DEDB areas are full.
FV		X								3	MSDB verify that condition failed.
MR		X	X	X		X	X	X		4	Error detected by the IBM IMS Queue Control Facility for z/OS routines.
QC		X								3	No more input messages exist.
QD			X				X			3	No more segments exist for this message.
QE			X				X			4	GN request before GU. GCMD request before CMD.
QF		X		X				X	X	4	Segment less than five characters (segment length is message text length plus four control characters). (Non-shared Queues)
				X							Shared Queues are full. (Shared Queues)
QH				X	X			X	X	4	Terminal symbolic error; output designation unknown to IMS (logical terminals or transaction code). Either the message segment LL is not at least 5 bytes or the destination name in I/O area is blank or invalid.
TG	X									4	No PSB was scheduled (command-level only).
	X									5	Invalid system DIB (command-level only).
TP	X									4	Invalid number for PCB or invalid processing option (command-level only).
TY	X									5	Database not open (command-level only).
TZ	X									5	Length of segment greater than 64 KB.
XA				X						4	Attempt to continue processing the conversation by passing SPA by a program-to-program switch after answering terminal.

Table 15. Message calls (continued).

PCB-status-code	AUTH	GU	GN	ISRT	CHNG	CMD	GCMD	PURG	SETO	Category	Description
XB				X						4	Program passed SPA to other program, but trying to respond.
XC				X						4	Program inserted message with Z1 field bits set. These bits are reserved for system use.
XE				X						4	Tried to ISRT SPA to express PCB.
XF				X	X					4	Alternate PCB specified in ISRT call for SPA had destination set to a logical terminal, but was not defined as ALTRESP=YES. MSC direct routing does not support program-to-program switch between conversational transactions.
XG				X						4	Current conversation requires fixed-length SPAs. Attempt was made to insert SPA to transaction with a different or nonfixed- length SPA.
X2				X				X		4	First insert to transaction code PCB that is conversational is not a SPA.
X3				X						4	Invalid SPA.
X4				X						4	Insert to a transaction code PCB that is not conversational and the segment is a SPA.
X5				X						4	Insert of multiple SPAs to transaction code PCB.
X6				X						4	Invalid transaction code name inserted into SPA. For an APPC or OTMA protected transaction, an immediate program switch or deferred program switch is not allowed.
X7				X						4	Length of SPA is incorrect (user modified first 6 bytes).
X9				X						4	Length of the SPA is greater than the size of the PSB I/O area.
bb1	X	X	X	X	X	X	X	X	X	1	No status code returned. Proceed.

Note:

1. bb indicates blank.

System service calls

Although the APSB, DPSB, and ROLL calls are included in the following table, they do not receive status codes.

Table 16. System service calls.

PCB-status-code	CHKP	INT	INQY	JAVA-SYNC	LOG	PCB	ROLB	ROLL	ROLS	SETS	SETU	SNAP-(1)	STAT-(2)	SYNC	XRST	Category	Description
AB	X	X	X		X								X			4	Segment I/O area required; none specified in call.
AC													X			4	Hierarchic error in SSAs.
AD	X	X	X		X		X	X	X	X			X	X	X	4	Function parameter invalid.
AG			X													4	Partial data return. I/O area too small.
AJ		X	X						X							4	Invalid parameter format in I/O area; invalid SSA format; invalid command used to insert a logical child segment. I/O area length in AIB is invalid.
AL							X		X	X						4	Call using I/O PCB in batch program.
AP	X															4	More than 4 user call parameters for a TP PCB are invalid.
AQ			X													4	Invalid subfunction code.
AT					X											4	User I/O area too long.
BE		X														4	A database name that is specified on the VERSION function of the INIT call cannot be found.
BF		X														4	The INIT VERSION call is invalid or database versioning not enabled.
BG		X														4	Unsupported database type.
BJ			X													6	All of the databases included in the PSB are unavailable or no database PCBs are in the PSB.
BK			X													6	At least one of the databases included in the PSB is unavailable or has limited availability, or at least one PCB received an NA or NU status code.
FA	X													X		4	MSDB arithmetic overflow error occurred.
FD		X												X		3	Deadlock occurred.
FF	X															3	No space in MSDB.

Table 16. System service calls (continued).

PCB-status-code	CHKP	INT	INQY	JAVA-SYNC	LOG	PCB	ROLB	ROLL	ROLS	SETS	SETU	SNAP-(1)	STAT-(2)	SYNC	XRST	Category	Description
FH	X													X		3	DEDB inaccessible.
FI	X						X									4	I/O area not in user dependent region.
FS	X													X		3	DEDB areas are full.
FV	X													X		3	MSDB verify that condition failed.
GA													X			2	Crossing hierarchic boundary.
GE	X												X	X		1	Segment not found.
GL					X											4	Invalid user log code.
NA		X														6	A database was unavailable.
NL	X															4	XEFRDER card not provided.
NU		X														6	A database was unavailable for update.
QC	X															3	No more input messages exist.
QE	X						X									4	GN request before GU. GCMD request before CMD.
QF	X															4	Segment less than five characters (segment length is message text length plus four control characters).
RA									X							4	Token does not match one for a SETS, or the PCB did not get BA or BB on last call.
RC									X							4	ROLS call issued with unsupported PCBs in the PSB, or the program is using an attached subsystem.
SA										X						5	Insufficient space.
SB										X						4	Would exceed maximum number of levels allowed.
SC										X	X					5	A SETS/SETU call was issued with unsupported PCBs in the PSB, or the program is using an attached subsystem.
SY				X												5	Internal error during sync point processing for an IMS Java™ application.

Table 16. System service calls (continued).

PCB-status-code	CHKP	INIT	INQY	JAVA-SYNC	LOG	PCB	ROLB	ROLL	ROLS	SETS	SETU	SNAP-(1)	STAT-(2)	SYNC	XRST	Category	Description
TA						X										5	PSB not in PSB directory (command-level only).
TC						X										4	PSB already scheduled (command-level only).
TE						X										5	PSB initialization failed (command-level only).
TJ						X										5	DL/I not active (command-level only).
TL						X										4	Conflict in scheduling intent (command-level only).
TN	X				X	X	X	X					X		X	5	Invalid system DIB (command-level only).
TP						X							X			4	Invalid number for PCB or invalid processing option (command-level only).
TR					X	X				X			X			4	CICS XDLIPRE user exit determined the preceding request should not be run.
TY						X							X			5	Database not open (command-level only).
TZ						X							X			5	Length of segment greater than 64 KB.
V2						X										4	Segment length invalid (command-level only).
V7													X			4	Statistics area length invalid (command-level only).
XD	X													X		1	IMS terminating. Further DL/I calls must not be issued. No message returned.
bb3	X	X	X		X	X	X		X	X	X	X	X	X	X	1	Good. No status code returned. Proceed.

Notes:
1. SNAP is a Product-sensitive programming interface.
2. STAT is a Product-sensitive programming interface.
3. bb indicates blank.

DL/I status code explanations

For EXEC DL/I commands, all status codes, except those identified as being returned to the application program, cause an abnormal termination of the application program.

All explanations apply to both DL/I call (call-level) programs and EXEC DLI (command-level) programs except where split. The term *request* means call, command, or both.

The status codes for DL/I calls are:

AA

Explanation: IMS ignored a CHNG or ISRT call because the alternate response PCB that is referenced in the call specified a transaction code as a destination. An alternate response PCB must have a logical terminal specified as its destination.

Programmer response: Correct the CHNG or ISRT call.

Source: DL/I codes

AB

Explanation: An I/O area is required as one of the parameters on this call, and the call did not specify one. After this status code is returned, your position in the database is unchanged. AB only applies to full-function DEQ calls.

Programmer response: Correct the call by including the address of an I/O area as one of the call parameters.

Source: DL/I codes

AC

Explanation: ***For call-level programs:*** An error is in an SSA for a DLET, Get, ISRT, REPL, or FLD call for one of these reasons:

- DL/I could not find a segment in the DB PCB specified in the call that has the segment name given in the SSA.
- The segment name is in the DB PCB, but the SSA specifying that segment name is not in its correct hierarchic sequence.
- The call specifies two SSAs for the same hierarchic level.
- A qualified GU or GN segment name call with SSA using the primary key field for target-dependent segment is not supported when a primary DEDB database is accessed through its secondary index by using a PCB with the PROCSEQD= parameter.
- The GUR call specifies an SSA beyond the PSB or DBD level.
- The GUR call specifies an SSA that contains a command code.
- An FLD call was issued to update a Fast Path secondary index-related field such as SRCH, SUBSEQ, or DDATA, which is not allowed for data integrity.

IMS also returns this status code when a STAT[1] call has an invalid statistics function. After this status code is returned, your position in the database is unchanged.

For command-level programs: An error is in one of the WHERE or SEGMENT options on a Get or ISRT command for one of these reasons:

- DL/I could not find a segment in the DB PCB specified in the segment name given in the SEGMENT option.
- The segment name is in the DB PCB, but the qualification for the command does not specify it in its correct hierarchic sequence.
- The command specifies two SEGMENT options for the same hierarchic level.

Programmer response: Correct the segment name in the SSA or SEGMENT option or in the statistics function of the STAT[1] call.

Source: DL/I codes

AD

Explanation: ***For call-level programs:*** Either the function parameter on the call is invalid or the function is not supported for the type of PCB specified in the call. Only applies to full-function DEQ calls. Some possible reasons are:

- The function parameter is invalid.
- A system service call used a PCB that is not the I/O PCB.
- A call issued in a DCCTL environment referred to an unsupported PCB or database.
- A message GU or GN call used an alternate PCB instead of the I/O PCB.
- A database call used a PCB that is not a DB PCB.
- A message GU used the I/O PCB without specifying IN=trancode in the BMP JCL.
- A SETS or ROLS call included the I/O area but omitted the token.

1. STAT is a Product-sensitive programming interface.

- A CPI Communications driven program issued the SETO call on the I/O PCB.
- A call was issued from an IFP region on an I/O PCB.
- Invalid subsystem level for spool API processing.
- A DL/I call was made against a DEDB or MSDB PCB in a non-Fast Path system.

For command-level programs: A command was issued that is not supported in the environment. An example is a system service command in an online program. If the command is correct, some other possible causes are:
- Referencing a DB PCB on a system service command. System service commands must reference the I/O PCB.
- Referencing an I/O PCB for a database command, or not defining an I/O PCB before issuing system service commands.
- A command issued in a DCCTL environment referred to an unsupported database or DB PCB.

Programmer response: Be sure that the specified function is valid for the PCB specified by the request.

Source: DL/I codes

AF

Explanation: GSAM detected a variable-length record whose length is invalid on a GU, GHU, GN, or GHN call.

Programmer response: Correct the program.

Source: DL/I codes

AG

Explanation: During INQY call processing, the I/O area was not large enough to contain all the output data. The I/O area was filled with partial data, as much as would fit in the area provided. AIBOALEN contains the actual length of the data returned to the application and AIBOAUSE contains the output area length that is required for the application program to receive all the data.

During POS call processing, the I/O area was not large enough to contain all the output data. The I/O area size is based on PSBIOASZ. This size was either user specified at PSBGEN by IOASIZE parameter or calculated by ACBGEN. See PSBGEN statement (System Utilities) for further detail.

During INIT VERSION call processing in an IMS Version 13 system or later, the I/O area was not large enough to contain all of the output data. The output data was truncated to fit in the I/O area.

Programmer response: Correct the application program by using a larger I/O area.

For an INQY call, the minimum size of the I/O area is the value contained in the AIBOAUSE field.

For a POS call, the minimum size of the I/O area is calculated by (((number of areas) * 24)+2) and maximum is 49154 bytes.

For an INIT VERSION call in IMS Version 13 systems and later, increase the size specified in the LL or LLLL field in the I/O area. The minimum size of the I/O area is calculated by multiplying the number of databases that are specified in the I/O area by 20. For example, the following FUNCTION specification includes three database names, so requires 60 bytes for the I/O area.

```
VERSION (DBa=1,DBb=2,DBc=3)
```

Source: DL/I codes

AH

Explanation: You get this status code if you:
1. Specify an options list parameter that was not specified in the call list.
2. The program issued an ISRT call that did not include any SSAs. The ISRT call requires an SSA.
3. If the program was issuing a GU call to a GSAM database, the GU did not specify an RSA. RSAs are required on GU calls to GSAM databases. After this status code is returned, your position in the database is unchanged.

Programmer response: For cause 2, correct the ISRT call by including a qualification; or for cause 3, correct the GU call by adding an RSA to the call.

Source: DL/I codes

AI

Explanation: A data management open error occurred. Some possible reasons are:
- An error is in the DD statements.
- Neither DD statements nor DFSMDA dynamic allocation members were provided for this database.
- The data set OPEN request did not specify load mode, but the data set was empty. An empty data set requires the load option in the PCB.
- The buffer is too small to hold a record that was read at open time.
- No DD statements or DFSMDA members were supplied for logically related databases.
- For an OSAM data set, the DSORG field of the OSAM DCB, DSCB, or JFCB does not specify PS or DA.
- For an old OSAM data set, the BUFL or BLKSIZE field in the DSCB is 0.
- The data set is being opened for load, and the processing option for one or more segments is other than L or LS.
- The allocation of the OSAM data set is invalid. The allocation is probably (x,y,z), rather than (x,y); this allocation causes the DSORG to be P0.
- The processing option is L, the OSAM data set is old, and the DSCB LRECL, BLKSIZE, or both, does not match the DBD LRECL, BLKSIZE, or both.

- Incorrect or missing information prevented IMS from determining the block size or the logical record length.
- A catalog was not available for accessing a VSAM database that was requested.
- OS could not perform an OPEN, but the I/O request is valid. Either the data definition information is incorrect, or information is missing.
- RACF® was used to protect the OSAM data set, and the control region has no update authorization.

If IMS returns message DFS0730I, you can determine the cause of the OPEN failure from this message in the job log.

Programmer response: These kinds of problems often require the help of a system programmer or system administrator. But before you go to one of these specialists, some things you can do are:

- Check the DD statements. Make sure that the ddname is the same as the name specified on the DATASET statement of the DBD. The segment name area in the DB PCB (call level), or in the DIB (command level) has the ddname of the data set that could not be opened.
- Check the PSB and make sure that the appropriate processing options have been specified for each of the DB PCBs that your program uses.

Source: DL/I codes

Related information:

DFS0730I (Messages and Codes)

AJ

Explanation: ***For call-level programs:*** For calls that provide parameters in the I/O area, such as `SETS`, `ROLS`,, and `INIT`, the format of the parameters in the I/O area is invalid.

For INIT VERSION (*dbname=number*), the syntax of the parameters in the I/O area is invalid. For example, a required value might be missing.

For database calls that include SSAs, such as the get-type calls, `DLET`, `REPL`,, and `ISRT`,, the format of one of the SSAs is invalid. The number in the segment level number field of the DB PCB is the level number of the SSA that is invalid. Some possible reasons for the invalid SSA format are:

- The SSA contains a command code that is invalid for that call.
- The relational operator in the qualification statement is invalid.
- A qualification statement is missing a right parenthesis or a Boolean connector.
- A comparative value contains one or more parentheses.
- A `DLET` call has multiple or qualified SSAs.
- A `REPL` call has qualified SSAs.
- An `ISRT` call has the last qualified SSA.
- An `ISRT` call that inserts a logical child segment into an existing database includes the D command code. `ISRT` calls for logical child segments cannot be path calls.
- The RSA parameter on a GSAM call is invalid.
- The SSA used an R, S, Z, W, or M command code for a segment for which no subset pointers are defined in the DBD.
- The subset command codes included in the SSA are in conflict; for example, if one SSA contained an S status code and a Z status code, Fast Path would return an AJ status code. S means to set the pointer to current position; Z means to set the pointer to 0. You cannot use these status codes in one SSA.
- The pointer number that follows a subset pointer command code is invalid. Either you did not include a number, or you included an invalid character. The number that follows the command code must be between 1 and 8, inclusive.
- The SSA included more than one R command code. An SSA can include only one R command code.
- The specified size for the SSA is too small. After this status code is returned, your position in the database is unchanged.
- In response to a `SETS` or `ROLS` call, the length of the I/O area is 0, the LL field is less than 4, or the ZZ field is not 0.
- In response to an `INIT` call, the format of the I/O area is incorrect.
- For calls that provide the length of the I/O area in the AIB, such as `INQY`, the I/O area length is invalid.
- For `SETO`, I/O area length is less than 4096 or less than the minimum.
- For the Q command code, the specified lock class is not a letter (A-J).
- A DL/I call with multiple SSAs was constructed in such a manner that the SSAs were conflicting and resulted in an impossible retrieval.

For command-level programs: An ISRT command attempted to insert a logical child segment by using a path command. ISRT commands for logical child segments cannot be path commands.

Programmer response: If you receive this status code on a `SETS`, `ROLS`, or `INIT` request, correct the parameters that are provided in the I/O area.

If you receive this status code on a `Get`, `DLET`, `REPL`, or `ISRT` request, correct the invalid portion of the SSA. If you receive this status code on a GSAM call, correct the RSA.

Source: DL/I codes

AK

Explanation: ***For call-level programs:*** An SSA contains an invalid field name, or the field name is not defined in the DBD. The number in the segment level number field of the DB PCB is the level number of the SSA that contains the invalid name.

When command code O is specified, the position or the length specified is invalid. An invalid value can be 0, or any value that exceeds the maximum length of the segment.

You can also receive this status code if the program is accessing a logical child through the logical parent. DL/I returns AK if the field specified in the qualification has been defined for the logical child segment, and it includes (at least partially) the portion of the logical child that contains the concatenated key of the logical parent.

When you are using field-level sensitivity, a field you specified in the SSA has not been defined in the PSB. After this status code is returned, your position in the database is unchanged.

For command-level programs: A WHERE option contains an invalid field name. (The field name is not defined in the DBD.) The number in the DIBSEGLV field of the DIB is the level number of the WHERE option that contains the invalid name.

Programmer response: Correct the SSA or WHERE option.

Source: DL/I codes

AL

Explanation: You get this status code if you:

1. Issue a message call in a batch program.
2. Issue a `ROLB`, `ROLS`, or `SETS` call from a batch program under one of the following conditions:
   - The system log is not on DASD.
   - The system log is on DASD, but dynamic backout has not been specified using the BKO execution parameter.

Programmer response: For cause 1, correct the program so that message calls in a batch program are not issued. For cause 2, either change the program or put the log on DASD with BKO specified on the execution parameter.

Source: DL/I codes

AM

Explanation: ***For call-level programs:*** The call function is not compatible with the processing option in the PCB, the segment sensitivity, the transaction-code definition, or the program type. The level number in the PCB is the level number of the SSA that is invalid. Some of the reasons you might get this status code are:

- If you attempt to OPEN a GSAM database without providing an I/O area.
- If you issue a retrieval call with the D command code in a program that does not have the P processing option specified in the DB PCB that was used for the call.
- If you issue a DLET or ISRT call to a terminal-related dynamic MSDB from a program with no input LTERM present. An example is a batch-oriented BMP.
- If the subset pointer referenced in the SSA was not defined in the program PSB. For example, if your program PSB specifies that your program can use subset pointers 1 and 4, and your SSA references subset pointer 5, Fast Path returns an AM status code to your program.
- If your program tried to use an S, Z, W, or M command code for a subset pointer to which it was not pointer update-sensitive, as defined in the program PSB.
- If a BMP, a CICS online program, or an MPP issues an ISRT call with the D command code when the program does not have the P processing option specified in the DB PCB that was referenced in the call. Batch programs do not need the P processing option to issue an ISRT call with the D command code, unless the program uses field-level sensitivity.
- If the processing option is L and the program issued a call other than an ISRT call. Load programs can issue only ISRT calls.
- If a DLET, REPL, or ISRT call that references a DB PCB does not have the necessary processing option for that call. The minimum processing options for these calls are D for DLET, R for REPL, and I for ISRT.
- If you issue a DLET, REPL, or ISRT call for a segment to which the program is not sensitive.
- If you issue a CHKP call on a GSAM or VSAM data set opened for output. This code is returned in the GSAM PCB.
- If you issue a GSAM call with an invalid call function code.
- If you issue an ISRT or DLET call for the index target segment or a segment on which the index target is dependent in the physical database while using an alternate processing sequence.
- If you issue a path replace where the program does not have replace sensitivity, command code N is not specified, and the data for the segment is changed in the I/O area.
- If GSAM could not obtain buffer space because the region size is too small. This situation is shown by the value X'1C' in the field GBCRTNCD.
- If you issue a DLET, ISRT, or REPL call from a program where the TRANSACT macro that was used at IMS system definition specified INQUIRY=YES for the input message.
- If you issue a call from an ETO terminal to a terminal-related MSDB or a non-terminal-related MSDB with terminal-related keys. See Planning a high-security environment with ETO (Communications and Connections) for more information about ETO.
- If you issue any type of call with update intent to an MSDB from a dynamically defined device such as a LU 6.2, ETO, or OTMA device.

- If you issue a REPL call with a PCB that specifies VIEW=MSDB, the segment must have a key. This includes any segment in a path if command code 'D' is specified.

After this status code is returned, your position in the database is unchanged.

For command-level programs: The command is not compatible with the processing option in the PCB or segment sensitivity. The level number in the DIB is the level number of the qualification that is invalid. Some of the reasons you might get this status code are:
- If you issue a path retrieval command in a program that does not have the P processing option specified in the DB PCB that was used for the call.
- If the processing option is L and the program issued a command other than a LOAD command. Load programs can issue only LOAD commands.
- If you issue a DLET, REPL, or ISRT command that references a DB PCB that does not have the necessary processing option for that command. The minimum processing options for these calls are D for DLET, R for REPL, and I for ISRT.
- If you issue a DLET, REPL, or ISRT command for a segment to which the program is not sensitive.
- If you issue a CHKP command if a GSAM or VSAM data set is open for output.
- If you issue a GSAM call with an invalid call function code.
- If you issue an ISRT or DLET command for the index target segment, or a segment in the physical database on which the index target is dependent, while using an alternate processing sequence.
- If you issue a path replace where the program does not have replace sensitivity, command code N is not specified, and the data for the segment is changed in the I/O area.
- If you issue a call to a GSAM dummy data set. Any call to a GSAM dummy data set is invalid.

Programmer response: Correct the request, or make the necessary changes in the PCB.

Source: DL/I codes

AN

Explanation: While the DEDB Alter utility was running against a DEDB area, an application attempted to update a subset pointer. Updating subset pointers while the DEDB Alter utility is active is not allowed.

Programmer response: Do not execute any application which update SUBSET POINTERS while the DEDB Alter utility is active.

Attention: Reads might update subset pointers if they are specified with a command code.

Source: DL/I codes

AO

Explanation: A BSAM, GSAM, VSAM, or OSAM physical I/O error occurred. When issued from GSAM, this status code means that the error occurred when:
- A data set was accessed.
- The CLOSE SYNAD routine was entered. The error occurred when the last block of records was written prior to the closing of the data set.

IMS does not return an AO status code for write errors with BSAM, VSAM, and OSAM.

If your program receives this status code after issuing a call, this call does not cause the database to be stopped.

Programmer response: Determine whether the error occurred during input or output, and correct the problem. These problems usually require the help of a system programmer or system administrator.

Source: DL/I codes

AP

Explanation: A message or `CHKP` call is invalid because more than four parameters (or five if a parameter count is specified) are in a message call or a `CHKP` call issued in a transaction-oriented BMP. The following exceptions apply:
- A batch-oriented BMP can issue a `CHKP` call with more than 4 (or 5) parameters.
- One parameter after the I/O area parameter is allowed in order for the application program to specify a MOD name in an `ISRT` call. It is counted towards the maximum of four (or five) parameters.

Programmer response: Correct the call.

Source: DL/I codes

AQ

Explanation: The AIB contains an invalid subfunction, or the `INQY` call specifies an invalid function.

Programmer response: Specify a valid subfunction. Valid `INQY` call subfunctions are null, DBQUERY, ENVIRON, FIND, or PROGRAM.

Source: DL/I codes

AR

Explanation: The options list contains an error that is related to a keyword. The feedback area, if one is provided, will contain additional error information.

Programmer response: Correct the request.

Source: DL/I codes

AS

Explanation: An IAFP specific processing error has occurred. The PRTO= option contained invalid data set processing options. The feedback area, if provided, will contain additional error information.

Programmer response: Correct the request.

Source: DL/I codes

AT

Explanation: The length of the data in the program's I/O area is greater than the area reserved for it in the control region. The length of the area reserved is defined by the ACB utility program, DFSUACB0, and is printed as part of its output.

Programmer response: If the program is in error, correct the program. If the program is correct, reserve a larger control region by specifying parameters on the PSBGEN statement of PSBGEN.

Source: DL/I codes

AU

Explanation: The total length of the SSAs in the database call is greater than the area reserved for them in the control region. The length of the area reserved is defined by the ACB utility program, DFSUACB0, and printed as part of its output. After this status code is returned, your position in the database is unchanged.

Programmer response: If the program is in error, correct the program. If the program is correct, increase the PSB SSA space defined in the PSBGEN.

Source: DL/I codes

AX

Explanation: This status code is caused by several error conditions:

- A failure to get CSA storage.
- A failure of the DFSLUMIF call.
- A processing error with the IAFP Spool API. This cause also results in a DFS0013E message.
- A RACROUTE REQUEST=VERIFY,EVIRON=CREATE (RACF RACINIT) made during an AUTH call for LU 6.2 was unsuccessful.
- An OTMA user exit (DFSPRX0, DFSYDRU0, or client DRU exit) returned invalid routing information.

When this code is returned, additional diagnostic information is written to the log in a X'67D0' log record.

Programmer response: These problems typically require the help of a system programmer or system administrator.

Source: DL/I codes

Related reference:

Chapter 6, "CQS codes," on page 69

"OTMA return codes in 67D0 log record" on page 210

Related information:

DFS0013E (Messages and Codes)

AY

Explanation: IMS ignored a message ISRT call because the logical terminal referenced by the alternate response PCB currently has more than one physical terminal assigned to it for input purposes.

Programmer response: Ask the master terminal operator to determine (using /DISPLAY ASSIGNMENT LTERM *x*) which physical terminals (two or more) refer to this logical terminal. Use the /ASSIGN command to correct the problem.

Source: DL/I codes

AZ

Explanation: IMS ignored a PURG or ISRT call in a conversational program. Some possible reasons are:

- Issuing a PURG call referencing the I/O PCB or an alternate response PCB. Conversational programs can issue PURG calls only when the PURG call references an alternate PCB that is not an alternate response PCB.
- Issuing a PURG call to send the SPA.
- Issuing an ISRT or a PURG call referencing an alternate PCB that is set for an invalid destination or for a destination that IMS cannot determine.
- Issuing an ISRT call referencing an alternate PCB whose destination is a conversational transaction code when the first segment inserted is not the SPA; or when IMS cannot determine whether or not the SPA was the first segment inserted.

Programmer response: Correct the PURG or ISRT call.

Source: DL/I codes

A1

Explanation: IMS returns the A1 status code for one of the following reasons:

- AUTH call for LU 6.2 input did not find a PST LU 6.2 extension block or did not find a UTOKEN.
- CHNG call against alternate response PCB when the application program has not yet issued a GU.
- The MSC program routing exit routine (DFSCMPR0) was called while processing a CHNG call and one of the following occurred:
  - The exit routine rejected the call by returning with return code 8 (A1 status code).
  - The exit routine returned with a RC=4 to route the message back to the originating system; however,

the originating system has not been determined because the application program has not issued a GU.
  - The SYSID returned in R0 by the exit routine is not a valid remote SYSID.
  - The MSNAME pointed to by the address in R1, set by the exit routine, is not a valid remote MSNAME.
- The MSC program routing routine exit (DFSMSCE0) was called while processing an ISRT or CHNG call and one of the following occurred:
  - The exit routine rejected the call by setting MSPRFL3=MSPR3REJ in the DFSMSCEP user parameter list that is passed to the exit.
  - IMS detected an error while processing the reroute request from the exit. It issued a message "DFS070 Unable to route message RSN=xxyy" and wrote a 6701-MSCE log record to the IMS log. For more information about this error, see the topic on diagnosing message routing problems in the IMS diagnostic information.
- The destination name supplied in the I/O area of a CHNG call is invalid.
- The destination name supplied in the I/O area of a CHNG call is valid (the destination is a program and the PCB is not an alternate response PCB), but the transaction is Fast Path exclusive.
- AUTH call parameter list contained an invalid generic CLASS name. No access checking was done.
- The routing exit routine (DFSCMPR0 or DFSMSCE0) attempted an invalid request to override a direct routing request.
- The OTMA Destination Resolution user exit (OTMAYPRX) might have specified an incorrect 16-byte OTMA client override name. The client name cannot contain all blanks. If the client name is shorter than 16 bytes, it must be padded with blanks.
- The length of modified OTMA user data is over 1K for the OTMA DFSYDRU0 exit.
- The OTMAYPRX and DFSYDRU0 user exit routines returned an unsupported return code.
- The OTMA destination descriptor entry located for the CHNG call cannot use the IMSTRAN type.
- The OTMA member name or OTMA client override name cannot be the OTMA internal member name DFSYICAL for the OTMA ALTPCB output.

Programmer response: Correct the CHNG or AUTH call, MSC program routing exit (DFSCMPR0 or DFSMSCE0), or ensure that the specified destination is valid.

Source: DL/I codes

A2

Explanation: The program issued a CHNG call against an invalid PCB. The PCB was invalid for one of these reasons:
- It was not an alternate PCB.
- It was an alternate PCB, but it was not modifiable.
- It was being used to process a message and had not completed processing it.

Programmer response: Check the PCB that was used by the CHNG call and determine which PCB should have been used for the call.

Source: DL/I codes

A3

Explanation: The program issued an ISRT or PURG call that referenced a modifiable alternate PCB that did not have its destination set. IMS returns this status code to PURG calls only when the PURG call specified an I/O area as one of the parameters.

Programmer response: Issue a CHNG call to set the destination of the modifiable alternate PCB, and then reissue the ISRT or PURG call.

Source: DL/I codes

A4

Explanation: A security violation was detected during processing of an AUTH, CHNG, or ISRT call of a SPA on a conversational response. Reasons for this status code include:
- Transaction authorization is active and either RACF or a transaction authorization exit routine returned a nonzero return code.
- The user is not authorized for access to the RESOURCE name in the class requested in the AUTH call. No installation data is returned.
- No source CNT is available, which possibly because the application program did not issue a GU.
- A program-to-program message switch is in progress. In this case, the applicable authorization is based on the original message, and this authorization does not allow this function to be performed.

Programmer response: Check the transaction code to make sure it was entered correctly. If it was, check with the person who handles security at your installation.

Source: DL/I codes

A5

Explanation: An ISRT or PURG call supplied an invalid parameter list. The call supplied the fourth parameter (the MOD name), but the ISRT or PURG being issued was not for the first segment of an output message.

Programmer response: Correct the ISRT or PURG call.

Source: DL/I codes

A6

Explanation: For a message processing program (MPP or BMP), IMS ignored a message ISRT call because the length of the message segment being inserted exceeds the size specified in the SEGSIZE keyword of the TRANSACT macro.

For a Fast Path program (IFP), one of the following situations occurred:

- The length of the output message to a Fast Path terminal exceeds the size specified in the FPBUF parameter of the TERMINAL macro.
- The length of the output message to an ETO terminal exceeds one of the following values:
  - The size specified in the EMHL parameter of the DFSPBxxx member of the IMS PROCLIB data set
  - The OLDS buffer size

Programmer response: Correct the output message segment.

Source: DL/I codes

A7

Explanation: IMS ignored a message ISRT call for one of the following reasons:

- The number of message segments inserted exceeds the number specified in the SEGNO keyword of the TRANSACT macro.
- The IMS user Queue Space Notification exit routine (DFSQSPC0) prohibited the insert to prevent the message queue data sets from overflowing. However, the ISRT is not ignored for the message in progress when the DFSQSPC0 threshold is exceeded. The in-progress message will be processed. Any subsequent ISRTs from that application are immediately rejected with a status of A7.
- The IMS Shared Queues Space Notification exit routine (DFSQSSP0) prohibited the message insert. Possible reasons are:
  - The shared queues structure is in overflow
  - The queue for the destination is on the overflow structure
  - The number of messages inserted for this unit of work exceeds a user-defined limit

  The in-progress message will be processed. Any subsequent ISRTs from that application are immediately rejected with a status of A7.
- The IMS user Queue Manager Space Notification exit routine (DFSQSPC0, or DFSQSSP0 for shared queues) prohibited the insert because the destination TRANSACTION or LTERM was stopped. The in-progress message will be processed. Any subsequent ISRTs from that application are immediately rejected with a status of A7.

Programmer response: Check the output messages and correct them. Use ROLB to backout in-progress messages.

Source: DL/I codes

A8

Explanation: IMS ignored an ISRT call because:

- An ISRT call to an alternate response PCB must not follow an ISRT call to the I/O PCB.
- An ISRT call to the I/O PCB must not follow an ISRT call to an alternate response PCB.

Programmer response: Correct the ISRT call.

Source: DL/I codes

A9

Explanation: IMS ignored the ISRT call because:

- The ISRT call referenced an alternate response PCB defined as SAMETRM=YES, but the PCB represented a logical terminal that is not part of the originating physical terminal. An alternate response PCB defined as SAMETRM=YES must represent the same physical terminal as the physical terminal associated with the originating logical terminal.
- The originating terminal is in response mode, and the alternate response PCB is not associated with that logical terminal.

IMS does not return this status code if the program makes either of these errors while communicating with a terminal in a remote IMS system through MSC.

Programmer response: Determine whether the application program is in error, the output logical terminal has been incorrectly reassigned (using the /ASSIGN command), or if SAMETRM=YES should not have been specified for the alternate response PCB.

Source: DL/I codes

BA

Explanation: The request was not completed because it required access to unavailable data. The possible causes of the unavailability of the data are unpredictable; for example, it can be caused by a failure to gain authorization to the data from DBRC, a failure to gain a lock from IRLM, or the database might be stopped or in recovery mode.

A status of BA is returned on a DL/I call that attempts to access an unavailable partition. If the very next DL/I call is a GN that is either completely unqualified or qualified only by root name, then the next partition is selected. The next-partition selection continues until either an available partition is found or there are no more partitions in the database. If an available partition is returned, the call returns the first root in that partition. A GN call that is qualified only on a dependent segment name results in a BA status if the prior call had a BA status returned for the root level.

Application programs that issue the INIT STATUS

GROUPA call can receive the BA status code when database versioning is enabled and an invalid database version has been specified.

Only the updates done for the current request, before the time it encountered the unavailable data, are backed out. The state of the database is as it was before the failing request was issued. If the request was `REPL` or `DLET`, the PCB position was unchanged. If the request was a Get or `ISRT` request, the PCB position is unpredictable.

For a DEDB, this status code might be returned if no updates have been made by the current call. If updates have been made by the current call since the last commit point, a BB status code is returned instead. If changes have been made by a previous call, the application program must decide whether to commit these changes.

Rather than having an abnormal termination occur, this status code is returned to the application program that issued the EXEC DLI command.

If you use PROCOPT=GO and access DEDB areas with SDEP segments, note that some lock requests must be made in a shared SDEP environment. Failing to make these lock requests can cause a BA status code on a DL/I call involving an SDEP segment. For example, if there is a retained lock on a current SDEP CI held by a failed IMS subsystem and a partner IMS issues a DL/I GET call with PCB PROCOPT=GO, a BA status code is returned if the call targets the locked CI.

DFSVSMxx option PPUR=Y can be used to prevent this status if it was received when running a PROCOPT=GOx transaction accessing HALDB partitions and a partition is found to be unavailable due to a database command in progress.

Programmer response: This is an information-only status code.

Source: DL/I codes

BB

Explanation: The BB status code is the same as BA except that all database updates that the program made since the last commit point are backed out, and all nonexpress messages sent since the last commit point are canceled. The PCB position for all PCBs is at the start of the database.

For a DEDB, this status code might be returned if updates have been made by the current call.

Rather than having an abnormal termination occur, this status code is returned to the application program that issued the EXEC DLI command.

Programmer response: This is an information-only status code.

Source: DL/I codes

BC

Explanation: The response from an INIT STATUS GROUPB call was not completed because it required access to unavailable data.

All database resources that were allotted up to the last commit point are backed out, except for GSAM and Db2 for z/OS. All output messages are backed out to the last commit point. Input messages are requeued.

Programmer response: No action is required.

Source: DL/I codes

BD

Explanation: The call could not be completed because the LOCKTIME value has been exceeded for an IRLM lock request.

Programmer response: Either increase the LOCKTIME value in the DFSVSMxx proclib member (DFSVSAMP if batch), or analyze the reason for the IRLM lock timeout.

Source: DL/I codes

BE

Explanation: A database name that is specified on the VERSION function of the INIT call cannot be found.

Programmer response: Correct the database names in the I/O area of the VERSION function.

Source: DL/I codes

Related concepts:

Database versioning (Database Administration)

Related reference:

INIT call (Application Programming APIs)

BF

Explanation: The INIT VERSION call is invalid.

Either the database version number that is specified in the I/O area of the VERSION function on the INIT call is invalid or database versioning is not enabled in the IMS system that contains the target database.

Database version numbers can be invalid for the following reasons:

- The version number that is specified on the INIT VERSION call is not a version number of any version of the specified database.
- The version number is not within the supported range of values.
- The version number specified on the INIT VERSION call is different from the version number specified on an INIT VERSION call that was previously issued by the application program for the same database.

Programmer response: Check that the database name and version number are specified correctly in the INIT VERSION call.

Confirm with your system programmer or database administrator that database versioning is enabled in the IMS system that contains the target database. If it is not, either remove the INIT VERSION call from the application program or coordinate with your system programmer and database administrator to enable database versioning.

Source: DL/I codes

Related concepts:

Database versioning (Database Administration)

Related reference:

INIT call (Application Programming APIs)

BG

Explanation: The database type of the database named on the VERSION function of the INIT call does not support database versioning. The database types that do not support database versioning include:

- GSAM
- Logical databases
- MSDB

Programmer response: Check that the database name is specified correctly.

Source: DL/I codes

Related concepts:

Database versioning (Database Administration)

Related reference:

INIT call (Application Programming APIs)

BH

Explanation: This status code occurs when an internal error is detected while performing a DL/I call with database versioning enabled.

Programmer response: Contact IBM Software Support.

Source: DL/I codes

BJ

Explanation: All of the databases in the PSB are unavailable, or there are no database PCBs in the PSB.

Each PCB (excluding GSAM) received an NA status code as the result of the INQY DBQUERY call.

Programmer response: This is an information-only status code.

Source: DL/I codes

BK

Explanation: At least one of the databases included in the PSB is unavailable or has limited availability.

At least one PCB received an NA or NU status code as the result of processing the INQY DBQUERY call.

Programmer response: This is an information-only status code.

Source: DL/I codes

CA

Explanation: The program issued a `CMD` call with an invalid command verb, or the command verb does not apply to the IMS system that the program is running in. IMS does not return any command responses.

Programmer response: Correct the command in the `CMD` call.

Source: DL/I codes

CB

Explanation: The command entered in the CMD call is not allowed from an AOI program. IMS does not return any command responses.

Programmer response: Correct the command. For a list of the commands that an AOI program can issue, see *IMS Version 13 Commands, Volume 1: IMS Commands A-M*.

Source: DL/I codes

CC

Explanation: IMS has executed the command and returned one or more command responses.

Programmer response: Your program should issue GCMD calls as necessary to retrieve the responses.

Source: DL/I codes

CD

Explanation: The command that was entered on the CMD call violates security, or the application program is not authorized to issue CMD calls. IMS does not execute the command or return any command responses.

Programmer response: Correct the command. If necessary, check with the person in charge of security at your installation to find out why your program is restricted from using that command.

Source: DL/I codes

CE

Explanation: IMS rescheduled the message that this GU call retrieved since the last CMD call. The program had not reached a commit point when the message was rescheduled.

Programmer response: This is an information-only status code.

Source: DL/I codes

CF

Explanation: The message being returned on the GU call was received by IMS before the start of this IMS execution. CF can be received on a CHKP call when an I/O area is specified for an MPP or message-oriented BMP. This occurs when a CHKP call issues an internal GU call. This code is only received by transactions that are eligible to issue commands.

Programmer response: This is an information-only status code.

Source: DL/I codes

CG

Explanation: The message retrieved by this GU originated from an AOI exit routine. This status code is returned only when the GU is originated from a transaction that is controlled by a type-1 AO application program (AOI=TRAN specified for the TRANSACT macro).

Programmer response: This is an information-only status code.

Source: DL/I codes

CH

Explanation: IMS ignored the CMD call just issued because the AOI command interface detected a system error and was unable to process the command. IMS processing continues.

Programmer response: Reissue the command.

Source: DL/I codes

CI

Explanation: CI is a combination of CE and CF. The message retrieved by this GU was scheduled for transmission before IMS was last started. The message was rescheduled, but the program had not reached a commit point.

Programmer response: This is an information-only status code.

Source: DL/I codes

CJ

Explanation: CJ is a combination of CE and CG. The message retrieved by this GU was scheduled for transmission before IMS was last started. The message originated from an AOI exit routine.

Programmer response: This is an information-only status code.

Source: DL/I codes

CK

Explanation: CK is a combination of CF and CG. The message retrieved with this GU originated from an AOI user exit. The message was scheduled for transmission before IMS was last started.

Programmer response: This is an information-only status code.

Source: DL/I codes

CL

Explanation: CL is a combination of CE, CF, and CG. See the explanations of those codes.

Programmer response: This is an information-only status code.

Source: DL/I codes

CM

Explanation: The command that was entered on the CMD call has been executed and completed, but it resulted in an exception response that could not be built because of an insufficient amount of general work area (WKAP).

Programmer response: Increase WKAP if you want retrieval of the response.

Source: DL/I codes

CN

Explanation: The IOASIZE= parameter that was specified on the PSBGEN macro is defined for less than the required minimum for CMD calls (132 bytes).

Programmer response: Redefine IOASIZE= parameter on the PSBGEN for a minimum of 132 bytes.

Source: DL/I codes

DA

Explanation: The program issued a DLET or REPL that tried to modify the key field in the segment or, when using field-level sensitivity, a REPL call tried to modify a field that had REPL=NO specified on the

SENFLD STMT in the PSB. You cannot change a segment's key field.

Programmer response: Correct the request.

Source: DL/I codes

DE

Explanation: IMS ignored a get unique record (GUR) call because it was issued without using the AIB interface. The GUR call is allowed only through the AIB interface.

Programmer response: Do not make GUR calls except in a program that uses the AIB interface.

Source: DL/I codes

DJ

Explanation: The program issued a DLET or REPL call that was rejected because the segment was not currently in hold status. Some possible reasons for this status code are:

- The segment had not been previously retrieved with a Get Hold call.
- The segment was already deleted using this PCB. After one Get Hold call, multiple REPL calls or a DLET call following a REPL call are valid, but multiple DLET calls are not.
- The segment was obtained using a secondary index as the processing sequence. A subsequent DLET or REPL call using either this PCB or another PCB within the PSB caused the current secondary index entry for this PCB to be deleted.
- A checkpoint call was issued following the Get Hold call and preceding the REPL or DLET call.
- A rollback call was issued following the get hold call and preceding the REPL or DLET call.

Programmer response: Correct the program so that the segment is in hold status when a DLET or REPL is issued.

Source: DL/I codes

DX

Explanation: The program issued a DLET that violates the delete rule for that segment.

Programmer response: Check the program to see whether or not the program should delete that segment; if it should, check with your DBA (or the equivalent specialist at your installation) to find out what delete rule has been specified for that segment.

Source: DL/I codes

EM

Explanation: The EM status (empty area) indicates that there are no valid sequential dependent segments in the area.

Programmer response: Check to see that the correct area is being processed by the utility and that sequential dependent segments have been inserted.

Source: DL/I codes

E1

Explanation: The DFSMSCE0 user routing exit rejected the ISRT or CHNG call by setting MSPRFL3=MSPR3REJ and MSPRSTAT=E1 in the DFSMSCEP user parameter list that is passed to the exit.

Programmer response: Refer to the user installation copy of the DFSMSCE0 exit for information on the MSPR3REJ and MSPRSTAT settings. Contact your system programmer.

Source: DL/I codes

E2

Explanation: The DFSMSCE0 user routing exit rejected the ISRT or CHNG call by setting MSPRFL3=MSPR3REJ and MSPRSTAT=E2 in the DFSMSCEP user parameter list that is passed to the exit.

Programmer response: Refer to the user installation copy of the DFSMSCE0 exit for information on the MSPR3REJ and MSPRSTAT settings. Contact your system programmer.

Source: DL/I codes

E3

Explanation: The DFSMSCE0 user routing exit rejected the ISRT or CHNG call by setting MSPRFL3=MSPR3REJ and MSPRSTAT=E3 in the DFSMSCEP user parameter list that is passed to the exit.

Programmer response: Refer to the user installation copy of the DFSMSCE0 exit for information on the MSPR3REJ and MSPRSTAT settings. Contact your system programmer.

Source: DL/I codes

FA

Explanation: IMS returns this status code when the program reaches a commit point and an arithmetic overflow occurs in an MSDB, DEDB, or VSO DEDB during that commit interval since the last commit point (or, if the program had not reached a commit point,

since the program began processing). You can receive this status code on a SYNC call, a CHKP call, or a GU call to the message queue, depending on your program. The overflow occurred after the program issued a FLD/CHANGE call, or a REPL call for the MSDB, DEDB, or VSO DEDB. When this happens, IMS issues an internal ROLB call to eliminate the changes that the program has made since the last commit point. All database positioning is lost.

Programmer response: Reprocess the transaction.

Source: DL/I codes

FC

Explanation: The program issued a request that is not valid for the segment type.

Programmer response: Correct the request.

Source: DL/I codes

FD

Explanation: A non-message driven batch message processing (BMP) program reached a deadlock when IMS tried to get DEDB or MSDB resources (either DEDB unit of works (UOW) or overflow latches) for the program. Or, a mixed-mode BMP reached a deadlock on any resource, either Fast Path or full function. IMS eliminates all database updates (except gsam data bases) that the program has made since the last SYNC call, CHKP request, or SYMCHKP command (or since the program started processing, if the program has not issued a SYNC call or CHKP request). All database positioning is lost, unless you specified the `P` processing option in the PCB. Messages to a non-express alternate PCB are discarded.

Rather than having an abnormal termination occur, this status code is returned to the application program that issued the EXEC DLI command.

Another possible cause of this code is that, if the application connects to one or more external subsystems and one of the external subsystems encounters a problem on a COMMIT request, an `FD` status code might be returned to the application. Likewise, if an application requests a backout during a phase 1 syncpoint, an `FD` status code might be returned.

Programmer response: Start processing from the last commit point. If you reach a deadlock again, terminate the program.

Source: DL/I codes

FE

Explanation: IMS returns this status code any time a program issues a FLD call that receives a non-blank status code in the FSA.

Programmer response: See Checking the contents of a field: FLD/VERIFY (Application Programming) for information about FSA status codes and correct the FLD call.

Source: DL/I codes

FF

Explanation: A program issued an ISRT call against an MSDB that has no free space. If IMS determines that there is no free space when the program issues the ISRT call, the program receives the FF status code for that call. IMS might not determine this until the program reaches the next commit point. In this case, IMS returns FF when the program issues a GU call to the message queue, a SYNC call, or a CHKP call, depending on which call caused the commit point.

Programmer response: To avoid this situation, specify more space for the MSDB at the next system start (cold start or normal restart).

Source: DL/I codes

FG

Explanation: FG is a combination of FE and FW. A batch-oriented BMP issued a FLD call that received a nonblank status code in the FSA, and the program has depleted its normal buffer allocation.

Programmer response: Check the FSA status code and correct the FLD call, and then issue SYNC or CHKP calls in the program more frequently. One way to handle this status code is to branch to an error routine that causes the program to issue SYNC or CHKP calls more frequently when it receives this status code.

Source: DL/I codes

FH

Explanation: A DEDB area was inaccessible to the requested service when the application program issued a database request or when the application program reached a commit point. The AREA was stopped or the DEDB randomizing routine was not loaded into storage. A /START DATABASE dedbname or UPDATE DB NAME(name) START(ACCESS) command causes the DEDB randomizing routine to be reloaded.

If IMS returns this status code on a call that caused a commit point to occur (a SYNC call, a message GU, a CHKP request, or a SYMCHKP command), IMS issues an internal ROLB call to eliminate the program's database updates and message output created since the last commit point.

If your program is accessing a DEDB in a data-sharing environment, and if the authorization fails when your program issues its first DL/I call to the DEDB, Fast Path returned this status code. Fast Path also notified the master terminal operator of the authorization failure. Your position in the database is before the first

root in the next area. A GN will get the next available record (unless that one is also inaccessible).

If a program has access to an area through a PCB with PROCOPT=H and another PCB without PROCOPT=H, it is possible that only calls to the PCB with PROCOPT=H will receive the FH status code. This is because the area is accessible to IMS, but the required HSSP (high-speed sequential processing) setup could not be established. Message DFS0535I explains the reason for this occurrence and is sent to the job log. This status code is also returned if the PROCOPT for one PCB is more restrictive than the PROCOPT of a different PCB in the same PSB. Position is set to the beginning of the next accessible area.

Rather than having an abnormal termination occur, this status code is returned to the application program that issued the EXEC DLI command.

Programmer response: If the data in the area is important, contact the DBA. If the data in the area is unimportant, the program should roll back the changes. Your program can continue processing with the next available area.

If the status code is related to an HSSP setup problem, fix the error as described in the message DFS0535I in the job log.

Source: DL/I codes

Related information:

DFS0535I (Messages and Codes)

FI

Explanation: IMS determined that one of the following events occurred:

- The storage address at the start of the I/O area supplied by the program could not be referenced.
- The storage address computed as the start of the I/O area plus the length of the segment or segments being returned could not be referenced.

IMS sets this status code to avoid a potential program check abend during data movement. The absence of an FI status code does not necessarily mean that the supplied I/O area address is logically correct or that the area is large enough.

If the AIB interface is being used, the supplied length in the AIB is validated against returned segment lengths. If this validation fails, the appropriate AIB return and reason codes are set. If this validation succeeds, IMS still checks the actual storage addresses involved in the move and it can return an FI status code. If an AIB interface is not used, only the storage address validation is performed.

Programmer response: Correct the program.

Source: DL/I codes

FM

Explanation: *For HALDB:*

The application program issued a request for which the randomizing routine returned a return code of 4.

The key that was supplied on a DL/I call to a HALDB was greater than the high-key value for the last partition. Or the user's partition selection exit returned with RC=04 after it was passed a key value to select a partition with. The FM status code is also returned if a DFSHALDB DD card is used to limit the partitions that can be allocated and the key requested is not in any of those partitions, but might be contained in other partitions.

Rather than having an abnormal termination occur, this status code is returned to the application program that issued the EXEC DLI command.

For DEDB (for modules DBFMGAP0, DBFMGAP1, and DBFDADC2):

The user-supplied randomizer returned RC=04 when it was passed the DEDB root key.

Rather than having an abnormal termination occur, this status code is returned to the application program that issued the EXEC DLI command.

Programmer response: The database position has not changed. The application program must determine subsequent processing.

Source: DL/I codes

FN

Explanation: The program issued a FLD call that contains a field name in the FSA that is not defined in the DBD. IMS does not continue processing the FLD call or any of the FSAs in the FLD call. IMS returns an FN status code in this situation even if an earlier FSA in the same FLD call received an FE status code.

Programmer response: Issue a ROLB call to remove the effects of the incorrect FLD call and then correct the FLD call.

Source: DL/I codes

FP

Explanation: The I/O area referenced by a REPL, ISRT, or FLD/CHANGE call to an MSDB contains an invalid packed-decimal or hexadecimal field.

Programmer response: Correct the data in the I/O area.

Source: DL/I codes

FR

Explanation: One of the following situations exists:

- A non-message driven region (that is, not an MPP, JMP, or IFP) issued a database request that forced the system to go beyond the DEDB buffer limit specified for the region.
- A batch-oriented BMP received a GC status code in a PCB with PROCOPT=H. Another commit process was required before using the PCB again.

IMS eliminates all database changes made by the program since the last SYNC call, CHKP request, or SYMCHKP command the program issued (or since the program started processing if the program has not issued any SYNC calls, CHKP requests, or SYMCHKP commands). All database positions for PCBs not referring to a DEDB with PROCOPT=P or H active are lost. If the PCB referred to a DEDB with PROCOPT=P or H active, the position is set to the valid position after the last commit process, or the start of the valid range if there was no commit process.

Rather than having an abnormal termination occur, this status code is returned to the application program that issued the database call. A message driven region will abend U1033 rather than receive status FR.

Programmer response: Either terminate the program and restart it with a larger buffer allocation, or provide a routine that causes frequent commit points. If PROCOPT=H is used, make sure that a commit point is requested after a GC code has been returned.

Source: DL/I codes

FS

Explanation: For a root segment or direct dependent segment, this status code is returned only to BMPs. For a sequential dependent segment, this status code can be returned to either a BMP or a message-driven program:

- A BMP issued an ISRT request for a root segment, a direct dependent segment, or a sequential dependent segment, but IMS could not get enough space in either the root-addressable or sequential dependent part of the DEDB area to insert the new segment:
  - If IMS returns this status code on an ISRT request for a root segment, a direct dependent segment, or a sequential dependent segment, the problem is with the root-addressable portion of the area, the independent overflow area, or the sequential dependent area.
  - If IMS returns this status code when the program issues a SYNC call, CHKP request, or SYMCHKP command, the problem is with the sequential dependent part of the area.

  In either case, IMS eliminates all of the database changes the program has made since the last commit point (or since the program started processing, if the program has not reached a commit point).
- A message-driven program issued an ISRT request for a sequential dependent segment, and the sequential dependent part is full.

Rather than having an abnormal termination occur, this status code is returned to the application program that issued the EXEC DLI command.

Programmer response: Continue with other processing, and report the problem to the system programmer.

Source: DL/I codes

FT

Explanation: The Fast Path program issued a call to a Fast Path database that included too many SSAs. A call to a DEDB can include up to 15 SSAs. A call to an MSDB can include only one SSA.

Programmer response: Correct the call.

Source: DL/I codes

FV

Explanation: At least one of the verify operations in a FLD call issued in a batch-oriented BMP failed when the program reached a commit point. IMS eliminates the database updates the program has made since it issued the last SYNC or CHKP call (or if the program has not issued a SYNC or CHKP call, since the program started processing). All database positioning is lost.

Programmer response: Reprocess the transaction or terminate the program.

Source: DL/I codes

FW

Explanation: A BMP has used all buffers that are allocated for normal use, or all buffers have been modified. IMS returns this status code to warn you that you might be running out of buffer space. An FR status code might be imminent.

If you have been processing a DEDB, you get FW for requests that change data.

If you have been processing an MSDB, you get FW for all calls that change data and for GH calls.

With a DEQ call, you receive this code if no buffers can be released.

Rather than having an abnormal termination occur, this status code is returned to the application program that issued the EXEC DLI command.

Programmer response: You can supply an error-handling routine, triggered by the FW status code, that will cause your program to issue SYNC calls, CHKP requests, or SYMCHKP commands as soon as an

FW status code is returned to your program. This reduces the total buffer requirement. To avoid receiving the FW status code, issue SYNC or CHKP calls more frequently.

Source: DL/I codes

FY

Explanation: PROCOPT=H PCBs process segments sequentially in the forward direction. Position is established on a UOW and is moved forward only. Attempts to retrieve segments prior to the current UOW position are not allowed for HSSP application programs and will not be processed; they receive this status code.

Programmer response: Change the application program to retrieve segments in a forward direction only; use a PCB with a PROCOPT value other than H to access the segments in the backward direction.

Source: DL/I codes

GA

Explanation: In trying to satisfy an unqualified GN or GNP call, IMS crossed a hierarchic boundary into a higher level.

If IMS returns GA after a STAT[2] request, it means that the request that was just issued retrieved the total statistics for all the VSAM buffer subpools.

Rather than having an abnormal termination occur, this status code is returned to the application program that issued the EXEC DLI command. This call results in a return code of 0.

Programmer response: This status code is an information-only status code.

Source: DL/I codes

GB

Explanation: In trying to satisfy a GN call, DL/I reached the end of the database or, if you used a SETR statement, the end of the current range. In this situation, the SSA for the call or qualification for the command specified data beyond the last occurrence, and the search was not limited to the presence of a known or expected segment occurrence.

For example, a GN call was specified for a key greater than a particular value, rather than a GU call specifying a key value beyond the highest value.

A GB status code can be returned for:
- An unqualified GN call
- A qualified GN call without a maximum key (if no data is returned to the I/O area)

In contrast, a GE status code, instead of a GB status code, can be returned for:
- A GU call
- A qualified GN call without a maximum key (if data is returned to the I/O area)
- A qualified GN call with a maximum key

IMS also returns this status code when it has closed a GSAM data set. The assumed position for a subsequent request for a GSAM or full-function database is the beginning of the database, or if a SETR statement was used for a DEDB database, the beginning of the current range.

Rather than having an abnormal termination occur, this status code is returned to the application program that issued the EXEC DLI command.

Programmer response: User determined.

Source: DL/I codes

GC

Explanation: An attempt was made to cross a unit-of-work (UOW) boundary, or an area boundary in the case of PROCOPT=H. For a batch-oriented BMP PCB with PROCOPT=H or PROCOPT=P, at least one call on the referenced PCB changed position in the database since the last commit process or after the program began executing. IMS did not retrieve or insert a segment. Position is before the first segment of the following UOW.

Rather than having an abnormal termination occur, this status code is returned to the application program that issued the EXEC DLI command.

Programmer response: User determined. However, if the GC status code results from a call that referred to a PCB with PROCOPT=H, the program must cause a commit process before any other call can be issued for that PCB. Failure to do so results in an FR status code.

Source: DL/I codes

GD

Explanation: The program issued an ISRT call that was not qualified for all levels above the level of the segment being inserted. For at least one of the levels for which no qualification was specified, a prior request using this PCB established valid position on a segment. That position is no longer valid for one of these reasons:
- The segment has been deleted by a DLET call using a different DB PCB.
- The segment was retrieved using an alternate processing sequence, and a REPL or DLET call for this DB PCB caused the index for the existing position to be deleted.

2. STAT is a Product-sensitive programming interface.

Rather than having an abnormal termination occur, this status code is returned to the application program that issued the EXEC DLI command.

Programmer response: User determined.

Source: DL/I codes

GE

Explanation: ***For call-level programs:*** IMS returns this status code when:

- DL/I is unable to find a segment that satisfies the segment search argument described in a Get call.
- For an ISRT call, DL/I cannot find one of the parents of the segment being inserted.
- For an ISRT call, DL/I was requested to insert a root segment outside of the accessible range determined by a SETR statement.
- The program issued a STAT[3] call for OSAM buffer pool statistics, but the buffer pool does not exist.
- The program issued a STAT[3] call for VSAM buffer subpool statistics, but the subpools do not exist.
- A nonmessage driven BMP issued a FLD call to an MSDB segment. After the FLD call but before a commit point, the MSDB segment was deleted. GE can be returned for this reason after either a SYNC or a CHKP call.

For command-level programs:

- DL/I is unable to find a segment that satisfies the segment described in a Get command.
- For an ISRT command, DL/I cannot find one of the parents of the segment you're inserting.
- The program issued a STAT[3] command for OSAM buffer pool statistics, but the buffer pool does not exist.
- The program issued a STAT[3] call for VSAM buffer subpool statistics, but the subpools do not exist.

Rather than having an abnormal termination occur, this status code is returned to the application program that issued the EXEC DLI command.

Programmer response: The action you take depends on your program.

Note: When a GNP call for a DEDB sequential dependent segment results in a GE status code, the I/O area contains a length indication of 10 bytes and the original position of the deleted portion of the sequential dependent part. Position is at the end of the sequential dependent chain. A GE status code can be returned to a program using PROCOPT=GOx for a segment that exists in a database during CI splits.

Source: DL/I codes

3. STAT is a Product-sensitive programming interface.

GG

Explanation: DL/I returns this status code if the segment being retrieved contains an invalid pointer and the application program has a processing option of GOT or GON. (Processing options are explained under PROCOPT in the discussion of program specification block generation in Program Specification Block (PSB) Generation utility (System Utilities).) This situation can occur when update activity in the database is going on concurrently with your program's processing.

DFSVSMxx option PPUR=Y can be used to prevent this status if it was received when running a PROCOPT=GOx transaction accessing HALDB partitions and a partition is found to be unavailable due to a database command in progress.

For call-level programs: The PCB key feedback length and area is based on the last segment that satisfied the call. Your position is at the beginning of the database.

For command-level programs: If your request specified KEYFEEDBACK, the DIBKFBL contains the length of the key of the last segment that satisfied the command. Your position is at the beginning of the database.

Rather than having an abnormal termination occur, this status code is returned to the application program that issued the EXEC DLI command.

Programmer response: Continue processing with another segment or terminate the program. The request that resulted in the GG status code might be successful if you issue it again.

Source: DL/I codes

GK

Explanation: DL/I has returned a different segment type at the same hierarchic level for an unqualified GN or GNP call.

Rather than having an abnormal termination occur, this status code is returned to the application program that issued the EXEC DLI command. This call results in a return and reason code of 0.

Programmer response: This is an information-only status code.

Source: DL/I codes

GL

Explanation: For either call-level or command-level programs:

The program issued a LOG request that contained an invalid log code for user log records. The log code in a LOG request must be equal to or greater than X'A0'.

For call-level programs: DL/I returns GL on a DEQ request when the first byte of the I/O area referenced in the request did not contain a valid DEQ class (B-J).

For command-level programs: EXECDLI returns a GL status for either a GN, GNP, GU, or DEQ command when the alphabetic character coded on the LOCKCLASS option is not within the range of B to J. An abend 1041 is then issued.

Programmer response: Correct the log code, which is the first byte of the log message.

For call-level programs: If the program received this status code for a DEQ request, check the DEQ class code in the I/O area.

For command-level programs: Check the alphabetic character coded for class on the LOCKCLASS option to ensure that it is in the range from B to J.

Source: DL/I codes

GP

Explanation: The program issued a GNP when there is no parentage established, or the segment level specified in the GNP is not lower than the level of the established parent.

Programmer response: Make sure you have established parentage before issuing GNP, and check the segment level specified by the GNP.

Source: DL/I codes

HT

Explanation: The HT status indicates that the High-Water-Mark time stamp (HWM TS) is less than the Logical Begin time stamp (LB TS).

Programmer response: The time stamp in the High-Water-Mark segment was not updated on the area data set during utility setup and partner notification. Check whether the data-sharing partner is still running. The RLM may have a lock for the sequential dependent CI.

Source: DL/I codes

II

Explanation: The program issued an ISRT call that tried to insert a segment that already exists in the database. Current® position after an II status code is just before the duplicate of the segment you tried to insert. Some of the reasons for receiving this status code are:

- A segment with an equal physical twin sequence field already exists for the parent.
- A segment with an equal logical twin sequence already exists for the parent.
- The logical parent has a logical child pointer, the logical child does not have a logical twin pointer, and the segment being inserted is the second logical child for that logical parent.
- The segment type does not have physical twin forward pointers and the segment being inserted is the second segment of this type for that parent, or it is the second HDAM or PHDAM root for one anchor point.
- The segment being inserted is in an inverted structure. (The immediate parent of this segment in the logical structure is actually its physical child in the physical structure.)
- A physically paired logical child segment already exists with a sequence field equal to that of the segment you're inserting. For example, the segment could have been inserted with no duplication, but when an attempt was made to position for the insert of its physical pair, the segment had a duplicate key to an existing twin segment.
- An application program inserted a key of X'FF...FF' into a HISAM, HIDAM, or PHIDAM database.

Rather than having an abnormal termination occur, this status code is returned to the application program that issued the EXEC DLI command.

Programmer response: User determined.

Source: DL/I codes

IX

Explanation: The program issued an ISRT call that violated the insert rule for that segment. Some of the reasons that IMS returns this status code are:

- The program tried to insert the logical child and logical parent, and the insert rule for the logical parent is physical and the logical parent does not exist.
- The program tried to insert the logical child and the logical parent, and the insert rule is logical or virtual and the logical parent does not exist. In the I/O area, the key of the logical parent does not match the corresponding key in the concatenated key in the logical child.
- The program tried to insert a logical child, and the insert rule of the logical parent is virtual and the logical parent exists. In the I/O area, the key in the logical parent segment does not match the corresponding key in the concatenated key in the logical child.
- The program tried to insert a physically paired segment, where both sides of the physical pair are the same segment type and the physical and logical parent are the same occurrence.
- The program issued an ISRT call to a GSAM database after receiving an AI or AO status code.

Programmer response: Correct the ISRT or the program.

Source: DL/I codes

L2

Explanation: The application program needed to allocate SDEP CI RBAs to contain the application programs' insert activity for a particular AREA in the DEDB, but the request to acquire the AREA lock failed.

Programmer response: Contact the IMS DBA or the IMS Systems Programmer.

Source: DL/I codes

LB

Explanation: The segment that the program tried to load already exists in the database. Other possible causes are:

- A segment with an equal physical twin sequence field already exists for the parent.
- A segment type does not have a physical twin forward pointer, and the segment being inserted is either the second segment of this segment type for the parent or the second HDAM or PHDAM root for one anchor point.
- An application program inserted a key of X'FF...FF' into a HISAM, HIDAM, or PHIDAM database.

Rather than having an abnormal termination occur, this status code is returned to the application program that issued the EXEC DLI command.

Programmer response: Correct the `ISRT` call or LOAD command, or find out if the load sequence is incorrect. Check with the DBA or the equivalent specialist at your installation.

Source: DL/I codes

LC

Explanation: The key field of the segment being loaded is out of sequence.

Programmer response: Check the segment and determine where it should be loaded.

Source: DL/I codes

LD

Explanation: No parent has been loaded for the segment being loaded.

Programmer response: Check the sequence of segments that have been loaded and determine where the parent should have been loaded.

Source: DL/I codes

LE

Explanation: The sequence of sibling segments being loaded is not the same as the sequence that is defined in the DBD.

Programmer response: Check and correct the sequence of the segments that are being loaded.

Source: DL/I codes

LF

Explanation: The source data for a logical child segment was found in the input stream of a load job for a High Availability Large Database (HALDB). Logical child segments cannot be loaded into a HALDB PHDAM or PHIDAM database. Instead, the segments must be added later in an update run.

Programmer response: Remove all source data for logical child segments from the load job and insert them later with an update job.

Source: DL/I codes

LS

Explanation: The LS status means that an application program needed to allocate SDEP CI RBAs to contain the application programs' insert activity for a particular area in a Data Entry Database and the CIs could not be locked by the RLM. The application work may be committed, but some other application work may not have enough CI space, depending on how much SDEP insert work was done and the first committed application.

Programmer response: Do a commit and be careful not to insert too many more SDEP segments.

Source: DL/I codes

MR

Explanation:

An error was detected by the IBM IMS Queue Control Facility for z/OS routines on a GU, GN, ISRT, CMD, or PURG call. If the application program issuing the call is not IMS Queue Control Facility, the problem is an invalid usage of the MRQPSB block. The PSB block can be used only by IMS Queue Control Facility. For information about how to specify the MRQPSB block, refer to the MRQPSBN= parameter description in the MSGQUEUE macro in IMS system definition information. If the application program is IMS Queue Control Facility, the AIBRETRN code should be X'000000F0'.

Programmer response: If the application program is not IMS Queue Control Facility, use a PSB other than MRQPSB.

If the application is IMS Queue Control Facility, locate

the AIBREASN code and refer to the IMS macro DFSMRAEQ for information about IMS Queue Control Facility AIBREASN codes.

Source: DL/I codes

Related reference:

IMS Queue Control Facility AIB reason codes

IBM IMS Queue Control Facility for z/OS interface (Diagnosis)

NA

Explanation: One or more of the databases that can be accessed by using this PCB is not available.

This status code can be issued as a result of the following actions when a database is not available:

- An INIT call with DBQUERY in the I/O area or the QUERY command was issued.
- The IMS catalog is required to complete the DL/I call, but the IMS catalog is unavailable.
- An INIT call with VERSION(*dbname=version*) in the I/O area was issued.
- The QUERY command was issued.
- A DL/I call was issued against the IMS catalog PCB DFSCAT00, but the catalog PSB DFSCP000 could not be scheduled. IMS attempts to dynamically attach the PSB, but if the PSB is not available then the call fails. Examine recent DFS1769W, DFS1852W, and DFS1934E messages for troubleshooting information.

A request made using this PCB will probably result in a BA status code if the INIT STATUS GROUPA has been issued or in a DFS3303I message and 3303 pseudoabend if it has not. An exception is when the database is not available because dynamic allocation failed. In this case, a request results in an AI (unable to open) status code.

Programmer response: This is an information-only status code.

Source: DL/I codes

NE

Explanation: Indexing maintenance issued a DL/I call, and the segment has not been found. This status code is included in message DFS0840I. The system console receives message DFS0840I INDEX ERROR (*dbdname*) NE (first *45* bytes of key). The application program receives a blank status code.

An application program could have processed a secondary index as a database and thus deleted some of the secondary index entries. Subsequently, when a source segment is deleted, the secondary index for the source statement might not be present. For this reason, when the application program deletes a source segment and the index entry is not present, the DFS0840I message is sent to the system console, but a blank status code is returned to the application program.

Programmer response: Determine whether the secondary index has been processed as a database and, as a result, the key included in the DFS0840I message was deleted. If this is not the case, check the cause for the index inconsistency with the database and correct it.

Source: DL/I codes

Related information:

DFS0840I (Messages and Codes)

NI

Explanation: The reasons that IMS returns this status code are:

- There is a duplicate segment in a unique secondary index. While IMS was inserting or replacing a source segment for a secondary index defined with a unique sequence field, the insertion of the secondary index segment was attempted but was unsuccessful because an index segment with the same key was found. One possible cause for a duplicate segment in the index is that the index DBD incorrectly specified a unique key value—secondary index only.
- A data management open error occurred when opening the index data set.

In an online application program, the call is backed out and the program receives an NI status code.

For a batch program that does not log to the IMS DASD log, IMS abnormally terminates the program with a 0828 abend. You should run batch backout.

Programmer response:

The response is determined by the user. If duplicate secondary index entries occur, specify the index as non unique, and provide an overflow entry-sequenced data set. If an open error occurred, examine message DFS0730I for the cause of the open error.

Source: DL/I codes

NL

Explanation: The application program issued an extended checkpoint call. Checkpoint information is written to the log data set, but there is no DD statement in the batch step for the log, so no checkpoint was written. The DD name for the log data set is IEFRDER. Although no checkpoint information was written, normal commit processing was performed.

Programmer response: Provide an IEFRDER DD statement. No status is returned for a DD DUMMY statement.

Source: DL/I codes

NO

Explanation: A BSAM or VSAM physical I/O error occurred during a database request that is issued by the index maintenance function.

For an online program, all updates made for the call are backed out and the application program receives the NO status code. For a batch program that does not log to the IMS DASD log, IMS abnormally terminates the program with an 826 abend.

Programmer response: See accompanying messages giving details of the error. In a batch environment, run batch backout.

Source: DL/I codes

NU

Explanation: An ISRT, DLET, or REPL request using this PCB might result in a BA status code if the INIT STATUS GROUPA call or QUERY command has been issued or in a DFS3303I message or 3303 pseudoabend if it has not. If the unavailable database is only required for delete processing, it is possible that the ISRT and REPL requests can be processed.

Programmer response: This is an information-only status code.

Source: DL/I codes

OB

Explanation: The OB status indicates that the STOPRBA parameter value given for the DEDB Sequential Dependent Scan or Delete Utility coincides with a preallocated sequential dependent CI boundary or its dummy segment which has a time stamp from a /DBR or RESTART that cannot be honored by the SDEP utility.

Programmer response: Check the parameter value for validity and use a correct value that is not a dummy segment or a preallocated SDEP CI boundary written by a /DBR or IMS restart.

Source: DL/I codes

OS

Explanation: The OS status indicates that the STOPRBA parameter value given for the DEDB Sequential Dependent Scan Utility is too large for the current sequential dependent CI set.

Programmer response: Check the parameter value for validity and use a correct value or use the utilities default value for the scan end.

Source: DL/I codes

QC

Explanation: There are no more messages in the queue for the program. The reasons that IMS returns this status code are:

- An application program issued a successful CHKP call, but the message GU call issued internally by the CHKP call was unsuccessful (that is, it did not return a message).
- An application program that is processing APPC synchronous messages that does not set sync points for each message GU call (that is, mode=MULT on the TRANSACT macro) is returned a QC status code to force a sync point after each GU call.

  For more information about the TRANSACT macro, see the IMS system definition information.
- An MPP or transaction-oriented BMP issued a GU call to retrieve another message, but either there are no more messages or the processing limit (that is, PROCLIM=parm on the TRANSACT macro) has been reached.
- IMS is shutting down or:
  - A /PSTOP REGION command has been issued for the dependent region in which the application program is processing.
  - A database dump (/DBD) command has been issued.
  - A database recovery (/DBR) command is in operation.
  - A stop subsystem (/STOP SUBSYS) command has been issued.
- IMS wants to reschedule the region (quick reschedule).
- If an application program accesses an external subsystem, such as DB2®, the Commit Verify exit provided by the external subsystem can determine whether MODE=MULT (CMTMODE(MULT)) is supported. IMS calls the exit routine before the next message is dequeued and presented to the application program. The exit routine allows the external subsystem to decide if it can properly process a new message without initiating a commit for the previous message. The external subsystem returns to IMS with a return code that requests that IMS continue with normal MODE=MULT (CMTMODE(MULT)) processing or initiate a commit action. If a commit action is requested, IMS will initiate the commit action before dequeuing the next message and will terminate the application program with a “QC” status code.

Programmer response: This is an information-only status code. The application program should terminate.

Source: DL/I codes

Related concepts:

Quick reschedule for regions in DB/DC and DCCTL environments (System Definition)

Related reference:

TRANSACT macro (System Definition)

Commit Verify exit routine (Exit Routines)

QD

Explanation:

The program issued a message GN or GCMD call, but there are no more segments for this message.

Programmer response: Process the message.

Source: DL/I codes

QE

Explanation: The program issued a message GN call before issuing a GU call to the message queue. In message-driven Fast Path programs, this code applies to message calls only. The program issued a message GN call before issuing a GU call to the message queue. In message-driven Fast Path programs, this code applies to message calls only. This code is also returned when a program issues a ROLB call, specifying the I/O area parameter, without having issued a successful message GU call during that commit interval. A message-driven Fast Path program issued a CHKP call to establish an internal GU call but the CHKP call failed with a status QC code. A successful GU call was never issued during the commit interval for the failing CHKP call. Information only status code for calls encountering SDEP full or FLD verify failures which are reprocessed using ROLB.

Programmer response: Correct the program by:
- Issuing a GU call before the GN call
- Issuing a CMD call before the GCMD call
- Issuing a GU call before the ROLB call

Source: DL/I codes

QF

Explanation: If in a non-shared queues environment, segment length is less than five characters (segment length is message text length plus four control characters).

If in a shared queues environment and the application program insert (ISRT) results in a message that spans multiple queue buffers, the second and subsequent buffers are PUT to the shared queues. If the shared queues are full and those CQS PUTs are rejected, this results in a STATUSQF being passed back to the application program.

Programmer response: If a non-shared queues environment, correct the segment and issue a ROLB to back out any incomplete data.

If a shared queues environment, follow the procedure to increase queue size.

Source: DL/I codes

QH

Explanation: There has been a terminal symbolic error. The output logical terminal name or transaction code is unknown to IMS. Some reasons for receiving this status code are:
- The program tried to insert an alternate response PCB receiving a QC status code for a GU call.
- The program tried to insert to an I/O PCB that has a logical terminal name of blanks. This could occur after the program issued a GU call for a message that originated either from a batch-oriented BMP or a CPI Communications driven program.
- SMB or CNT could not be found.
- The program deallocated a conversation with a SETO call with the DEALLOCATE_ABEND option. Any subsequent ISRT calls are rejected with this status code.
- The program issued an ISRT call without first issuing a GU call.
- The logical terminal name or transaction code specified is Fast Path exclusive and is not available to this program.
- The program issued an ISRT call for a segment shorter than 5 bytes.
- The program issued an ISRT call for a SPA shorter than 6 bytes.
- The logical terminal name or transaction code has leading blanks, instead of being left-justified.

Programmer response: Check the logical terminal name or transaction code, and correct it.

Source: DL/I codes

RA

Explanation: The token does not match a token for any outstanding SETS requests or the request was issued for a database PCB that did not get a BA status on the previous request.

Programmer response: The outstanding SETS request might have been canceled by a commit process, or an error exists in the use of the token.

Source: DL/I codes

RC

Explanation: The ROLS call was issued with unsupported PCBs in the PSB, or the program is using an attached subsystem. If the ROLS call is in response to a SETS call, the call is rejected. If the ROLS call is in response to a SETU call, the call is processed, but updates to unsupported PCBs or an attached subsystem are not backed out. This status is only returned for a ROLS call in response to a SETU call if an attached subsystem is being used.

Explanation: The ROLS request was rejected because the PSB contains access to a DEDB, MSDB, or GSAM organization or has access to an attached subsystem.

Programmer response: User determined.

Programmer response: The ROLS request is invalid in this environment. The program must either remove the use of the database organization that is preventing the use of the ROLS call or not use the ROLS call.

Source: DL/I codes

RX

Explanation: The program issued a REPL that violated the replace rule for that segment.

Programmer response: Correct the REPL call, or check with the DBA or the equivalent specialist at your installation.

Source: DL/I codes

SA

Explanation: IMS was not able to obtain the storage space.

For a SETS request, IMS could not get storage for the data in the I/O area.

For an INIT VERSION(*dbname=version*) request, IMS could not get CSA storage to build the required internal blocks.

Programmer response: Use a larger region size for the job step.

Source: DL/I codes

SB

Explanation: The maximum number of levels, nine, of SETS requests were already specified, and this request is attempting to set the tenth.

Programmer response: Correct the program.

Source: DL/I codes

SC

Explanation: A SETS or SETU call was issued with unsupported PCBs (DEDB, MSDB, or GSAM) in the PSB, or the program is using an attached subsystem.

Programmer response: For a SETS call, the request is rejected. Remove the unsupported PCBs or use the SETU call. For a SETU call, the program can proceed with the knowledge that a ROLS call will not back out changes for the unsupported PCBs. The other option is to not use the SETS or ROLS function.

Source: DL/I codes

SD

Explanation: ***For call-level programs:*** When command code O is specified with a segment search argument (SSA), the SSA is not allowed to contain position and length values for a segment of a Fast Path secondary index database.

For command-level programs: When command code O is specified, the SSA format with position and length values is not allowed against a segment of a Fast Path secondary index database.

Programmer response: Correct the SSA.

Source: DL/I codes

SF

Explanation: An application program with field-level sensitivity attempted to access a segment in a back-level version of a database, but the length of the target segment was changed in the current version of the database. If the length of a segment is changed between versions of a database, application programs that have field-level sensitivity can access the segment in only the current version of the database.

System action: IMS returns this status code and continues to run normally.

System programmer response: To access the segment, the application program must access the current version of the database.

If the requested version of the database is specified in either the PCB or a DL/I INIT VERSION call, the version specified must be changed to the current version.

If the version is not specified in either the PCB or the INIT VERSION call, you can change the default version that IMS returns to the application program by specifying DBLEVEL=CURR in the PSB or in the DFSDF*xxx* member of the IMS.PROCLIB data set.

Any changes to a PCB or PSB require that the PSB be regenerated by running the PSB Generation utility.

To detect changes to the DFSDF*xxx* member, online IMS systems must be restarted after the changes are made. DLIBATCH and DBBBATCH jobs can detect changes to the DFSDF*xxx* member after the jobs are restarted, without requiring a restart of IMS.

Source: DL/I codes

Module: DFSDFLS0

Related concepts:

Database versioning (Database Administration)

Related reference:

PSBGEN statement (System Utilities)

| Full-function or Fast Path database PCB statement (System Utilities)

| INIT call (Application Programming APIs)

| DATABASE section of the DFSDFxxx member (System Definition)

SY

Explanation: IMS incurred an internal error during Syncpoint processing for an IMS Java SYNC request call.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

TA

Explanation: This status code applies to CICS online command-level programs only, and it is returned following a scheduling request. The PSB named in the request is not in the PSB directory.

Programmer response: Correct the name of the PSB in the scheduling request, or add the PSB name to the PSB directory.

Source: DL/I codes

TC

Explanation: This status code applies to CICS online command-level programs only, and it is returned following a scheduling request. It means that you have already scheduled a PSB.

Programmer response: Correct your program so that you terminate a PSB before scheduling another. If you want to reschedule a PSB, you must have already terminated the PSB.

Source: DL/I codes

TE

Explanation: This status code applies to CICS online command-level programs only, and it is returned following a scheduling request. The PSB could not be scheduled because an initialization error occurred.

Programmer response: See your system programmer or DBA. For information on possible causes for the PSB initialization error, see What to do when your IMS program terminates abnormally (Application Programming).

Source: DL/I codes

TG

Explanation: This status code applies to CICS online command-level programs only, and it is returned following a terminate request. The program issued a terminate request when there was no PSB scheduled.

Programmer response: This is an information-only status code. If you only wanted to terminate a PSB, continue with processing. If you also wanted to cause a sync point, issue a SYNCPOINT command. (No sync point was caused by the unsuccessful terminate request.)

Rather than having an abnormal termination occur, this status code is returned to the application program that issued the EXEC DLI command.

Source: DL/I codes

TH

Explanation: This status code applies to CICS online command-level programs only, and it is returned following a database request or a statistics request. The program attempted to access the database before scheduling a PSB.

Programmer response: Correct your program, and schedule a PSB before accessing the database.

Source: DL/I codes

TI

Explanation: This status code applies to command-level programs only, and it is returned after an `ISRT` command. The `ISRT` command defined an invalid path to the segment. Data must be transferred for all segments between the first named segment and the last named segment.

Programmer response: Correct the ISRT command, specifying a FROM option for each segment to be transferred.

Source: DL/I codes

TJ

Explanation: This status code applies to CICS online command-level programs only, and it can be returned after any command that a CICS online program uses. DL/I is not active.

Programmer response: Contact your DBA. CICS must be reinitialized with DL/I defined as active in the SIT.

Source: DL/I codes

TL

Explanation: This status code applies to CICS online command-level programs only, and it is returned after a scheduling request. A conflict in scheduling intent occurred. (This cannot occur if program isolation has been specified.)

Programmer response: Specify program isolation in the SIT. If program isolation has not been specified, wait until the PSB is no longer in use, and reschedule it.

Source: DL/I codes

TN

Explanation: This status code applies to command-level programs only, and it can be returned after any of the commands. An invalid SDIB exists. An initialization call was not made, or the system's DIB (not the application program's DIB) was overlaid.

Programmer response: Check your program to make sure that you did not use an entry statement, as you would in a call-level batch program. Also make sure that no addressing errors are in your program that would cause an overlay.

Source: DL/I codes

TO

Explanation: This status code applies to command-level programs only, and it is returned following a `REPL` command. A path-replace error occurred. The segments to be replaced are compared to the previous Get command and one of the following situations occurred:

- A segment is named to be replaced that was not retrieved by the Get command.
- Data had not been transferred (no INTO option) for this segment on the Get command.
- The attributes of the data to be transferred do not match the data in the database.

Programmer response: Correct the program.

Source: DL/I codes

TP

Explanation: This status code applies to command-level programs only, and it is returned following any of the database commands, a LOAD command, or a statistics request. The number of the PCB specified in the USING option is higher than the number of PCBs in the PSB being used, or an invalid processing option was specified. For example, the program tried to issue a LOAD command without having the L processing option specified in its PSB.

An EXEC DLI command is being attempted against a GSAM PCB. This is invalid.

Programmer response: Check the PSB and correct your program.

Source: DL/I codes

TR

Explanation: This status code means that the CICS XDLIPRE exit routine returned X'04' in register 15 because the routine determined that the immediately preceding DL/I request should not be executed.

Programmer response: Contact the CICS system programmer.

Source: DL/I codes

TY

Explanation: This status code applies to CICS online command-level programs only, and it is returned following a database or statistics request. The database was not open when the request was issued.

Programmer response: Contact your DBA or system programmer. The database can be checked and opened by using operator commands.

Source: DL/I codes

TZ

Explanation: This status code applies to CICS online command-level programs only, and it is returned following a database or statistics request. The length of the retrieved segment is greater than 64 KB.

Programmer response: Contact your DBA or system programmer; the database definition might require modification.

Source: DL/I codes

UB

Explanation: This status code is returned when IMS is unable to obtain private buffer pool.

Programmer response: No DFS0535I message is issued if the High Speed Reorganized Utility (HSRE) is being used when this status code is received. See the DFS2712I messages issued at utility termination for the name of the module, abend subcode, Utility High Speed Workarea (UHSW) storage area dump, IOAR (DEDB I/O), and register contents.

If the DBFPAPB0 return code is 08, storage is not available for the private buffer pool.

If the DBFHUSS0 return code is 10, the request for private buffers is for the initial buffer set and the private pool anchor address already exists.

Source: DL/I codes

UC

Explanation: This status code is returned for the following reasons:

- For batch programs in which a checkpoint record was written to the Utility Control Facility (UCF) journal data set.

  During the processing of an HD reorganization, a reload, or an initial load program under the supervision of the Utility Control Facility (UCF), a checkpoint record was written to the UCF journal data set. IMS returns this status code to indicate that the last ISRT call was correct and the initial load program might continue or it might perform a checkpoint procedure before continuing.
- When a connect failed.

Programmer response: This is an information-only status code for the first status code reason.

When this status code is issued for a connect failure, see message DFS0535I for more information about how to correct the error.

Source: DL/I codes

Related information:

DFS0535I (Messages and Codes)

UJ

Explanation: See Chapter 12, "Fast Path utility status and reason codes," on page 179.

UP

Explanation: This status code is returned when the unit of work (UOW) requested is greater than the UOW range.

Programmer response: Correct the error and run the job again.

Source: DL/I codes

UR

Explanation: This status code is returned for batch programs only. Your initial load program is being restarted under Utility Control Facility (UCF). The program terminated while executing under UCF. The job was resubmitted with a restart request.

Programmer response: Ensure that the program is in proper sequence with database loading. The program uses the I/O area and the DB PCB key feedback area.

Source: DL/I codes

US

Explanation: This status code is returned for batch programs only. The initial load program is about to stop processing. While processing an HD reorganization reload or user initial load program under the supervision of Utility Control Facility (UCF), the operator replied to the WTOR from UCB and requested the current function to terminate. The last ISRT call was processed.

Programmer response: Ensure that the initial load program performs a checkpoint procedure of its data sets and returns with a nonzero value in register 15.

Source: DL/I codes

UW

Explanation: This status code is returned when IMS is unable to obtain a work area.

Programmer response: Increase the REGION size and run the job again.

Source: DL/I codes

UX

Explanation: This status code is returned for batch programs only. A checkpoint record was written, and processing stopped. This is a combination of UC and US status codes.

Programmer response: See the descriptions of UC and US status codes.

Source: DL/I codes

U1

Explanation: This status code is returned when the area name specified is not valid.

Programmer response: Correct the error and run the utility job again.

Source: DL/I codes

U9

Explanation: This status code is returned when the area access intent is read or read only. Access intent must be UP or EX.

Programmer response: Use the `/START DB ACCESS` or `UPDATE DB START(ACCESS) SET(ACCTYPE())` command to set the access intent to UP or EX and run the job again.

Source: DL/I codes

V1

Explanation: The program tried to insert or replace a variable-length segment that is too long. The length of the segment must be equal to or less than the maximum length specified in the DBD. IMS also returns status code V1 when the specified minimum length cannot hold the complete sequence field of the segment type. In this situation, status code V1 results from one of three instances: processing without an edit/compression routine; processing with an edit/compression routine, but not specifying the key compression option; or coding a length field (LL) that is less than the specified minimum length. The length must be long enough to include the entire reference field; if the segment is a logical child, it must include the entire concatenated key of the logical parent and all sequence fields for the paired segment. The program tried to delete a variable-length segment. The copy of this segment in the user's I/O area contains an invalid length field.

IMS also returns this status code when an invalid record length is specified in a GSAM call.

Programmer response: Correct the program.

Source: DL/I codes

V2

Explanation: This status code applies to command-level programs only, and it is returned following a database or LOAD command. The segment length is missing or invalid. The segment length must be a positive integer. For variable-length segments, it is the maximum size acceptable to the program's I/O area.

Programmer response: Check that the program translated and compiled correctly. The value of any segment length in a path command should not exceed 32 KB, and the sum of the lengths should not exceed 64 KB.

Source: DL/I codes

V3

Explanation: This status code applies to command-level programs only, and it is returned following a Get or ISRT command. The field length is missing or invalid. The field length must be a positive integer, and it must be specified for each field in a `WHERE` option.

Programmer response: Correct the program.

Source: DL/I codes

V4

Explanation: This status code applies to command-level programs only, and it is returned following any of the database commands or a LOAD command. The length of a variable-length segment is invalid. The LL field as provided by the program on an ISRT or REPL command, or as received in the I/O area on a Get command, exceeds the value of SEGLENGTH.

Programmer response: Correct the program.

Source: DL/I codes

V5

Explanation: This status code applies to command-level programs only, and is returned following a Get, REPL, or ISRT command. The offset is invalid. The offset must be a positive integer and not greater than the segment length.

Programmer response: Correct the program.

Source: DL/I codes

V6

Explanation: This status code applies to command-level programs only, and it is returned following a Get or ISRT command using the KEYS option. The concatenated key length is missing or invalid. The length of the concatenated key must be a positive integer.

Programmer response: Correct the program.

Source: DL/I codes

V7

Explanation: This status code applies to command-level programs only, and is returned following a STAT command. It means that the statistics area length is either too small or invalid. The length must be a positive integer, and it must be at least 72 bytes for unformatted statistics, 120 bytes for summary statistics, and 360 bytes for formatted statistics.

Programmer response: Correct the program.

Source: DL/I codes

XA

Explanation: The program tried to continue processing the conversation by passing the SPA to another program through a program-to-program message switch after already responding to the terminal.

Programmer response: If a response has been sent, the SPA should be returned to IMS. Correct the program.

Source: DL/I codes

XB

Explanation: The program has passed the SPA to another program but is trying to respond to the originating terminal.

Programmer response: No response is allowed by a program that is passed control of the program through a program-to-program message switch.

Source: DL/I codes

XC

Explanation: The program inserted a message that has some bits in the Z1 field set. The Z1 field is reserved for IMS.

Programmer response: Correct the program to prevent it from setting those bits.

Source: DL/I codes

XD

Explanation: IMS is terminating by a CHECKPOINT FREEZE or DUMPQ. IMS returns this code to a BMP that has issued a `CHKP` or `SYNC` call. If it is a transaction-oriented BMP, IMS does not return a message.

IMS also returns XD when a batch program issues a `SYNC` call.

Programmer response: Terminate the program immediately. IMS will terminate the program abnormally if the program issues another call.

Source: DL/I codes

XE

Explanation: A program tried to insert a SPA to an alternate express PCB.

Programmer response: Regenerate the PSB and remove the EXPRESS=YES option from the PCB, or define another non-express PCB to be used in the `ISRT` call.

Source: DL/I codes

XF

Explanation: IMS is ignoring the ISRT call for the SPA, because the specified alternate PCB had its destination set to a logical terminal but was not defined as ALTRESP=YES during PSB generation.

MSC directed routing does not support a program-to-program switch between conversational transactions.

Programmer response: Correct the application program or change the PSB generation for that alternate PCB to specify ALTRESP=YES.

Source: DL/I codes

XG

Explanation: IMS ignored the ISRT call because the current conversation requires a fixed-length SPA, and the insert (ISRT) call was to a program with a different length or variable-length SPA, while the source IMS system was earlier than IMS 6.1. If the SPA ISRT on a remote system is not going back to the input terminal (IOPCB), the SPA size must be the same as the size of the current one, if the source IMS system is earlier than IMS 6.1.

Programmer response: Correct the program or the SPA definitions.

Source: DL/I codes

XX

Explanation: An error occurred during GSAM initialization or during GSAM call processing. If this status code is in the GSAM PCB before the application program issued the first call, the error was detected during initialization. Possible causes are:

- Insufficient space
- Invalid DBD
- Invalid block size
- Invalid option
- Internal GSAM error

Programmer response: A subsequent GSAM call will result in an abnormal termination of the program. The program should terminate.

Source: DL/I codes

X2

Explanation: The first `ISRT` call to an alternate PCB whose destination is a conversational transaction code is not for the SPA. The SPA must be inserted with the first `ISRT` call.

Programmer response: Insert the SPA, and then reinsert the message segment.

Source: DL/I codes

X3

Explanation: The program modified the first 6 bytes of the SPA; the SPA is now invalid.

Programmer response: Correct the program and restore the original bytes.

Source: DL/I codes

X4

Explanation: The program issued an ISRT call to pass the SPA to a nonconversational transaction code. It did this by referencing a PCB whose destination was set for the nonconversational transaction code. You can send the SPA only to transaction codes that are defined as conversational.

Programmer response: Correct the ISRT call. Send only data segments.

Source: DL/I codes

X5

Explanation: The program issued more than one ISRT call to send the SPA to a PCB whose destination is a transaction code. Only one SPA is allowed per message.

Programmer response: Correct the program.

Source: DL/I codes

X6

Explanation: An invalid transaction code name was inserted into the SPA. This occurs if the input is from LU 6.2 (APPC) or OTMA and if a dynamic control block was built for the transaction code.

Programmer response: Correct the program to set the proper transaction code name.

Source: DL/I codes

X7

Explanation: The length of the SPA is incorrect. The program modified the first 6 bytes.

Programmer response: Correct the SPA and the program.

Source: DL/I codes

X9

Explanation: The length of the SPA is greater than the size of the PSB I/O area.

Programmer response: Correct the length of the SPA or the size of the PSB I/O area in the PSBGEN.

Source: DL/I codes

Z0

Explanation: The High Speed Reorganized Utility was not run because ERRCTN=TERM was specified for the segment shunting function and invalid data was found in the INDD input data set.

Programmer response: Correct the error cards in the INDD data set using the error messages from the Reorganized Utility report. Rerun the High Speed Reorganized Utility.

Source: DL/I codes

Module: DBFUMAN0

blanks(bb)

Explanation: The call was completed.

Programmer response: Proceed with processing.

Source: DL/I codes

Chapter 10. DBCTL return codes

The Database Control Subsystem (DBCTL) can issue return codes.

DBCTL DRA return codes

Coordinator controller (CCTL) and an Open Database Access (ODBA) application program using an ODBA interface can access an IMS database through the database resource adapter (DRA).

Unlike a CCTL, the ODBA interface does not use the PAPL parameter list. The ODBA interface uses the AERTDLI interface to communicate its requests to the DRA. Therefore, this information does not apply when ODBA is used. For information about using ODBA, see Writing ODBA application programs (Application Programming).

The coordinator controller initiates a request to connect to the Database Control Subsystem (DBCTL). The Database Resource Adapter (DRA) establishes and maintains the connection to DBCTL and handles all communication between the CCTL and DBCTL. Once the connection has been established, the DRA is ready to process requests from the CCTL for DBCTL services. The CCTL uses a parameter list called the DFSPAPL to communicate its requests to the DRA. (For the layout of DFSPAPL, see Problem diagnosis (System Programming APIs).) DBCTL responds to requests from the CCTL with a code in field PAPLRETC of DFSPAPL that tells whether the request was successfully completed. The format of PAPLRETC is *hhsssuuu*, where *hh* indicates a system abend, IMS abend, or DBCTL return code.

hh	**Meaning**
80	Either a system abend code or an IMS abend code was returned: *sss* contains the system abend code and *uuu* contains the IMS abend code (in hexadecimal). Either *sss* **or** *uuu* contains a code; the other field contains zeros. For an explanation of system abend codes, see *z/OS MVS System Codes*. For system or IMS abend codes, DBCTL typically dumps (SDUMP or SNAP) storage for diagnosis. However, if DBCTL determines that a dump (SDUMP or SNAP) is not necessary, it sets *hh* to X'88'. But if a SNAP (not an SDUMP) is wanted, then it sets *hh* to X'84'. For more information about DRA dumps, see IMS system definition information. When a Fast Path prepare call fails, DBCTL returns a status code in field PAPLSTCD in addition to the IMS abend code 35 in PAPLRETC.
00	A hexadecimal DBCTL return code was returned in field *uuu*.

For more information about DBCTL DRA codes, see the following information:

Related concepts:

IMS abend codes (Messages and Codes)

Related reference:

z/OS: z/OS MVS System Codes

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Return codes from requests under the DRA and THREAD functions

All requests under the DRA and THREAD functions receive return codes.

Return code	Meaning
0	Request completed successfully.
4	Invalid function requested.

Return codes from requests under the DRA function

The database resource adapter (DRA) issues return codes for all requests.

These codes are listed by the request as follows:

INIT request codes

INIT requests under the DRA function can receive return codes.

Return code	Meaning
8	GETMAIN failure trying to obtain required DRA storage.
12	Dynamic allocation of DRA RESLIB failed.
16	OPEN of DRA RESLIB failed.
20	ATTACH of the DRA TCB failed.
36	Required parameters not specified correctly.
48	LOAD of required DRA module failed.
72	The DRA RESLIB is not authorized.
76	The load of the DRA startup table (DFSPZPxx) failed.

PURGE request codes

PURGE requests under the DRA function can receive return codes.

PURGE requests codes are shown in the following list:

Return code	Meaning
24	CCTL storage was damaged. Unable to find thread service routine master control block (PAT).
28	Unable to find the thread for purge.
40	No active communications with DBCTL.
44	Invalid call token. Either the PAPLCTOK pointer was zero, or it did not contain the address of a valid call token.
131	Invalid address of DFSDPDIR for PURGE request.
232	Invalid address of thread TCB for PURGE request.

RESYNC request codes

RESYNC requests under the DRA function can receive the return codes.

The codes from RESYNC requests are shown in the following list:

Return code	Meaning
24	CCTL storage was damaged. Unable to find thread service routine master control block (PAT).
40	No active communications with DBCTL.
44	Invalid call token. Either the PAPLCTOK pointer was zero or it did not contain the address of a valid call token.
68	Invalid resync action requested.

TERMINATE request codes

TERMINATE requests under the DRA function can receive return codes.

TERMINATE requests can receive these codes:

Return code	Meaning
8	GETMAIN failed.
40	No active communication with DBCTL.
44	Invalid call token. Either the PAPLCTOK pointer was zero, or it did not contain the address of a valid call token.
213	Upon termination, there is at least one unit of recovery in doubt. A Recoverable Indoubt Structure (RIS) is built for each in-doubt unit of recovery. Termination is completed.
214	There might be an in-doubt unit of recovery upon termination, but DBCTL is not available.

Return codes from requests under the THREAD function

Requests under the THREAD function can issue return codes.

All requests under the THREAD function receive this return code:

Return code	Meaning
68	Invalid thread request.

Additional return codes for specific requests are as follows:

DL/I request codes

DL/I requests under the THREAD function can issue return codes.

Return code	Meaning
24	CCTL storage was damaged. Unable to find the thread service routine master control block (PAT).
28	No thread connection.
40	No active communications with DBCTL.
44	Invalid call token. Either the PAPLCTOK pointer was zero or it did not contain the address of a valid call token.
56	Language parameter (PAPLALAN) not specified.
64	DL/I call list (PAPLCLST) not specified.
221	A DL/I request was issued, but the thread is not primed with a recovery token. The user might have failed to issue the PTOK request after a sync point HOLD request.

PRIME RECOVERY TOKEN (PTOK) request codes

PRIME RECOVERY TOKEN (PTOK) requests under the THREAD function can receive return codes.

The return codes are shown in the following list:

Return code	Meaning
24	CCTL storage was damaged. Unable to find the thread service routine master control block (PAT).
28	No thread connection.
40	No active communications with DBCTL.

44 Invalid call token. Either the PAPLCTOK pointer was zero or it did not contain the address of a valid call token.
52 Invalid recovery token. The PAPLRTOK was zero.

SCHEDULE or UNSCHEDULE request codes

SCHEDULE or UNSCHEDULE requests under the THREAD function can return codes.

SCHEDULE or UNSCHEDULE requests can receive these codes:

Return code
Meaning

24 CCTL storage was damaged. Unable to find the thread service routine master control block (PAT).
28 PSB is not scheduled for an unschedule request.
32 Thread is already scheduled for a schedule request.
40 No active communications with DBCTL.
44 Invalid call token. Either the PAPLCTOK pointer was zero or it did not contain the address of a valid call token.
52 Invalid recovery token. Field PAPLRTOK was zero.
56 Language parameter (PAPLALAN) not specified.
60 PSB parameter (PAPLPSB) not specified.
201 PSB stopped or locked.
202 Database stopped or locked in DEDB.
203 I/O error in reading PSB or data management block.
205 data management block, PSB, or PSBW pool too small.
206 Schedule failed because of a stop region command.
207 Invalid processing option L or LS.
208 Fast Path buffer page fix error.
209 Invalid processing intent.
210 Database authorization failure.
211 The recovery token is not unique, or the CCTL ID portion of the recovery token does not match the USERID.
212 The recovery token passed is zeros.

SYNCPOINT request codes

SYNCPOINT requests under the THREAD function can receive return codes.

SYNCPOINT requests receives these codes:

Return code
Meaning

24 CCTL storage was damaged. Unable to find the thread service routine master control block (PAT).
28 No thread connection.
40 No active communications with DBCTL.
44 Invalid call token. Either the PAPLCTOK pointer was zero or it did not contain the address of a valid call token.
52 Invalid recovery token. The PAPLRTOK was zero, PAPLNRTK was zero on a CONTinue call, or PAPLRTOK=PAPLNRTK.
200 A PSB schedule is terminated at the end of sync point because a `/DBD` or `/DBR` command was issued, IRLM failed, or communication with IRLM failed.
218 For a RESYNC request, the recovery token is unknown to DBCTL.

TERMINATE THREAD request codes

TERMINATE THREAD requests under the THREAD function can receive return codes.

TERMINATE THREAD requests can receive these codes:

Return code	Meaning
24	CCTL storage was damaged. Unable to find the thread service routine master control block (PAT).
28	No thread connection.
40	No active communications with DBCTL.
44	Invalid call token. Either the PAPLCTOK pointer was zero or it did not contain the address of a valid call token. Thread is terminated.
210	A CCTL subsystem issued an UNSCHEDULE call or a TERMINATE THREAD call to the DBCTL subsystem.

Reason codes from DRA to the control exit

The DRA notifies the coordinator controller (CCTL) of asynchronous events (for example, a DRA failure, an identify failure, a DBCTL termination, and so on) by driving the Control Exit, a routine supplied by the CCTL.

The DRA passes control to this exit using the PAPL as the standard parameter list to pass information. The CCTL responds to notification of the event by passing back a return code in field PAPLRETC that tells the DRA what action to perform. The DRA then performs the requested action.

Use Table 17 on page 154 to determine what asynchronous event occurred, what actions the CCTL can ask the DRA to perform in response to the event, and what actions the DRA performed. The combination of codes in the first four columns specifically defines the asynchronous event. For example,

- PAPLFUNC=05 (column 1) indicates that some failure occurred.
- PAPLSFNC=01 (column 2) further defines this failure as an identify failure.
- PAPLRETC=8 (column 3) and PAPLRCOD=08 (column 4) define the failure precisely, indicating that the identify failure occurred in MVS SSI and that DBCTL is not active.

The last column contains both the return code that the CCTL passes to the DRA (in field PAPLRETC) to tell the DRA how to respond to the asynchronous event, and the action the DRA performs (DRA Actions). To interpret the return codes and determine DRA actions, refer to the notes following the table.

The first 4 columns in the table are fields in the DFSPAPL. They contain:

PAPLFUNC
: Function

PAPLSFNC
: Subfunction

PAPLRETC
: Return Code

PAPLRCOD
: Reason Code

Table 17. Asynchronous event code table.

PAPL FUNC	PAPL SFNC	PAPL RETC	PAPL RCOD	Event that invoked Control Exit	CCTL response and DRA actions
05 Some Failure occurred.					
	01 Identify failed. DBCTL not ready to connect.				0, 4, 8 See note 1
		8	08	Failure in MVS SSI. DBCTL is not active.	
		12	09	Failure in MVS SSI. DBCTL does not exist.	
		12	10	DBCTL is in initialization process.	
		12	11	DBCTL completed initialization and is waiting for restart command.	
		12	12	DBCTL is in restart process.	
		12	13	XRF alternate is in tracking mode.	
		12	14	XRF alternate is in takeover mode.	
		12	37	DBRC is not in share control mode.	
	02 Identify process is canceled.				0, 4 See note2.
		N/A	04	z/OS console operator canceled the CCTL request to wait until DBCTL becomes active. See note 1, code 0.	
		IMS abend code	05	DBCTL returned an IMS abend code.	
	03 DBCTL is terminating.				0, 4, 8 See note 6.
		N/A	02	The connected DBCTL terminated abnormally.	
	04 DRA failed.				No response. DRA terminated.
			01	A DRA function request failed in MVS SSI.	
		z/OS return code		Identify request failed (from DFSPRA10). SSI return code is not 8 or 12.	
		40		Resync request failed (from DFSPRA20).	
		40		Purge thread request failed (from DFSPRA50).	
		z/OS return code	03	Identify request failed in allocating DRA storage (from DFSPRA10).	
		z/OS return code	06	Establish DRA ESTAE failed (from DFSFPRA0).	
		See notes 4 and 5.	07	DRA terminated abnormally (from DFSFPRA0).	
		See note 4.	15	DRA terminated at the request of the Control Exit after DBCTL failed or the operator entered a /CHE FREEZE command.	
	05 DBCTL is shutting down.				0, 4, 8 See note 1.
		N/A	N/A	The operator entered a /CHE FREEZE command for DBCTL.	
	02 Resynchronization				0, 4 See note 3.

Table 17. Asynchronous event code table (continued).

PAPL FUNC	PAPL SFNC	PAPL RETC	PAPL RCOD	Event that invoked Control Exit	CCTL response and DRA actions
	N/A	N/A	N/A	Identify process completed. A recovery token list for all in-doubt units of recovery is passed to CCTL in field PAPLILST.	

Note:

1. The CCTL responds to the DRA by passing a return code (0, 4 or 8) in field PAPLRETC. This return code tells the DRA what action to perform. The DRA then performs the action requested.
   - 0 - Retry the connection.

     DRA writes message DFS690A to the z/OS console to indicate that IMS control or DBCTL region is not active. The z/OS console operator can respond with 'wait' or 'cancel'.
     - If the operator enters 'wait', the DRA sets a timer for issuing the next identify call. Each call is analyzed and processed just like the first call.
     - If the operator enters 'cancel', the DRA invokes the Control Exit with **reason code** 04. (Refer to note 2 for possible response and action.)
   - 4 - Proceed with termination.

     The DRA proceeds with termination and does not call the Control Exit again. The CCTL might delete the Control Exit at this time.
   - 8 - Identify to another DBCTL whose ID is in PAPLDBCN.

     The DRA issues the identify call to the designated DBCTL and processes the result just like the first identify call.
2. The CCTL responds to the DRA by passing a return code (0 or 4) in field PAPLRETC. This return code tells the DRA what action to perform. The DRA then performs the action requested.
   - 0 - Wait for the CCTL to send a DRA terminate request.

     The DRA waits for the CCTL to send the terminate request.
   - 4 - Proceed with termination.

     The DRA proceeds with termination.
3. After the identify is complete, the CCTL responds to the DRA for resynchronization by passing a return code (0 or 4) in field PAPLRETC. This return code tells the DRA what action to perform. The DRA then performs the action requested.
   - 0 - The CCTL acknowledges the success of identify and waits for requests from its subsystems.

     The DRA waits for a call from CCTL.
   - 4 - Proceed with termination.

     The DRA proceeds with termination and does not call the Control Exit again. The CCTL might delete the Control Exit at this time.
4. PAPLRETC contains the same information as it does for a terminate request.
5. PAPLACDE contains the abend code, if any.
6. DBCTL is terminating.
   - 0 - The DRA waits for the TERM request from the CCTL.
   - 4 - The DRA termination completed. The next request from the CCTL must be INIT.
   - 8 - The DRA issues an identify request to DBCTL, using the PAPLDBCN value if it was supplied by the control exit routine.

Chapter 11. DBRC request return codes

Database Recovery Control (DBRC) requests issue return codes for various calls.

The codes for each call are shown in a table. The return codes are given in decimal and hexadecimal.

The return codes for DBRC requests include the following calls:

Return codes from Sign-on Normal call

Sign-on Normal calls issue return code.

The decimal, and the hexadecimal value, and the meaning of the codes are shown in the following table:

Table 18. Sign-on Normal call return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
8	08	Existing subsystem entry found in RECON data set.
12	0C	Existing subsystem entry found in RECON data set marked as abnormally terminated.
16	10	Existing subsystem entry found in RECON data set marked as having recovery processing started.
20	14	Subsystem name was not unique.
41	29	Request for subpool 0 storage (24K) failed.
44	2C	Internal DBRC error.
48	30	Invalid parameter found.
76	4C	The requested role does not match local role (active signing on at tracker).
80	50	No GSG record found in the RECON during Sign-on Recovery Start for an RSR capable system.
84	54	Another tracking subsystem (different SSID) exists for the GSG (DSPTSIGN).
88	58	An RSR takeover is in progress. Normal sign-on is rejected.
92	5C	This subsystem is a member of another GSG or no GSG name was specified when restarting an RSR capable SS.
96	60	The subsystem attempting to sign-on is an earlier release than is allowed (MINVERS).
100	64	An RSR tracker was attempting sign-on when the RECON indicates `ACCESS=PARALLEL`. Normal sign-on is rejected.

Return codes from Sign-on Alternate call

Sign-on Alternate calls issues return codes.

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The decimal, hexadecimal values, and the meaning of the codes are shown in the following table:

Table 19. Sign-on Alternate call return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
8	08	Alternate subsystem already exists.
24	18	Alternate subsystem is signing on, but a subsystem record does not exist.
28	1C	A takeover request provided a block too small to return a list of authorized databases, or no block was provided.
60	3C	Takeover requested, but no alternate signed on.
64	40	The IRLM ID in the alternate takeover request does not match the IRLM ID in the subsystem record.
68	44	Alternate subsystem is signing on with recovery control.

Return codes from Sign-on Recovery call

Sign-on Recovery calls issue return codes.

The decimal, hexadecimal values, and the meaning are shown in the following table:

Table 20. Sign-on Recovery calls return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
4	04	No updates for an authorized database existed for this subsystem; successfully completed.
12	0C	Error deleting in-doubt EEQEs.
16	10	Existing subsystem entry found in RECON data set marked as having recovery processing started.
24	18	Subsystem entry not marked as abnormally terminated and there is no IRLM.
28	1C	No subsystem entry for the calling subsystem in the RECON data set.
32	20	IRLM IDs do not match.
36	24	Subsystem not marked as having recovery processing started.
40	28	Internal error encountered during unauthorization.
41	29	Request for subpool 0 storage (24K) failed.
44	2C	Internal DBRC error.
48	30	Invalid parameter found.
56	38	Alternate subsystem is signing on for recovery.
72	48	No PRIOLDS record exists in the RECON for the Online subsystem making the Sign-on Recovery End call.
80	50	No GSG record found in the RECON during Sign-on Recovery Start for an RSR capable system.
84	54	Another tracking subsystem (different SSID) exists for the GSG (DSPTSIGN).
92	5C	This subsystem is a member of another GSG or no GSG name was specified when restarting an RSR capable SS.

Return codes from Sign-off Normal call

Sign-off Normal calls can issue return codes.

The decimal, hexadecimal values, and the meaning of the codes are shown in the following table:

Table 21. Sign-off Normal call return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion. Subsystem entry deleted.
8	08	Subsystem entry found in RECON data set marked as abnormally terminated.
12	0C	Subsystem entry found in RECON data set marked as having recovery processing started.
16	10	No subsystem entry in RECON data set.
32	20	Alternate subsystem IRLM ID does not match subsystem record IRLM ID.
40	28	Internal error encountered during unauthorization.
44	2C	Internal DBRC error.
48	30	Invalid parameter found.

Return codes from Sign-off Abnormal call

Sign-off Abnormal calls can issue return codes.

The decimal, hexadecimal values, and the meaning of these codes are shown in the following table:

Table 22. Sign-off Abnormal call return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion. Subsystem entry deleted.
4	04	Sign-off successfully completed; subsystem entry marked as abnormally terminated.
8	08	Subsystem entry found in RECON data set was already marked as abnormally terminated.
16	10	No subsystem entry in RECON data set.
20	14	Active subsystem is attempting to terminate abnormally with an alternate subsystem available.
32	20	Alternate subsystem IRLM ID does not match subsystem record IRLM ID.
40	28	Internal error encountered during unauthorization.
44	2C	Internal DBRC error.
48	30	Invalid parameter found.

Return codes from Authorization calls

Authorization calls can issue return codes to report status or problems.

The decimal, hexadecimal value, and the meaning of the codes are listed in the following table:

Table 23. Authorization call return codes

Decimal	Hexadecimal	Meaning
0	00	All of the specified databases were authorized.
4	04	The data is already hardened and need not be reapplied.
8	08	At least one or more of the databases and areas could not be authorized, but all other databases and areas were authorized.
12	0C	Subsystem not registered in DBRC.
20	14	Active subsystem calling authorization after a takeover occurred.
44	2C	Internal DBRC error.
48	30	Invalid parameter found.

Return codes from Unauthorization call

Unauthorization calls can issue return codes

The decimal, hexadecimal values, and the meaning of the codes are listed in the following table:

Table 24. Unauthorization call return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
4	04	For function code 2 (unauthorizing a list), successful completion; databases that were updated were not unauthorized. For function code 5 (unauthorizing a Fast Path area), successful completion; the area needs recovery.
8	08	Database not registered in RECON data set.
12	0C	Subsystem record not found in RECON.
16	10	Subsystem not authorized to use the database.
20	14	One of the following problems occurred: • Internal DBRC unauthorization error: database and subsystem records do not match. • Previously active subsystem calling for unauthorization after a takeover occurred.
24	18	Internal DBRC or IMS unauthorization error: held state could not be computed by the IMS compatibility evaluation routine.
44	2C	Internal DBRC error.
48	30	Invalid parameter found.

Return codes from the DB I/O Error exit

Return codes from DB I/O Error exit report status or problems.

The decimal, hexadecimal values, and the meaning of the codes are shown in the following table:

Table 25. DB I/O Error exit return codes

Decimal	Hexadecimal	Meaning
0	00	Successful call.
8	08	The database was not registered in the RECON data set.
12	0C	The database data set was not registered in the RECON data set.
16	10	The subsystem was not registered in the RECON data set.
20	14	The subsystem was not authorized to use the database.
28	1C	An EEQE add/delete/replace request could not be satisfied.
44	2C	Internal DBRC error.
48	30	Missing or invalid parameter.

Return codes from the DB Open exit

Return codes from the DB Open exit report status or problems.

The decimal, hexadecimal values, and the meaning of the codes are shown in the following table:

Table 26. DB Open exit return codes

Decimal	Hexadecimal	Meaning
0	00	Successful call.
4	04	The database was not registered in the RECON data set.
8	08	A database data set was not registered in the RECON data set.
12	0C	The subsystem was not registered in the RECON data set.
16	10	The subsystem was not authorized to use the database.
20	14	IMS passed a block that was too small to contain the EEQE list.
44	2C	Internal DBRC error.
48	30	Missing or invalid parameter.

Return codes from local and global /START command

A local or global /START command can issue return codes.

The decimal, hexadecimal values, and the meaning of the codes are shown in the following table:

Table 27. Local and global /START command return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
4	04	Database not registered in RECON.
8	08	Read-only user flag is on.
12	0C	Prohibit-further-authorization flag is on.
16	10	Fast Path area needs recovery, or database needs recovery, but the EEQE count is zero.

Table 27. Local and global /START command return codes (continued)

Decimal	Hexadecimal	Meaning
20	14	Database needs backout.
44	2C	Internal DBRC error.
48	30	Invalid parameter found.

Return codes from global /STOP command

The global /STOP command issues return codes to identify status or problems.

The decimal, hexadecimal values, and the meaning of the codes are shown in the following table:

Table 28. Global /STOP command return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion. Prohibit-further-authorization flag turned on.
4	04	Database was not registered in RECON data set.
12	0C	Prohibit-further-authorization flag is on.
44	2C	Internal DBRC error.
48	30	Invalid parameter found.

Return codes from local and global /DBD commands

Return codes from local and global /DBD commands report status or problems.

The decimal, hexadecimal values, and the meaning of the codes are shown in the following table:

Table 29. Local and global /DBD command return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
4	04	Database was not registered in RECON data set.
12	0C	Prohibit-further-authorization flag is on.
16	10	Fast Path area needs recovery, or database needs recovery, but the EEQE count is zero.
20	14	Database needs backout.
24	18	Database authorized by at least one batch subsystem.
44	2C	Internal DBRC error.
48	30	Invalid parameter found.

Return codes from global /DBR command

The global /DBR command issues return codes to identity status or problems.

The decimal, hexadecimal values, and the meaning of the codes are shown in the following table:

Table 30. Global /DBR command return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion. Prohibit-further-authorization flag is turned on.
4	04	Database was not registered in RECON data set.
24	18	Batch systems authorized to use database.
44	2C	Internal DBRC error.
48	30	Invalid parameter found.

Return codes from OLDS Open call

OLDS Open calls issue return codes.

The decimal, hexadecimal values, and the meaning of the codes are shown in the following table:

Table 31. OLDS Open call return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
4	04	There is already an OLDS open for the invoking subsystem.
8	08	The OLDS being opened is invalid. The OLDS contains unarchived data and is needed to close a previous OLDS, or the data set name of the OLDS matches the data set name of another OLDS for the same subsystem.
12	0C	Invocation sequence error. An open secondary OLDS call was made without a corresponding open primary OLDS call.
44	2C	Invalid DBRC error.
48	30	Invalid parameter found.

Return codes from OLDS Switch call

OLDS Switch calls issue return codes.

The decimal, hexadecimal values, and the meaning of the codes are shown in the following table:

Table 32. OLDS Switch return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
4	04	There is no OLDS of the specified type, primary or secondary, open for the invoking subsystem.
8	08	The OLDS being opened is invalid. The OLDS contains unarchived data and is needed to close a previous OLDS, or the data set name of the OLDS matches the data set name of another OLDS for the same subsystem.
12	0C	Invocation sequence error. A switch secondary OLDS call was made without a corresponding switch primary OLDS call.
44	2C	Internal DBRC error.
48	30	Invalid parameter found.

Return codes from OLDS Close call

OLDS Close calls issue return codes.

The decimal, hexadecimal values, and the meaning of the codes are shown in the following table:

Table 33. OLDS Close call return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
4	04	There is no OLDS of the specified type, primary or secondary, open for the starting subsystem.
12	0C	Invocation sequence error. A close secondary OLDS call was made without a corresponding close primary OLDS call.
44	2C	Internal DBRC error.
48	30	Invalid parameter found.

Return codes from OLDS Status call

OLDS Status calls issue return codes.

The decimal, hexadecimal values, and the meaning of the codes are shown in the following table:

Table 34. OLDS Status call return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
44	2C	Internal DBRC error.
48	30	Invalid parameter found.

Return codes from the last OLDS call

You can access the return codes from the last OLDS call.

The decimal, hexadecimal values, and the meaning of the codes are shown in the following table:

Table 35. Last OLDS call return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion. One or more OLDS descriptors are returned to the return area.
4	04	Successful completion. One or more SLDS descriptors are returned to the return area.
8	08	There are no log data sets (OLDS or SLDS) known to DBRC. No information is returned.
12	0C	The return area is too small to contain the return data. The required length is returned in the first two bytes of the return area.
44	2C	Internal DBRC error.

Table 35. Last OLDS call return codes (continued)

Decimal	Hexadecimal	Meaning
48	30	Invalid parameter found.

Return codes from the Locate Log Record call

Locate Log Record calls issue return codes.

The decimal, hexadecimal values, and the meaning for the codes are shown in the following table:

Table 36. Locate Log Record call return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion. One or more OLDS descriptors are returned in the return area.
4	04	Successful completion. One or more SLDS descriptors are returned in the return area.
8	08	There are no log data sets (OLDS or SLDS) known to DBRC. No information is returned.
12	0C	The return area is too small to contain the return data. The required length is returned in the first two bytes of the return area.
16	10	There is no log data set identified in RECON with the specified open time. Used to locate previous log data set and next log data set only.
20	14	An open SLDS was found in the descriptor area.
44	2C	Internal DBRC error.
48	30	Invalid parameter found.

Return codes from the Archive Init call

Archive Init calls can issue return codes to report status or problems.

The decimal, hexadecimal values, and the meaning of the codes are listed in the following table:

Table 37. Archive Init call return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
4	04	When archiving OLDSs: One or more, but not all, of the specified OLDSs were previously archived. Not used for the SLDS copy function.
8	08	Invalid utility input.
12	0C	An invalid volume stop time was specified.
44	2C	Internal DBRC error.
48	30	Invalid parameter found.

Return codes from the Archive Completion call

Archive Completion calls issue return codes to report status or problems.

The decimal, hexadecimal values, and the meanings of the codes are shown in the following table:

Table 38. Archive Completion call return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
8	08	When archiving OLDSs: One or more of the OLDSs being archived has already been archived. The archive utility should terminate processing. Not used when copying an SLDS.
12	0C	An invalid volume stop time was specified.
44	2C	Internal DBRC error.
48	30	Invalid parameter found.

Return codes from the Archive End-of-Job call

Archive End-of-Job calls can issue return codes. These codes in the decimal, hexadecimal values, and the meaning are listed in the table.

Table 39. Archive End-of-Job call return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
44	2C	Internal DBRC error.
48	30	Invalid parameter found.

Return codes from the Log Recovery utility Init call

Log Recovery utility Init calls issue return codes to identify status or problems.

Return codes for SLDS recovery

Table 40. SLDS Recovery return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
12	0C	DBRC initialization failed.

Return codes for OLDS recovery

Table 41. OLDS Recovery return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
44	2C	Internal DBRC error.
48	30	Invalid parameter found.

Return codes from the Log Recovery utility Open call

Log Recovery utility Open calls issue return codes to identify status or problems.

Return codes for SLDS recovery

Table 42. SLDS Recovery return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
4	04	Successful completion. Only the last volume of an SLDS is being processed. No interim SLDS can be created.
8	08	The data set being recovered is not known to DBRC.
12	0C	Duplicate RECON records were found for the input data set. The utility should terminate processing.
16	10	Error opening RECON data set. This is an internal DBRC error. The utility should terminate processing.
20	14	Error closing RECON data set. This is an internal DBRC error. The utility should terminate processing.
24	18	Error extracting data set name. This is an internal DBRC error. The utility should terminate processing.
28	1C	I/O error on RECON data set. This is an internal DBRC error. The utility should terminate processing.
32	20	Error freeing extract data area. This is an internal DBRC error. The utility should terminate processing.
52	34	Unable to GETMAIN storage. The utility should terminate processing.
56	38	Undefined function requested.
60	3C	Invalid input. More than one data set was specified on the input DD statement. The utility should terminate processing.

Return codes for OLDS recovery

Table 43. OLDS Recovery return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
4	04	Invalid utility input. The utility should terminate processing.
16	10	Invalid call. An attempt was made to close the active OLDS of an active subsystem.
20	14	The last block sequence number returned from DBRC for the closing OLDS is zero.
44	2C	Invalid DBRC error.
48	30	Invalid parameter found.

Return codes from the Log Recovery utility Close call

Log Recovery utility Close calls issue return codes to indicate status or problems.

Return codes for SLDS recovery

Table 44. SLDS Log Recovery utility Close Call return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.

Table 44. SLDS Log Recovery utility Close Call return codes (continued)

Decimal	Hexadecimal	Meaning
16	10	Error opening RECON data set. This is an internal DBRC error. The utility should terminate processing.
20	14	Error closing RECON data set. This is an internal DBRC error. The utility should terminate processing.
24	18	Error extracting data set name. This is an internal DBRC error. The utility should terminate processing.
28	1C	I/O error on RECON data set. This is an internal DBRC error. The utility should terminate processing.
32	20	Error freeing extract data area. This is an internal DBRC error. The utility should terminate processing.
36	24	Error adding the data set entry to the interim log record. The data set entry exists. The utility should terminate processing.
40	28	Error deleting interim record from RECON. This is an internal DBRC error. The utility should terminate processing.
44	2C	Error obtaining volume serial number of output data set. This is an internal DBRC error. The utility should terminate processing.
52	34	Unable to GETMAIN storage. The utility should terminate processing.
56	38	Undefined function requested.

Return codes for OLDS recovery

Table 45. OLDS Log Recovery utility Close call return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
44	2C	Invalid DBRC error.
48	30	Invalid parameter found.

Return codes from the Log Recovery utility End-of-Job call

Log Recovery utility End-of-Job (EOJ) calls issue return codes to identify status or problems.

Return codes for SLDS recovery

Table 46. SLDS Recovery return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
48	30	DBRC termination error.
56	38	Undefined function requested.

Return codes for OLDS recovery

Table 47. OLDS Recovery return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.

Table 47. OLDS Recovery return codes (continued)

Decimal	Hexadecimal	Meaning
44	2C	Internal DBRC error.
48	30	Invalid parameter found.

Return codes from the RELOAD utility

RELOAD utility calls issues return codes.

The decimal value, hexadecimal value, and meaning for each code are show in the following table:

Table 48. RELOAD utility return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
4	04	Database not registered or not found.
8	08	I/O error reading RECON data set.
12	0C	Unknown function.
16	10	Feature initialization error.
20	14	Feature termination error.
24	18	RECON open error.
32	20	Internal notify problem.
36	24	RECON close error.
44	2C	IC needed flag already on.

Return codes from the Begin HSSP Image Copy call

Begin HSSP Image Copy calls issues return codes. The decimal, hexadecimal values, and the meaning of each code are listed in this table.

Table 49. Begin HSSP Image Copy call return codes

Decimal	Hexadecimal	Meaning
0	00	Successful call.
4	04	No usable image copy data set found.
12	0C	The area was not registered in RECON data set.
16	10	The area did not have REUSE attribute for image copy data sets.
20	14	Request did not complete.
24	18	HSSP image copy was already in progress for this area.
44	2C	Internal DBRC error occurred.
48	30	Invalid parameter was found.

Return codes from the End HSSP Image Copy call

End HSSP Image Copy calls issue return codes to identify status or problems.

The decimal, hexadecimal, and meaning of the codes are shown in the following table:

Table 50. End HSSP Image Copy call return codes

Decimal	Hexadecimal	Meaning
0	00	Successful call.
8	08	Image copy record specified not found.
12	0C	Area was not registered in RECON data set.
16	10	Image copy specified already ended (stop time>0).
32	20	Request did not complete.
44	2C	Internal DBRC error.
48	30	Invalid parameter found.

Return codes from the LOGSET call

LOGSET calls issue return codes to identify status or problems.

Table 51. LOGSET call return codes

Decimal	Hexadecimal	Meaning
00	00	Successful call. (DSPUBK10)
02	02	Successful call, but IMS passed DBRC insufficient storage to return the output. IMS must obtain sufficient storage and rerun the exit. (DSPUBK10).
08	08	When processing a LOGSET request DBRC found that a later PRILOG with the same SSID contains non-batch backout utility logs. (DSPUBK10)
12	0C	When processing a LOGSET request from IMS, DBRC could not find the specified Log data set in the RECON. DBRC cannot perform Log Verification. (DSPUBK10)
44	2C	An internal DBRC error occurred.
48	30	DBRC detected an invalid parameter from IMS.

Return codes from the SAVUOR call

SAVUOR calls can issue return codes.

The decimal, hexadecimal values, and the meaning of the codes are shown in the following table

Table 52. SAVUOR call return codes

Decimal	Hexadecimal	Meaning
00	00	The call ended successfully.
02	02	The call ended successfully, but the caller passed insufficient storage for DBRC to return the output. (DSPUBK00)
04	04	Either a new BACKOUT record was not written because it had no UORs, or an existing BACKOUT record was deleted because all UORs were deleted.

Table 52. SAVUOR call return codes (continued)

Decimal	Hexadecimal	Meaning
08	08	IMS Control Region Case (DSPUBK20): DBRC Save Unit of Recovery (SAVUOR) exit processing located the requested DB record in the RECON, but did not find it authorized to the requested subsystem. IMS Batch Backout Case (DSPUBK00): Backouts cannot be saved because the last log is (1) open, or (2) is not for a restart, or (3) the log and the BACKOUT record flag conditions do not match.
12	0C	DBRC could not find the requested log data set in the RECON, making log verification impossible. (DSPUBK00)
16	10	DBRC found that the subsystem is not authorized to use a database, or the database is not recoverable. The backout counts cannot be updated. (DSPUBK00)
40	28	DBRC found that the USID for a database entry passed in the DSPUORLS parameter list is less than the current hardened USID for the database in the RECON. DBRC sets a field in the entry to show this condition and returns to the caller with a return code of 40 (RC40).
44	2C	DBRC encountered an internal error.
48	30	DBRC encountered an invalid parameter.

Return codes from the UPDUOR call

UPDUOR calls issue return codes.

The decimal, hexadecimal values, and the meaning of the return codes are listed in the following table:

Table 53. UPDUOR call return codes

Decimal	Hexadecimal	Meaning
00	00	Successful call.
04	04	When processing an UPDUOR request from the IMS Batch Backout Utility, DBRC found the database is not registered. (DSPUBK00) When processing an UPDUOR request from the IMS Control Region, DBRC could not find a BACKOUT record in the RECON for the SSID that IMS specified. (DSPUBK20)
08	08	When processing an UPDUOR request from the IMS Batch Backout Utility, DBRC found that the subsystem is not authorized to use the Database. (DSPUBK00) When processing an UPDUOR request from the IMS Control Region, DBRC found that either the subsystem is not authorized to use a database, or a database is not recoverable. DBRC cannot update the Backout counts in the DB header record in the RECON. (DSPUBK20)
12	0C	When processing an UPDUOR request from the IMS Batch Backout Utility, DBRC found that either no BACKOUT record exists or there are no UORs for this subsystem. Update is not possible. (DSPUBK00) When processing an UPDUOR request from the IMS Control Region, DBRC found that either the BACKOUT record or the UOR List has no UORs to update. (DSPUBK20)

Table 53. UPDUOR call return codes (continued)

Decimal	Hexadecimal	Meaning
16	10	When processing an UPDUOR request from the IMS Batch Backout Utility, DBRC found that at least one UOR or database that was passed in the list has already been backed out or does not exist in the BACKOUT record. (DSPUBK00) When processing an UPDUOR request from the IMS Control Region, DBRC found that an UPDATE UOR has been attempted for a database unknown to the BACKOUT record. An incorrect Backout might have been done. (DSPUBK20)
40	28	DBRC found that the USID for a database entry passed in the DSPUORLS parameter list is less than the current hardened USID for the database in the RECON. DBRC sets a field in the entry to show this condition and returns to the caller with a return code of 40 (RC40).
44	2C	An internal DBRC error occurred.
48	30	DBRC detected an invalid parameter from IMS.

Return codes from the VERUOR call

VERUOR calls can issue return codes.

The decimal, hexadecimal values, and the meaning of the return codes are listed in the following table: .

Table 54. VERUOR call return codes

Decimal	Hexadecimal	Meaning
00	00	Successful call. (DSPUBK10 or DSPUBK20)
02	02	Successful call, but IMS passed DBRC insufficient storage to return the output. IMS must obtain sufficient storage and rerun the exit. (DSPUBK10 or DSPUBK20)
04	04	No BACKOUT record found for this SSID. (DSPUBK10 or DSPUBK20)
12	0C	When processing a VERUOR request from the IMS Control Region DBRC found that either the BACKOUT record or the UOR list has no UORs to verify. (DSPUBK20)
44	2C	An internal DBRC error occurred. (DSPUBK10 or DSPUBK20)
48	30	DBRC detected an invalid parameter from IMS. (DSPUBK10 or DSPUBK20)

Return codes from New Update Set ID Validation

Update Set ID Validation calls issues return codes.

The decimal, hexadecimal values, and the meaning of the codes are shown in the following table:

Table 55. New Update Set ID Validation return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
4	04	Requested USID is already marked as hardened.
8	08	The currently authorized USID is not yet complete.
12	0C	The specified USID is not the next one to be applied.
16	10	The database or area is not authorized.

Table 55. New Update Set ID Validation return codes (continued)

Decimal	Hexadecimal	Meaning
20	14	The database needs recovery.
44	2C	An internal DBRC error occurred.
48	30	An invalid parameter was found.

Return codes from End of Active Log Stream Notification

Return codes from the End of Active Log Stream Notification identify status or problems.

The decimal, hexadecimal values, and the meaning of the codes are shown in the following table:

Table 56. End of Active Log Stream Notification return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
8	08	An invalid PRILOG time was specified.
44	2C	An internal DBRC error occurred.
48	30	An invalid parameter was found.

Return codes from tracking log OPEN, CLOSE, and DELETE

Tracking log OPEN, CLOSE, and DELETER can issue return codes.

The decimal, hexadecimal values, and the meaning of the codes are listed in the following table:

Table 57. Tracking log OPEN, CLOSE, and DELETE return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
8	08	Invalid (zero) data set start or stop time. (CLOSE)
12	0C	Invalid first log sequence number (LSN). Could not find matching data set. (CLOSE and DELETE)
16	10	Data set exists. (OPEN)
20	14	One or more new data set LSNs overlap previous or next data set LSN range. (OPEN and CLOSE)
24	18	Zero PRILOG start time value.
28	1C	Zero PRILOG Token value. (OPEN)
32	20	No log release level.
44	2C	An internal DBRC error occurred.
48	30	An invalid parameter was found.

Return codes from End Tracking of Active Updates

Return codes from the End Tracking of Active Updates identify status or problems.

The decimal, hexadecimal values, and the meaning of the codes are shown in the following table:

Table 58. End Tracking of Active Updates return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
4	04	The database is not currently authorized.
44	2C	An internal DBRC error occurred.
48	30	An invalid parameter was found.

Return codes from Early End of Database Tracking

Return codes from Early End of Database Tracking identify status or problems.

The decimal, hexadecimal values, and the meaning of the codes are shown in the following table:

Table 59. Early End of Database Tracking return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
44	2C	An internal DBRC error occurred.

Return codes from the OFR exit

Online Forward Recovery (OFR) exit calls issues return codes.

The decimal, hexadecimal values, and the meaning of the codes are shown in the following table:

Table 60. Online Forward Recovery (OFR) exit return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
4	04	All of the databases are current and do not require OFR.
8	08	OFR is invalid for one or more of the databases.
12	0C	OFR is invalid for all of the databases.
44	2C	An internal DBRC error occurred.
48	30	An invalid parameter was found.

Return codes from End of OFR exit

Return codes from the OFR exit identify status or problems.

The decimal, hexadecimal values, and the meaning of the codes are shown in the following table:

Table 61. End of Online Forward Recovery (OFR) exit return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.

Table 61. End of Online Forward Recovery (OFR) exit return codes (continued)

Decimal	Hexadecimal	Meaning
8	08	Invalid OFR identifier.
12	0C	Invalid database or area name.
44	2C	An internal DBRC error occurred.
48	30	An invalid parameter was found.

Return codes from Get Service Group List

Get Service Group List calls issues return codes to identify status or problems.

The decimal, hexadecimal values, and the meaning of the codes are shown in the following table:

Table 62. Get Service Group List return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
8	08	The GSG name is not defined in RECON.
44	2C	An internal DBRC error occurred.
48	30	A required parameter was not specified on the exit invocation.

Return codes from Query Log Data Sets

Query Log Data Sets issues return codes.

The decimal, hexadecimal values, and the meaning of the codes are shown in the following table:

Table 63. Query Log Data Sets return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
8	08	An error was encountered while processing one or more of the gap descriptors.
12	0C	Invalid gap fill request.
44	2C	An internal DBRC failure occurred.
48	30	A required parameter was not specified on the exit invocation.

Return codes from Query Global Service Group PRILOG Tokens

Query Global Service Group PRILOG Tokens issue return codes.

The decimal, hexadecimal values, and the meaning are shown in the following table:

Table 64. Query Global Service Group PRILOG Tokens return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
4	2C	Specified GSG not defined to DBRC.

Table 64. Query Global Service Group PRILOG Tokens return codes (continued)

Decimal	Hexadecimal	Meaning
48	30	A required parameter was not specified on the exit invocation.

Return codes from Query Tracking Log Gap Descriptors

Query Tracking log Gap Descriptors issues return codes.

The decimal, hexadecimal values, and the meaning for the codes are shown in the following table:

Table 65. Query Tracking Log Gap Descriptors return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
4	2C	DBRC has no knowledge of the specified active subsystem, or there are no active subsystems for the current GSG.
44	2C	An internal DBRC failure occurred.
48	30	A required parameter was not specified on the exit invocation.

Return codes from RSR takeover request (planned or unplanned)

Remote-site recovery (RSR) takeover requests issue return codes.

The decimal, hexadecimal values, and the meaning of the codes are shown in the following table:

Table 66. RSR takeover request (planned or unplanned) return codes

Decimal	Hexadecimal	Meaning
0	00	Successful completion.
8	08	There is at least one abnormally terminated subsystem record in RECON.
12	0C	No GSG record is defined to DBRC.
44	2C	An internal DBRC failure occurred.
48	30	A required parameter was not specified on the exit invocation.

Database quiesce call return codes

Calls for database quiesce can return codes to show their status.

Return codes from the Database quiesce calls are shown in the following table:

Table 67. Return codes from the Database quiesce calls

Decimal	Hexadecimal	Meaning
00	00	The call was successful for all of the databases or areas.
04	04	One or more of the databases and areas were not registered or were disabled. Processing for the rest of the databases or areas completed successfully.
12	0C	The call was unsuccessful because of the status of one or more of the databases or areas. Check the status of the databases and areas.

Table 67. Return codes from the Database quiesce calls (continued)

Decimal	Hexadecimal	Meaning
14	0E	The MINVERS value was less than 11.1.
18	12	Subsystem record was not found in RECON. Multiple sets of RECONs might be in use, or the subsystem record was deleted in error.
44	2C	An internal DBRC error occurred.
48	30	DBRC detected an invalid parameter from IMS.

Chapter 12. Fast Path utility status and reason codes

The Fast Path utilities can return a status code during the execution of an IMS or DBTOOLS utility. This usually indicates an error condition, but the status code might simply be of an informative nature.

Status codes

Table 68. Fast Path utility status codes

Status code	Meaning
AA	No ddname statement was specified.
AB	DBRC interface failure occurred.
AC	No ddname for an available ADS was specified.
AD	Less than 2 available ddnames were specified.
AE	Too many ddname statements were specified.
AK	The field name was not defined.
AO	I/O error on data set.
AX	If this was issued while the DEDB Area Data Set Create utility was running, an area data set, which should be marked 'AVAILABLE' in the RECON data set, was not found. If this was issued while the DEDB Area Data Set Compare utility was running, any area data sets which are specified for comparison could not be found in an ADSC.
BA	IRLM failed (LOCK or NOTIFY request).
BR	Error reading data from the original area during DEDB Alter in DBFDAC00. Look up the reason code that is shown in the DFS4660E message in Table 2. Error committing data to the shadow area during DEDB Alter in DBFDAC00. The return code in the DFS4661E message is for internal diagnostics only.
EM	The SDEP area was empty.
FB	FIRST START segment time stamp below logical BEGIN time tamp.
FD	This was the first dependent.
FH	Area not available.
FL	STOP segment time stamp less than START segment time tamp.
FR	This was the first root.
FU	START segment time stamp greater than HIGH WATER MARK time stamp.
ID	INDOUBT segment found in range to delete.
LB	STOP segment time stamp less than LOGICAL BEGIN time stamp.
LD	This was the last dependent.
LR	This was the last root.
LU	LAST segment time stamp greater than HIGH WATER MARK time stamp.
ND	There are no dependents.
OB	The STOPRBA value you specified coincides with an already allocated SDEP CI boundary or its dummy segment, that has a time stamp from a /DBR or RESTART and cannot be honored by the SDEP utility.

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Table 68. Fast Path utility status codes (continued)

Status code	Meaning
OC	The relative byte address (RBA) and cycle count are not consistent between DMACNXTS and DMACXVAL in the DMAC for this area.
OD	The relative byte address (RBA) was not within the sequential-dependent part.
OL	The RBA was not within the range of the currently-used portion of the sequential-dependent part.
OL	The stop location specified was less than the logical begin of the sequential-dependent part.
OS	STARTRBA was logically higher than the STOPRBA.
OS	The stop location specified was greater than the logical end of the sequential-dependent part.
PE	Parameter error.
SO	SORT NEW FORMAT segments failed.
TA	Error while freeing storage.
TB	Error while page freeing storage.
TC	Invalid write request from the utility.
TD	Buffer chain problem with utility buffers.
TE	SDEP preallocated CI write error.
TF	The utility requested more buffers than the maximum allows.
UA	This status code is returned when an unknown error occurs during a DL/I call in DEDB Alter. In the event of this status code, contact IBM support.
UB	Error occurred obtaining buffer for IOVF data during DEDB Alter in DBFDAC50. **Note:** This status code occurs only if the area is closed; otherwise, it results in a 1026 abend.
UD	Deadlock for CI lock.
UE	I/O error detected in chain of I/O.
UJ	Wait for I/O completion timed out.
UK	No pre-allocated SDEP CIs exist at start of utility.
UL	Global lock failed.
UL	Retained/Held CI lock.
UM	ADS enters long busy I/O state
UP	Area name was not in this database.
UQ	The DELETE Utility found EEQE in the SDEP part of Area.

Table 68. Fast Path utility status codes (continued)

Status code	Meaning
UR	**DBFDAU70** An AREA connect error was detected. **DBFUMAV0** An error occurred retrieving the AREA or ADS LIST from DBRC **DBFUMDS0** The AREA was being quiesced, utility connection failed. **DBFUMFT0** An error occurred retrieving the AREA or ADS LIST from DBRC **DBFUMSP0** An error occurred retrieving the AREA or ADS LIST from DBRC
UX	Unlock failed for a SDEP buffer, xcrb or uxrb not found.
UY	Not enough page fixable (real) storage available.
UZ	Not enough storage for the needed number of utility buffers.

Reason codes

The Fast Path High Speed Reorganization can return the following reason codes. You can find the returned codes in the high speed reorganization report.

Table 69. Fast Path High Speed Reorganization reason codes

Reason code	Meaning
01	The IOVF lock resource failed.
02	The IOVF buffer use limit was exceeded. The specified or default BUFNO value did not provide enough buffers to meet the needs of the utility. This includes the dynamic expansion of the buffer pool which had already taken place. The message reports that the buffer use count (buffers taken) reached the limit count (buffers provided) set by BUFNO and that UOW was failed. This was likely due to a high number of IOVF CIs needing to be processed for the UOW. Limit count = {{{number of CIs per UOW} * BUFNO} * 2} Must increase the BUFNO value.
03	The UOW read failed.
04	The UOW lock failed.
05	An I/O error occurred when reading the IOVF control CI.
06	An unknown commit failure occurred.
07	The area or region was stopped.
08	An I/O error occurred when reading the IOVF data CI.
09	There was insufficient IOVF space. The area spacebars no longer have available IOVF CIs to use for the reorganization. The UOW fails.
10	The lock attempt for IOVF control CI failed.
11	A deadlock on IOVF control CI occurred.
12	The relative byte address (RBA) in XCRB could not be freed.
13	The buffer free space element (FSE) was too small for IOVF CI.

Table 69. Fast Path High Speed Reorganization reason codes (continued)

Reason code	Meaning
14	The buffer free space element (FSE) was not available for reuse.
15	Database re-verification was in progress.
16	The system cannot acquire the buffers needed for the IOVF. The request to get a buffer could not be completed due to a storage shortage. The UOW failed.
17	The system cannot acquire the buffers needed for the UIOW. The request to acquire the initial buffer sets, or their dynamic extension, could not be completed due to a storage shortage. The UOW failed.
NA	The reason code is not applicable because there is no reason code set in the low-level module.

Chapter 13. IRLM request return and reason codes

The internal resource lock manager (IRLM) issues error return and reason codes for service requests.

For information about IRLM codes, see IRLM return and reason codes.

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Chapter 14. IMS Connect return and reason codes

IMS Connect can issue return and reason codes.

These codes are issued for the user message exits HWSSMPL0, HWSSMPL1, HWSIMSO0, HWSIMSO1, and HWSDPWR1 and contains diagnosis, modification, or tuning Information.

Return and reason codes for IMS Connect exits

Return and reason codes for HWSSMPL0, HWSSMPL1, HWSCSLO0, HWSCSLO1, and HWSDPWR1 are sent to the client in the request status message (RSM) fields RSM_RETCOD and RSM_RSNCOD.

Return codes

Table 70. Return codes for HWSSMPL0, HWSSMPL1, and HWSDPWR1

Decimal value	Hex value	Description
4	04	Exit request error message sent to client before socket termination. The socket is disconnected for IMS.
8	08	Error detected by IMS Connect and the socket is disconnected for IMS.
12	0C	Error returned by IMS OTMA and the socket is disconnected for IMS.
16	10	Error returned by IMS OTMA when an OTMA sense code is returned in the "Reason Code" field of the RSM. The socket is disconnected for IMS. See Chapter 15, “OTMA codes,” on page 201
20	14	Exit requests response message to HWSPWCH/PING request to be returned to client. IMS Connect keeps the socket connection because the PWCH/PING came in on a new socket connection or an existing persistent socket connection that is not in conversational mode or waiting for an ACK/NAK from the client application. IMS Connect can also determine whether to keep the connection depending upon the socket status after sending a user-defined message back to the client application.
24	18	SCI error detected, see Chapter 7, “CSL codes,” on page 89 for reason codes. The socket is disconnected for IMS.
28	1C	OM error detected, see Chapter 7, “CSL codes,” on page 89 for reason codes. The socket is disconnected for IMS.
32	20	IRM_TIMER value expired. When this return code is issued, the value of the corresponding reason code is not a code, but rather the time interval that was in effect for the IRM_TIMER. The socket is disconnected by IMS Connect.

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Table 70. Return codes for HWSSMPL0, HWSSMPL1, and HWSDPWR1 (continued)

Decimal value	Hex value	Description
36	24	A default IRM_TIMER value expired. Either the IRM_TIMER value specified was X'00' or an invalid value. When this return code is issued, the value of the corresponding reason code is not a code, but rather the time interval that was in effect for the IRM_TIMER. The socket is disconnected by IMS Connect.
40	28	IRM_TIMER value expired. When this return code is issued, the value of the corresponding reason code is not a code, but rather the time interval that was in effect for the IRM_TIMER. The connection is not disconnected. The socket remains connected.
44	2C	The DATASTORE in no longer available.
128 - 140	80 - 8C	DataPower® return codes. See the DataPower documentation for a description of these return and reason codes.

Reason codes

Table 71. Reason codes for HWWSMPL0, HWSSMPL1, and HWSDPWR1

OMUSR reason code passed to exit	Decimal value in RSM	Description
N/A	4	Input data exceeds buffer size.
N/A	5	Negative length value.
N/A	6	IMS request message (IRM) length invalid.
N/A	7	Total message length invalid.
N/A	8	OTMA NAK with no sense code or RC.
N/A	9	Contents of buffer invalid.
N/A	10	Output data exceeds buffer size.
N/A	11	Invalid unicode definition.
N/A	12	Invalid message, no data.
N/A	16	Do not know who client is.
N/A	20	OTMA segment length error.
N/A	24	FIC missing.
N/A	28	LIC missing.
N/A	32	Sequence number error.
N/A	34	Unable to locate context token.
N/A	36	Protocol error.
N/A	40	Security violation.
N/A	44	Message incomplete.
N/A	48	Incorrect message length.
NOSECHDR	51	Security failure: no OTMA security header.
INVESECHL	52	Security failure: no security data in OTMA security header.
SECFNOPW	53	Security failure: no password in OTMA user data header.

Table 71. Reason codes for HWWSMPL0, HWSSMPL1, and HWSDPWR1 (continued)

OMUSR reason code passed to exit	Decimal value in RSM	Description
SECFNUID	54	Security failure: no user ID in OTMA security header.
SECFNPUI	55	Security failure: no password in OTMA user data and no user ID in OTMA security header.
DUPECLNT	56	Duplicate Client ID used; the client ID is currently in use.
INVLDTOK	57	Invalid token is being used: internal error.
INVLDSTA	58	Invalid client status: internal error.
CANTIMER	59	Cancel Timer completed successfully.
NFNDCOMP	70	Component not found.
NFNDFUNC	71	Function not found.
NFNDDST	72	The data store was not found, or communication with the data store was stopped using an IMS Connect command.
DSCLOSE	73	IMS Connect in shutdown.
STP/CLSE	74	The data store or IMSplex was in a stop or close process, or the IMS data store has shut down or disconnected.
DSCERR	75	Data store communication error.
STOPCMD	76	The data store or IMSplex was stopped by command.
COMMERR	77	A data store or IMSplex communication error was sent to the pending client.
SECFAIL	78	Security failure. RACF call failed, IMS Connect call failed. See IMS Connect error message on system console.
PROTOERR	79	IMS Connect protocol error. See IMS Connect error message on system console.
NOTACTV	80	The IMSplex connection is not active. The STOPIP command was issued or the SCI address space is not active.
CANCRTP	81	IMS cancelled the Resume Tpipe request as a result of an ACKTO timeout, or a /STO TMEMBER TPIPE command.
INVLDCM1	93	Invalid commit mode of 1 specified on the RESUME TPIPE request.
REQUEST	94	Request.
CONVER	95	Conversation.
REQ_CON	96	Request and conversation.
DEAL_CTD	97	Deallocate confirmed.
DEAL_ABT	98	Deallocate abnormal termination.
	99	Default reason code.

HWSSOAP1 return and reason codes

HWSSOAP1 return and reason codes are sent to the client in the request service message (RSM) fields RSM_RETCOD and RSM_RSM_RSNCOD.

HWSSOAP1, the user message exit for XML conversion, issues the return and reason codes, shown in Table 72 and Table 73.

Return codes

Table 72. Return codes for HWSSOAP1

Decimal value	Hex value	Description
8	08	Error detected by IMS Connect and the socket is disconnected by IMS Connect

Reason codes

Table 73. Reason codes for HWSSOAP1

OMUSR reason code passed to exit	Decimal value in RSM	Description
N/A	13	No adapter name returned from user message exit.
N/A	14	Message not processed by the adapters.
N/A	15	Invalid adapter return code.
N/A	100	Enqueue of AWE failed: internal error. See the IMS Connect error message on the z/OS console log.
N/A	101	No buffer returned by adapter: internal error. See the IMS Connect error message on the z/OS console log.
N/A	102	Invalid buffer address returned by adapter: internal error. See the IMS Connect error message on the z/OS console log.
N/A	103	FREEMAIN of original input buffer failed: internal error. See the IMS Connect error message on the z/OS console log.
N/A	104	FREEMAIN of original output buffer failed: internal error. See the IMS Connect error message on the z/OS console log.
N/A	105	Function not supported by user message exit: internal error. See the IMS Connect error message on the z/OS console log.
N/A	106	Invalid return code from user message exit: internal error. See the IMS Connect error message on the z/OS console log.
N/A	107	Adapter requested second output buffer: internal error. See the IMS Connect error message on the z/OS console log.
N/A	108	Adapter returned invalid data length: internal error. See the IMS Connect error message on the z/OS console log.
N/A	110	Invalid adapter function requested.

Table 73. Reason codes for HWSSOAP1 (continued)

OMUSR reason code passed to exit	Decimal value in RSM	Description
N/A	111	Free original TCP/IP output buffer failed.
N/A	112	The TRANCODE was not provided to IMS Connect either from the XML converter or from the IRM_TRNCOD field.
N/A	113	Incorrect length value in an IMS Request Message (IRM) extension or incorrect offset to the first IRM extension.
N/A	114	Offset to the first IRM extension is zero.
N/A	115	Not enough space is available in the user data section of the OTMA header.

HWSIMSO0 and HWSIMSO1 return and reason codes

HWSIMSO0 and HWSIMSO1 return and reason codes are sent to the client in the RSM fields RSM_RETCOD/RSM_RSM_RSNCOD.

Return codes

Table 74. Return codes for HWSIMSO0 and HWSIMSO1

Hex value	Description
04	Exit request error message sent to client before socket termination. The socket is disconnected.
08	Error detected by IMS Connect; the socket is disconnected for IMS.
0C	Error returned by IMS/OTMA; the socket is disconnected for IMS.
10	Error returned by IMS OTMA when an OTMA sense code is returned in the "Reason Code" field of the RSM. See the Chapter 15, “OTMA codes,” on page 201 for your installation's version of IMS for sense code descriptions. The socket is disconnected for IMS.
14	Currently reserved.
18	SCI error detected. See Chapter 7, “CSL codes,” on page 89 for REASON codes. The socket is disconnected for IMS.
1C	OM error detected. See Chapter 7, “CSL codes,” on page 89 for REASON codes. The socket is disconnected for IMS.
20	The IRM_TIMER value has expired. The reason code value is the value of the IRM_TIMER and the socket is disconnected by IMS Connect.
24	A default IRM_TIMER value has expired. Either the IRM_TIMER value specified was X'00' or an invalid value. The reason code value is the value of the IRM_TIMER and the socket is disconnected by IMS Connect.
28	IRM_TIMER value has expired. The reason code value is the value of the IRM_TIMER. The connection is not disconnected. The socket remains connected.
2C	Cancel Timer has completed successfully.

Reason codes

Table 75. Reason codes for HWSIMSO0 and HWSIMSO1

OMUSR reason code passed to Exit	Decimal value in RSM	Description
N/A	4	Input data exceeds buffer size.
N/A	5	Negative length value.
N/A	6	IMS request message (IRM) length invalid.
N/A	7	Total message length invalid.
N/A	8	OTMA NAK with no sense code or RC.
N/A	9	Contents of buffer invalid.
N/A	10	Output data exceeds buffer size.
N/A	11	Invalid Unicode definition.
N/A	12	Invalid message, no data.
N/A	16	Do not know who client is.
N/A	20	OTMA segment length error.
N/A	24	FIC missing.
N/A	28	LIC missing.
N/A	32	Sequence number error.
N/A	34	Unable to locate context token.
N/A	36	Protocol error.
N/A	40	Security violation.
N/A	44	Message incomplete.
N/A	48	Incorrect message length.
NOSECHDR	51	Security failure — no OTMA security header.
INVESECHL	52	Security failure — no security data in OTMA security header.
SECFNOPW	53	Security failure — no password in OTMA user data header.
SECFNUID	54	Security failure — no user ID in OTMA security header.
SECFNPUI	55	Security failure — no password in OTMA user data and no user ID in OTMA security header.
DUPECLNT	56	Duplicate Client ID used; the client ID is currently in use.
INVLDTOK	57	Invalid token is being used — internal error.
INVLDSTA	58	Invalid client status — internal error.
CANTIMER	59	Cancel Timer completed successfully.
NFNDCOMP	60	Component not found.
NFNDFUNC	61	Function not found.
NFNDDST	62	The data store was not found.
DSCLOSE	63	IMS Connect in shutdown.
STP/CLSE	64	The data store or IMSplex was in a stop or close process.

Table 75. Reason codes for HWSIMSO0 and HWSIMSO1 (continued)

OMUSR reason code passed to Exit	Decimal value in RSM	Description
DSCERR	65	Data store communication error.
STOPCMD	66	The data store or IMSplex was stopped by command.
COMMERR	67	A data store or IMSplex communication error was sent to the pending client.
SECFAIL	68	Security failure. RACF call failed, IMS Connect call failed. See IMS Connect error message on system console.
PROTOERR	69	IMS Connect protocol error. See IMS Connect error message on system console.
INVLDCM1	93	Invalid commit mode of 1 specified on the RESUME TPIPE request.
REQUEST	94	REQUEST
CONVER	95	Conversation
REQ_CON	96	Request and conversation
DEAL_CTD	97	Deallocate confirmed
DEAL_ABT	98	Deallocate abnormal termination
	99	Default reason code

XML adapter return and reason codes

XML Adapter returns errors to the client in either an XML adapter status message (XASM) or an XML error message.

XASM uses the same format as the IMS Connect request status message (RSM), with an ID of `*XADPST*`.

The return code (RC) is the XML Adapter code returned to IMS Connect on all errors in the parameter list fields EXPRXML_RSNCODE for inbound and EXPXXML_RSNCODE for outbound. The return codes are shown in the following table:

Table 76. XML adapter return codes

RC	XASM RC	Message ID	Description
RCs from 1-99 are general errors.			
8	XASM RC=8		IMS Connect passed an invalid XML adapter function code.
RCs from 100-199 are inbound errors.			
108	XASM RC=108		The XML adapter did not find the specified XML Converter. Check that the XML Converter is compiled and linked to the correct data set.
112	XASM RC=112		The XML adapter failed to load the specified XML Converter. Check that the XML Converter is compiled and linked to the correct data set.

Table 76. XML adapter return codes (continued)

RC	XASM RC	Message ID	Description
116	XASM RC=116		The XML adapter failed to load the XML Converter Metadata Service. Check that the XML Converter is linked using its name and has an alias where the last character of the name is replaced by the letter X. For example, if the XML Converter name is XMLCNVD, then link it with entry name of XMLCNVD and alias of XMLCNVX.
118	XASM RC=118		The PreInit table is full. The XML adapter failed to delete an entry from the table. This is an internal error. If the problem persists, search the problem reporting databases to find a correction for the problem. If none exists, contact IBM Software Support.
120	XASM RC=120		The XML adapter failed to invoke the XML Converter Metadata Service. This is an internal error. If the problem persists, search the problem reporting databases to find a correction for the problem. If none exists, contact IBM Software Support.
124		HWSB0105E	Failed to obtain storage.
125	XASM RC=125		The XML adapter failed to convert HWSB0105E message to the outbound code page. The conversion failure is a secondary failure; check that z/OS support for Unicode Conversion Services is setup to support conversions from EBCDIC to UTF-8 and vice versa.
128		HWSB0110E	Failed to invoke XML Converter.
129	XASM RC=129		The XML adapter failed to convert HWSB0110E message to the outbound code page. The conversion failure is a secondary failure; check that z/OS support for Unicode Conversion Services is setup to support conversions from EBCDIC to UTF-8 and vice versa.
132			XML Converter error. An IRZ error message is reported.
133	XASM RC=133		The XML adapter failed to convert the XML Converter error message to the outbound code page. The conversion failure is a secondary failure; check that z/OS support for Unicode Conversion Services is setup to support conversions from EBCDIC to UTF-8 and vice versa.
136		HWSB0115E	Converted inbound message is greater than max supported size of 32,767 bytes.
137	XASM RC=137		The XML adapter failed to convert HWSB0115E message to the outbound code page. The conversion failure is a secondary failure; check that z/OS support for Unicode Conversion Services is setup to support conversions from EBCDIC to UTF-8 and vice versa.
141	XASM RC=141		The XML adapter failed to convert the output open and close tags to the outbound code page. Check that z/OS support for Unicode Conversion Services is setup to support conversions from EBCDIC to UTF-8 and vice versa.

Table 76. XML adapter return codes (continued)

RC	XASM RC	Message ID	Description
RCs from 200-299 are outbound errors.			
208	XASM RC=208		The XML adapter did not find the specified XML Converter. Check that the XML Converter is compiled and linked to the correct data set.
212	XASM RC=212		The XML adapter failed to load the specified XML Converter. Check that the XML Converter is compiled and linked to the correct data set.
216	XASM RC=216		The XML adapter failed to load the XML Converter Metadata Service. Check that the XML Converter is linked using its name and has an alias where the last character of the name is replaced by the letter X. For example, if the XML Converter name is XMLCNVD, then link the XML converter with entry name of XMLCNVD and alias of XMLCNVX.
218	XASM RC=218		The PreInit table is full. The XML adapter failed to delete an entry from the table. This problem is internal. If the problem persists, search the problem reporting databases to find a correction for the problem. If none exists, contact IBM Software Support.
220	XASM RC=220		The XML adapter failed to invoke the XML Converter Metadata Service. This problem is internal. If the problem persists, search the problem reporting databases to find a correction for the problem. If none exists, contact IBM Software Support.
224		HWSB0205E	Failed to obtain storage.
225	XASM RC=225		The XML adapter failed to convert HWSB0205E to the outbound code page. The conversion failure is a secondary failure; check that z/OS support for Unicode Conversion Services is setup to support conversions from EBCDIC to UTF-8 and vice versa.
228		HWSB0210E	Failed to invoke XML Converter.
229	XASM RC=229		The XML adapter failed to convert HWSB0210E message to the outbound code page. The conversion failure is a secondary failure; check that z/OS support for Unicode Conversion Services is setup to support conversions from EBCDIC to UTF-8 and vice versa.
232			XML Converter error. An IRZ error message is reported.
233	XASM RC=233		The XML adapter failed to convert an XML Converter error message to the outbound code page. Check that z/OS support for Unicode Conversion Services is setup to support conversions from EBCDIC to UTF-8 and vice versa.
237	XASM RC=237		The XML adapter failed to convert an IMS DFS message to the outbound code page. Check that z/OS support for Unicode Conversion Services is setup to support conversions from EBCDIC to UTF-8 and vice versa.

Table 76. XML adapter return codes (continued)

RC	XASM RC	Message ID	Description
241	XASM RC=241		The XML adapter failed to convert the output open and close tags to the outbound code page. Check that z/OS support for Unicode Conversion Services is setup to support conversions from EBCDIC to UTF-8 and vice versa.

Related reference:

Error messages for IBM Rational Developer for System z Enterprise Service Tools

IMS TM Resource Adapter return and reason codes

OTMA return codes and IMS TM Resource Adapter return and reason codes are sent to the OTMA User fields OMUSR_RETCODE and OMUSR_RESCODE.

Return codes

Table 77. Return codes for OTMA

OMUSR_RETCODE received by IMS TM Resource Adapter (hex value)	Description
04	Exit request error message sent to client before socket termination. The socket is disconnected for IMS.
08	Error detected by IMS Connect; the socket is disconnected for IMS.
0C	Error returned by IMS/OTMA; the socket is disconnected for IMS.
10	Not valid for HWSJAVA0 (OTMA RETURN code); the socket is disconnected for IMS.
14	Reserved
18	Not valid for HWSJAVA0 (SCI RETURN code); the socket is disconnected for IMS.
1C	Not valid for HWSJAVA0 (OM RETURN code); the socket is disconnected for IMS.
20	The IRM_TIMER has expired. The reason code value is the value of the IRM_TIMER and the socket is disconnected by IMS Connect.
24	A default IRM_TIMER value has expired. Either the IRM_TIMER value specified was X'00' or an invalid value. The reason code is the value of the IRM_TIMER and the socket is disconnected by IMS Connect.
28	IRM_TIMER value has expired. The reason code value is the value of the IRM_TIMER. The connection is not disconnected. The socket remains connected.
2C	Cancel Timer has completed successfully.

Table 77. Return codes for OTMA (continued)

OMUSR_RETCODE received by IMS TM Resource Adapter (hex value)	Description
30	Exit requests response message to the HWSPWCH/PING request to be sent back to client. IMS Connect keeps the socket connection because the PWCH/PING came in on a new socket connection or an existing persistent socket connection which is not in conversational mode or waiting for an ACK/NAK from the client application. IMS might also determine whether to keep the connection depending upon the socket status after sending a user-defined message back to the client application. Exit requests a message to be sent to the client and requests IMS Connect to determine whether to keep the persistent connection open.
34	Exit requests response message to the HWSPWCH/PING request to be sent back to client. IMS connect will terminate the socket connection after sending the message back to the client application because IMS Connect was waiting for an ACK/NAK from the client application on that socket connection.
38	Exit requests response message to the HWSPWCH/PING request to be sent back to client. IMS connect will terminate the socket connection after sending the message back to the client application because that socket connection was being used in IMS conversational mode.

Reason codes

Table 78. Reason codes for OTMA

OMUSR_RESCODE received by IMS TM Resource Adapter	Description
	Default reason code.
APPLREQD	The RACF application name is required when you attempt to change a password phrase by using a RACF PassTicket.
BADEXTNL	Incorrect length value in an IRM extension or incorrect offset to the first IRM extension.
CANCRTP	IMS cancelled the Resume Tpipe request as a result of an ACKTO timeout, or a /STO TMEMBER TPIPE command.
CANTIMER	Cancel Timer completed successfully.
COMMERR	A data store or IMSplex communication error was sent to the pending client.
CONVER	Conversation.
DEAL_ABT	Deallocate abnormal termination.
DEAL_CTD	Deallocate confirmed.
DSCERR	Data store communication error.
DSCLOSE	IMS Connect in shutdown.

Table 78. Reason codes for OTMA (continued)

OMUSR_RESCODE received by IMS TM Resource Adapter	Description
DUPECLNT	Duplicate client ID was used; the client ID is currently in use.
ICONSUCC	PING or PWCH request was successful. ICONSUCC can also indicate that a user-defined message was sent back to the client application.
INVCHAR	Security failure; invalid character detected in user ID, groupname, or password field.
INVLDCM1	An invalid mode of 1 was specified on the RESUME TPIPE request.
INVLDSTA	Invalid client status; internal error.
INVLDTOK	Invalid token is being used; internal error.
INVLERCD	Invalid error code was returned for PWCH request.
INVPHRSL	The length of the RACF password phrase provided is invalid.
INVRQSNT	The PWCH request has invalid syntax.
INVSECHL	Security failure; no security data in the OTMA security header.
NFNDCOMP	Component not found.
NFNDDST	The data store was not found.
NFNDFUNC	Function not found.
NFNDUOR	Unit of recovery not found.
NOSECHDR	Security failure; no OTMA security header.
NPW1INVL	The new password 1 contained non-alphanumeric character.
NPW2INVL	The new password 2 contained non-alphanumeric character.
NPW1LINV	The new password 1 has invalid length.
NPW2LINV	The new password 2 has invalid length.
NPWINVAL	The new password is invalid.
NPWNOMCH	New passwords do not match.
OPWINVAL	The old password contained non-alphanumeric character.
OPWLINVL	The old password has invalid length.
PROTOERR	An IMS Connect protocol error occurred. See the IMS Connect error message on the system console.
PWCHGERR	The password change request was in error.
PWCHNSUP	Password change function is not supported.
PWEXPIRD	The password has expired.
PWNOAUTH	The old password is not authorized.
RACFNACT	RACF is not active.
REQUEST	Request.
REQ_CON	Request and conversation.

Table 78. Reason codes for OTMA (continued)

OMUSR_RESCODE received by IMS TM Resource Adapter	Description
SECFAIL	Security failure; a RACF call failed; an IMS Connect call failed. See the IMS Connect error message on the system console.
SECFNOPW	Security failure; no password in the OTMA user data header.
SECFNPUI	Security failure; no password in the OTMA user data header, and no user ID in the OTMA user security header.
SECFNUID	Security failure; no user ID in the OTMA user security header.
STOPCMD	The data store or IMSplex was stopped by a command.
STP/CLSE	The data store or IMSplex was in a stop or close process.
XTNOFFZR	Offset value to the first IRM extension is zero.

Extended local return and reason codes

IMS Connect sends return and reason codes to IMS TM resource adapter.

The following return and reason codes, in Table 79 and Table 80, are sent by IMS Connect to IMS TM resource adapter, and are passed back to the client application in the exception.

Return codes

Table 79. Extended local return codes

Hex value	Description
04	Exit request error message sent to client before socket termination. The socket is disconnected by IMS Connect.
08	Error detected by IMS Connect. The socket is disconnected by IMS Connect.
C	Error returned by IMS/OTMA. The socket is disconnected by IMS Connect.
20	The IRM_TIMER has expired. The reason code value is the value of the IRM_TIMER. The socket is disconnected by IMS Connect.
24	A default IRM_TIMER value has expired. Either the IRM_TIMER value specified was X'00' or an invalid value. The reason code value is the value of the IRM_TIMER. The socket is disconnected by IMS Connect.

Reason codes

Table 80. Extended local reason codes

Reason code	Description
BPESVCER	SVC was incorrectly set up.
CLNTSTOP	Client is stopped. This situation might occur if the client was stopped after an IMS timeout when MPP was unavailable to process the transaction.
CTXSWCHF	RRS context switch failed.

Table 80. Extended local reason codes (continued)

Reason code	Description
ESTAEERR	ESTATE setup error was detected.
HWSFAIL	IMS Connect failed during a call.
HWSNOACT	IMS Connect is currently inactive.
HWSSHUTP	IMS Connect is shutting down.
INACTIVE	The Local port is not currently active.
INTFABND	The client interface to IMS Connect abnormally ended during the call.
INVLDCID	An invalid client ID was specified.
NAMTKNER	An invalid IMS Connect name was specified.
NFNDSVT	The connection token control block was not found. This situation might indicate that the last 4 bytes of the connection token have been corrupted.
RACFFAIL	The SAF check against the client failed. The client address space is not authorized to access HWS.ICON_NAME in the facility class.
SBFLBAD	An invalid length for the send buffer was detected.

IMS Connect post codes

IMS Connect post codes identify the IMS Connect Module that issued the post or the meaning of the post code. For each post code, the first byte is blank, and the following three bytes are alphabetic data. For example, in the post code CMD, the code is 'bCMD' where 'b' is a blank.

Table 81. IMS Connect post codes

Value (decimal)	Module or meaning
CMD	HWSCMDC0
CXQ	HWXCXQH0
CXR	HWSCXRP0
DCV	HWSDREC0
DOC	HWSDOCC0
DOP	HWSDOPN0
DO3	HWSDOC30
DRE	HWSDREC0
DSC	HWSDSCH0
DSE	HWSDSCE0
DSL	HWSDSCL0
DST	HWSDSTM0
DS2	HWSDSC20
DSE	HWSDSC30
DS5	HWSDSC50
DXC	HWSDDXCN
DXM	HWSDXMT0
EQC	HWSEQCL0

Table 81. IMS Connect post codes (continued)

Value (decimal)	Module or meaning
EQS	HWSEQS00
ETR	HWSETRM0
OCL	HWSSOCL0
OCM	HWSSOCM0
PCD	HWSPSVT0
PCI	HWSPCINF
PCR	HWSPSVT0
PCS	HWSPSVT0
PCV	HWSPCVC0
PST	Good post value
RCD	HWSRCDR0
REC	HWSSREC0
SCV	HWSSCVC0
SOC	HWSSOCL0
SOL	HWSSOCL0
SOP	HWSSOPN0
SST	HWSSSTP0
STP	HWSSSTP0
STR	HWSSTRM0
SVT	HWSSVTM0
SXT	HWSSXTE0
VTD	NWSSVTD0
XMT	HWSSXMT0
$TI	BPE timer call post

Chapter 15. OTMA codes

The IMS Open Transaction Manager Access (OTMA) issues various return and sense codes. You can use these codes and the information about them to diagnose problems with OTMA.

OTMA sense codes for NAK messages

OTMA issues sense codes that accompany OTMA negative acknowledgment (NAK) messages.

Codes X'0000' through X'0FFF' and X'9000' through X'FFFF' are reserved for IBM use. Codes X'1000' through X'8FFF' are reserved for customer use.

0001

Explanation: IMS received a message from a client, but the message is not part of the OTMA sign-on protocol. The client is not yet ready for message processing.

Programmer response: Make sure that the client has sent the client-bid request and successfully received an ACK for that client-bid request.

Source: OTMA NAK codes

0002

Explanation: IMS received a message from a client, but the client cannot send or receive messages.

Programmer response: Make sure that the client is not stopped.

Source: OTMA NAK codes

0003

Explanation: Either the client-bid request did not correctly set the length of the state-data section, or the application-data section is present.

Programmer response: Make sure that the length of the state-data section and the XCF length fields are correct. The application-data section should not be included in the client-bid request.

Source: OTMA NAK codes

0004

Explanation: Reserved

Source: OTMA NAK codes

0005

Explanation: IMS received a message for a multi-segment message that duplicated an existing segment.

Programmer response: Make sure that the segment number is not duplicated.

Source: OTMA NAK codes

0006

Explanation: IMS received a return code from XCF after attempting to receive the message. The return code is saved in the reason code field of the message-control information section of the message prefix.

Programmer response: Refer to the appropriate z/OS programming manual for action.

Source: OTMA NAK codes

0007

Explanation: The maximum number (255) of clients was reached. No new client structure is created.

Programmer response: Make sure the client name is correct and that you have not exceeded the limit of 255 clients.

Source: OTMA NAK codes

0008

Explanation: The security check by IMS rejected the client-bid request.

Programmer response: Make sure the security data specified in the client-bid request is valid and correct. In addition, verify RACF definitions and the IMS security exit routine.

Source: OTMA NAK codes

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0009

Explanation: IMS received an invalid OTMA command.

Programmer response: Verify the OTMA command.

Source: OTMA NAK codes

000A

Explanation: IMS received an OTMA data message. IMS only accepts transaction, command, response, or commit messages. A data message must be a continuation of an IMS conversational transaction.

Programmer response: Verify the data message being sent. The data flag in byte 1 of the OTMA control data could have been set incorrectly, or the conversation iteration message was sent to a terminated IMS conversational transaction.

Source: OTMA NAK codes

000B

Explanation: IMS received an invalid message type. An OTMA message must be a transaction, command, response, data, or commit message.

Programmer response: Make sure the Message Type in the message-control information section of the message prefix is set properly.

Source: OTMA NAK codes

000C

Explanation: Reserved

Source: OTMA NAK codes

000D

Explanation: IMS received an OTMA data message for continuation of an IMS conversation using a nonexistent transaction pipe.

Programmer response: Make sure the transaction pipe exists and that the first iteration of the IMS conversation is successfully completed.

Source: OTMA NAK codes

000E

Explanation: IMS was unable to create the transaction pipe to process the message.

The synchronized tpipe flag in the processing flag of the OTMA message-control-information prefix was set incorrectly on or off an existing tpipe. After a tpipe is created for an input or output OTMA message, the synchronized tpipe setting for the tpipe cannot be changed for the subsequent input or output OTMA message.

Programmer response: Make sure IMS storage pools are properly allocated and available.

Source: OTMA NAK codes

000F

Explanation: The transaction pipe for the message was stopped.

Programmer response: Find out why the transaction pipe was stopped. Issue an IMS `/START` command to restart the transaction pipe.

Source: OTMA NAK codes

0010

Explanation: The OTMA message had no state data.

Programmer response: Verify that the state-data flag is set and that state data is present.

Source: OTMA NAK codes

0011

Explanation: IMS received the OTMA commit message, but the request was not to terminate the conversation. IMS only allows commit-type messages for terminating IMS conversations (equivalent to the IMS `/EXIT` command).

Programmer response: Make sure the commit message is used to terminate an IMS conversation.

Source: OTMA NAK codes

0012

Explanation: The OTMA message prefix was too large. The maximum size of the OTMA prefix is 4 KB.

Programmer response: Check the size of the OTMA message prefix.

Source: OTMA NAK codes

0013

Explanation: The client-bid request did not set the size of the message hash table. This size is a required field, which is to be set by the client for client-bid requests.

Programmer response: Set the message hash table size in the client-bid request.

Source: OTMA NAK codes

0014

Explanation: The client sent a second client-bid request while the first client-bid request was still active.

Programmer response: Make sure the client leaves and joins the XCF group before sending a new client-bid request to IMS.

Source: OTMA NAK codes

0015

Explanation: IMS was unable to allocate storage for the message hash table.

Programmer response: Check the specified size of the message hash table; it might be too large.

Source: OTMA NAK codes

0016

Explanation: Client was not yet active and ready for message processing.

Programmer response: Make sure the client-bid request was sent and successfully completed. Also check that the XCF state is active.

Source: OTMA NAK codes

0017

Explanation: The OTMA message specified an invalid synchronization level in the state-data section of the message prefix. The synchronization-level field should be either None, Commit, or SYNCPT.

Programmer response: Make sure the synchronization level is valid.

Source: OTMA NAK codes

0018

Explanation: The OTMA message had an invalid transaction-pipe (tpipe) name. See Administering IMS for OTMA (Communications and Connections) for information about transaction pipes.

Programmer response: Correct the transaction-pipe name.

Source: OTMA NAK codes

0019

Explanation: The OTMA message had an invalid client name. For the naming rules for clients, see the information about OTMA naming conventions.

Programmer response: Correct the client name.

Source: OTMA NAK codes

Related reference:

OTMA naming conventions (Communications and Connections)

001A

Explanation: IMS detected an error and canceled the message before putting it on the IMS queue for processing. Usually, an IMS message, accompanying the NAK, describes the problem.

If this sense code was received for an OTMA message that was intended for a remote IMS system by way of an IMS to IMS TCP/IP connection, the remote IMS system detected the error and issued any associated DFS messages at the remote installation.

Programmer response: See the reason code that accompanies the NAK code.

The following table lists the reason codes, in hexadecimal, decimal, and gives an explanation.

Table 82. Reason codes associated with the 001A sense code

Hex:	Decimal:	Explanation:
X'03'	03	RACF RACROUTE VERIFY call failed for incorrect input user ID. For OTMA messages intended for a remote IMS system, IMS Connect returns a NAK to OTMA. OTMA routes the message to the IMS Connect dead letter queue HWS$DLQ in the sending IMS system.
X'15'	21	The message segment length or ZZ field cannot be changed by DFSNPRT0 exit.
X'16'	22	Invalid security option specified in the message prefix.
X'17'	23	Invalid command from an OTMA client. See DFS1285E.
X'18'	24	Transaction currently not available for use. See DFS3470E.
X'19'	25	SMB transaction/LTERM is stopped. See DFS065. For OTMA messages intended for a remote IMS system: • IMS Connect returns a NAK to the sending OTMA • The sending OTMA keeps the message at the front of the tpipe queue in the sending IMS system • Message DFS065 is issued at the remote IMS installation

Table 82. Reason codes associated with the 001A sense code (continued)

Hex:	Decimal:	Explanation:
X'1A'	26	Invalid CPIC transaction. See DFS1286E.
X'1B'	27	Invalid remote destination (RCNT). See DFS1287E.
X'1C'	28	Invalid CNT name specified. See DFS1288E.
X'1D'	29	SMB not found. See DFS064. For OTMA messages intended for a remote IMS system: • IMS Connect returns a NAK to the sending OTMA • The sending OTMA routes the message to the IMS Connect dead letter queue HWS$DLQ in the sending IMS system • Message DFS064 is issued at the remote IMS installation
X'1E'	30	Invalid security. See DFS1292E. For OTMA messages intended for a remote IMS system: • IMS Connect returns a NAK to the sending OTMA • The sending OTMA routes the message to the IMS Connect dead letter queue HWS$DLQ in the sending IMS system • The remote IMS system issues message DFS1292E
X'1F'	31	System error requested.
X'20'	32	System error message.
X'21'	33	User error message.
X'22'	34	Single-segment message. See DFS1290E.
X'23'	35	All messages discarded. See DFS249.
X'24'	36	Null segment sent. See DFS249. One cause for this error maybe the length specified on the MSGLEN key parameter of the IXCMSGO macro does not match the length of the OTMA data. No extra or null data can be padded at the end of the application data section.
X'25'	37	Queue overflow as unsuccessful insert.

Table 82. Reason codes associated with the 001A sense code (continued)

Hex:	Decimal:	Explanation:
X'26'	38	Commit mode 0 not allowed for IMS conversational or Fast Path transaction. See DFS1291E. For OTMA messages intended for a remote IMS system: • IMS Connect returns a NAK to the sending OTMA • The sending OTMA routes the message to the IMS Connect dead letter queue HWS$DLQ in the local, sending IMS system • The remote IMS system issues message DFS1291E
X'27'	39	IMS conversation is stopped, similar to an /EXIT command.
X'28'	40	DFSNPRT0 requested that a message be rerouted to a remote system, but failed. See DFS064.
X'29'	41	DFSNPRT0 requested that a message be rerouted to a remote system, but failed. See DFS070.
X'32'	50	The length specified in the application data section or the segment length for multi-segment input data exceeds the length specified on the MSGLEN key parameter of the XCF IXCMSGO macro.
X'51'	81	IMS Queue Manager detected an oversized OTMA prefix and cannot insert the message. Examine the length of OTMA user data prefix and security data prefix.
X'0065'	101	Both the TMAMTXP1 and TMAMTXP2 flags are set in the OTMA state data. Only one can be set to request the OTMA transaction expiration function.

Source: OTMA NAK codes

Related information:

- DFS064I (Messages and Codes)
- DFS065 (Messages and Codes)
- DFS070 (Messages and Codes)
- DFS249 (Messages and Codes)

- DFS1285E (Messages and Codes)
- DFS1286E (Messages and Codes)
- DFS1287E (Messages and Codes)
- DFS1288E (Messages and Codes)
- DFS1290E (Messages and Codes)
- DFS1291E (Messages and Codes)
- DFS3470 (Messages and Codes)

001B

Explanation: IMS rejected the message, because IMS is shut down.

Programmer response: Resend the message when IMS is restarted.

Source: OTMA NAK codes

001C

Explanation: IMS rejected the message, because the synchronization flag was not set in the state-data section of the message prefix.

Programmer response: Set the synchronization flag before sending the message to IMS.

Source: OTMA NAK codes

001D

Explanation: IMS rejected the message, because the length of the user-data section of the message prefix exceeded the maximum allowable length (1024 bytes).

Programmer response: Check the length of the user-data section of the message prefix.

Source: OTMA NAK codes

001E

Explanation: IMS rejected the message, because the length of the server user data in the state-data section of the message prefix exceeded the maximum allowable length (256 bytes).

Programmer response: Check the length of the server user data.

Source: OTMA NAK codes

001F

Explanation: IMS rejected the message, because the recoverable sequence number in the message-control information section of the message prefix does not match the IMS sequence number for the synchronized transaction pipe (tpipe). If IMS receives 001F from a client, IMS stops the tpipe.

Programmer response: Check the recoverable sequence number in the message and ensure it is at least one greater than the current recoverable sequence number for the synchronized transaction pipe.

Source: OTMA NAK codes

0020

Explanation: IMS rejected the message, because the message did not have any application data.

Programmer response: Check the application-data section of the message prefix and ensure it has a transaction code or a valid IMS command.

Source: OTMA NAK codes

0021

Explanation: IMS rejected the message, because the chain flag was not set in the message-control information section of the message prefix.

Programmer response: Ensure the chain flag is set properly.

Source: OTMA NAK codes

0022

Explanation: IMS was unable to find the transaction pipe associated with the Server token to process the conversational message.

Programmer response: Ensure that the Server token is passed correctly to the server with the conversational state bit on.

Source: OTMA NAK codes

0023

Explanation: The input recoverable sequence number is invalid.

Programmer response: If one of the following conditions exists, IMS sends this NAK message in response to the input message:

- The tpipe is synchronized, the transaction is defined as recoverable, and the input recoverable sequence number is 0.
- The tpipe is synchronized, the transaction is defined as irrecoverable, and the input recoverable sequence number is not 0.
- The tpipe is not synchronized, and the input recoverable sequence number is not 0.
- The tpipe is synchronized for command input, the commit mode is 0, and the input recoverable sequence number is not 0.

Source: OTMA NAK codes

0024

Explanation: A conversational program has not yet responded to the last input message. Multiple conversational messages were received by OTMA; subsequent messages were rejected because the first message is still being processed. IMS discards subsequent messages, and responds to the accepted input message.

Programmer response: Modify the client program to wait for the conversational transaction output before sending the next input message.

Source: OTMA NAK codes

0025

Explanation: IMS has detected a resynchronization protocol violation during the resynchronization process.

Programmer response: If one of the following conditions exists, IMS sends this NAK message in response to the input message:
- The client's resynchronization logic does not follow the OTMA resynchronization protocol.
- The client's message prefix specifies the incorrect tpipe name or member name.

Source: OTMA NAK codes

0026

Explanation: During resynchronization, IMS tried to dequeue messages without success.

Programmer response: Contact IBM Software Support for assistance.

Source: OTMA NAK codes

0027

Explanation: During resynchronization, IMS tried to reset recoverable sequence numbers without success.

Programmer response: Contact IBM Software Support for assistance.

Source: OTMA NAK codes

0028

Explanation: IMS rejected a RESUME TPIPE request from an OTMA client. A reason code accompanies the sense code; this code can be one of these values:

Code **Explanation**
X'01' The tpipe is stopped.

Programmer response: Check the reason code that accompanies the NAK code.

You might need to restart the tpipe with a /START TMEMBER TPIPE command to complete the resume tpipe operation.

Source: OTMA NAK codes

0029

Explanation: OTMA detected that the total number of transaction pipes (tpipe) has reached or exceeded the limit defined in the descriptor file.

Possible reason codes are:

Reason code **Explanation**

01 The MAXTP for the member limit is reached. Check the MAXTP parameter for the member in the OTMA client descriptor.

02 The MAXTP for the global limit is reached. Check the MAXTP parameter for DFSOTMA in the OTMA client descriptor.

Programmer response: Issue a checkpoint three times to clean the idle tpipes.

Source: OTMA NAK codes

002A

Explanation: The delivery of an OTMA message to a remote IMS system for processing could not be completed.

A reason code accompanies this code. The following table lists the reason codes, in hexadecimal, decimal, and gives an explanation:

Table 83. Reason codes associated with the 002A sense code

Hex:	Decimal:	Explanation:
X'01'	01	The name of the remote IMS Connect that is specified for the failed OTMA message in either the OTMA destination descriptor or the OTMA DFSYDRU0 exit routine does not match the name of any remote IMS Connect instance defined to IMS Connect (NFNDRICN). IMS Connect returns a NAK to OTMA and the message is routed to the IMS Connect dead letter queue HWS$DLQ in the local, sending IMS system.

Table 83. Reason codes associated with the 002A sense code (continued)

Hex:	Decimal:	Explanation:
X'02'	02	The name of the remote IMS system that is specified for the failed OTMA message in either the OTMA destination descriptor or the OTMA DFSYDRU0 exit routine does not match the name of any IMS system defined to the remote IMS Connect instance (NFNDDST). IMS Connect returns a NAK to OTMA and the message is routed to the IMS Connect dead letter queue HWS$DLQ in the local, sending IMS system.
X'03'	03	The remote IMS Connect instance is down (TDCONERR). IMS Connect returns a NAK to OTMA and the message remains at the front of the tpipe queue in the local, sending IMS system. IMS Connect attempts to reconnect to the remote IMS Connect. When successful, OTMA resends the message.
X'04'	04	The remote IMS system is down (STP/CLSE). IMS Connect returns a NAK to OTMA and the message remains at the front of the tpipe queue in the local, sending IMS system.
X'05'	05	The authentication of a RACF Passticket failed at the remote IMS Connect instance. The message is rerouted to the dead letter queue, HWS$DLQ.
X'06'	06	The remote IMS Connect instance returned a NAK to the local IMS Connect instance after failing to receive an ACK or NAK response from the remote IMS system before the ACK timeout interval expired. The message is rerouted to the ACK timeout queue, either DFS$$TOQ or the tpipe specified on the CM0ATOQ parameter of either the HWS or DATASTORE configuration statement.

Table 83. Reason codes associated with the 002A sense code (continued)

Hex:	Decimal:	Explanation:
X'07'	07	The local IMS Connect instance issued a TCP/IP read to receive an acknowledgment from the remote IMS Connect instance, but the read failed. This can happen if TCP/IP is down. The message is rerouted to the dead letter queue, HWS$DLQ.
X'08'	08	The RMTIMSCON connection has been STOPPED in the local IMS Connect instance. IMS Connect returns a NAK response to the local IMS system and the message remains at the front of queue.

Programmer response: See the reason code that accompanies the NAK code.

Source: OTMA NAK codes

002B

Explanation: A late or invalid ACK/NAK was sent to OTMA.

Before this late or invalid ACK/NAK message, OTMA might receive a timeout or /STO TMEMBER TPIPE command to get out of the WAIT status for an acknowledgment message. Since OTMA is no longer waiting for an ACK/NAK, this late ACK/NAK message from the client was rejected by OTMA with this NAK message.

Programmer response: Change the IMS timeout value if it is too small. The timeout value could be the ICAL timeout or the CM0/CM1 ACK timeout. If this prolem is related to Resume Tpipe request for IMS Connect, re-issue a new Resume Tpipe request to retrieve IMS messages.

Source: OTMA NAK codes

002C

Explanation: The OTMA message specified an invalid commit mode with a synchronized tpipe in the state-data section of the message prefix. You must use the Commit-then-Send commit mode.

Programmer response: Make sure that you choose the Commit-then-Send commit mode.

Source: OTMA NAK codes

002D

Explanation: An incompatibility between the synchronization level and the commit level was indicated in the message prefix. A send-then-commit level is required with a sync level of SYNCPT.

Programmer response: Correct the incompatibility in the message prefix.

Source: OTMA NAK codes

002E

Explanation: The OTMA message prefix indicated an incompatibility between the sync level field and the context ID field. the context_id field must only be supplied with a sync level of SYNCPT.

Programmer response: Correct the incompatibility in the message prefix.

Source: OTMA NAK codes

002F

Explanation: A z/OS Resource Recovery Services (RRS) two-phase commit (synclevel=syncpoint) transaction failed.

Explanation: IMS failed to express an interest with the input RRS context token in the OTMA message prefix.

System programmer response: Make sure that the input RRS token in the OTMA prefix is a valid one and that RRS, IMS, and the OTMA client, such as IMS Connect, are on the same z/OS image.

Source: OTMA NAK codes

0030

Explanation:

OTMA has detected a message flood condition for an OTMA member or for all the members. The number of input messages waiting to be processed exceeds the currently defined maximum number allowed. To protect the IMS system, OTMA rejects the new input messages until the flood condition is relieved. A reason code accompanies this code. The following table lists the reason codes in hexadecimal and decimal, and provides an explanation.

Table 84. Reason codes associated with the 0030 sense code

Hex	Decimal	Explanation
X'01'	01	The flood condition for a specific OTMA member was detected. No new input transaction can be accepted from this member.
X'02'	02	The OTMA global flood condition was detected. OTMA rejects all new transactions from all the members.

Programmer response: When OTMA members receive this OTMA code, you can choose to take corrective action to reroute the OTMA transaction to a different IMS. Notify the system programmer of the IMS OTMA message flood condition. This flood condition is relieved when the input messages (TIB) have decreased below 50% of the flood limit. For IBM MQ applications, IBM MQ issues message CSQ2003E to the system console for the OTMA message flood condition. IBM MQ puts the message back on the queue. After the OTMA message flood condition is relieved, the messages on the queue are re-sent to IMS OTMA.

Source: OTMA NAK codes

0031

Explanation: A /STOP TMEMBER command has been issued to prevent OTMA from accepting any new transactions or commands from this OTMA client.

System action: The OTMA client or member is stopped. Use a /DISPLAY OTMA command is see whether the OTMA client or member is stopped.

Programmer response: Since this IMS does not accept a new transaction or command from this client or member, consider having the application program submit the transaction or command to a different IMS for processing.

Problem determination: Check with the system programmer to understand why the client or member was stopped. It could be that the /STOP TMEMBER is issued to an IMS that experiences an OTMA message flood condition.

Source: OTMA NAK codes

0033

Explanation: OTMA detected a security violation while processing a resume tpipe request from an OTMA hold queue capable client, such as IMS Connect. The reason can be either of the following:
- RIMS security class for the OTMA TPIPE user ID is not authorized.
- DFSYRTUX rejects the TPIPE user ID.

System action: The resume tpipe request was rejected with this NAK code.

Programmer response: Contact the system security

administrator to verify the user ID for the TPIPE access.

Source: OTMA NAK codes

0034

Explanation: OTMA has detected an expired input transaction and canceled the transaction. You specify the expiration time for the canceled transaction in the OTMA message prefix, using the TRANSACT macro, the IMS destination creation exit DFSINSX0, or the DRD type-2 commands such as CREATE/UPDATE TRAN commands.

System action: The transaction was canceled.

Programmer response: No action is required.

The reason code identifies when OTMA expired the transaction:

X'0001' - transaction was canceled right after OTMA receives it from XCF
X'0002' - transaction was canceled before OTMA enqueues it

Source: OTMA NAK codes

0035

Explanation: OTMA detected an invalid response message or failed to process the response message for a synchronous callout request that is using the DL/I ICAL call.

A reason code accompanies this code.

The reason code can be one of the following codes:

Code **Meaning**

X'0001' The ICAL call has already been processed. It no longer waits for a response message. IMS rejects this response message as a late message. The response message might carry an invalid correlator token in the OTMA message prefix.

X'0002' The response message was delivered without the required TMAMSYRP flag set in the OTMA message prefix.

X'0003' IMS failed to locate the tpipe based on the correlator token in the OTMA message prefix.

X'0004' The response message was delivered to an incorrect IMS. The application might be sending IMS the incorrect correlator token in the OTMA message prefix.

X'0005' OTMA cannot process this response message because an internal state error occurred.

X'0006' OTMA failed to obtain the storage from subpool 231 that is needed to process this response message.

X'0007' OTMA detected that the length of the application data section of the OTMA message is less than 4 bytes.

X'0008' A duplicate response message or a second response message was received for the callout request.

X'0009' Because a NAK message of the callout request was previously processed, IMS cannot accept a response message for the callout request.

X'000A' Reserved for future use.

X'000B' The response was sent to OTMA in the multisegment message format. However, one of the segments contains no data.

X'000C' The XCF buffer length was less than the total length of the response message.

X'000D' Reserved for future use.

X'000E' Reserved for future use.

X'000F' IMS experienced an internal post error to pass the response to the ICAL call. IMS will time out the ICAL call.

X'0020' IMS received a response message, followed by an ACK message of the callout request message. However, IMS failed to process the response message with the send-only-with-ack option because of the internal post error.

X'0021' IMS received a response message, followed by an ACK message of the callout request message. However, IMS failed to process the response message with the send-only-with-ack option because a /PSTOP or /STOP REGION ABDUMP command was issued previously.

X'0022' IMS received a response message, followed by an ACK message of the callout request message. However, IMS failed to process the response message with the send-only-with-ack option because an OTMA ACK timeout or an OTMA command was processed to reject the ICAL call.

X'0023' IMS received a response message, followed by an ACK message of the callout request message. However, IMS failed to process the response message with the send-only-with-ack option because of the ICAL call time out.

X'0024' IMS received a response message, followed by a NAK message of the callout request message. The response message was rejected.

X'0025' IMS experienced a shortage of LUMP storage and cannot process the response with the send-only-with-ack option. A retry routine can be used to resend the response message before IMS times out the ICAL call.

System action: The response message was rejected. A 6701 log record is written out for this rejected response message.

Programmer response: No action is required.

See the reason code returned and take the appropriate action. Examine the 6701 log records for the callout request and response message to determine the cause of the error.

Source: OTMA NAK codes

0036

Explanation: OTMA detected an invalid message length. The sum of the parts is greater than the XCF message length.

System action: The message is rejected, and NAK X'36' is sent to the client. A LOG67D0 record is also written out for diagnostics.

Programmer response: Check that the correct flags are set in the message prefix to indicate which parts are included (TMAMCPFL) and that the lengths for security data, user data, and application data are correct.

Source: OTMA NAK codes

OTMA return codes in 67D0 log record

If an error occurs in an IMS OTMA destination routing exit routine, your application program can retrieve a status code for the IMS call.

The X'67D0' records are written to the IMS log, and the return codes are shown in the following table:

Table 85. OTMA return codes

Code	Explanation
X'1C'	An internal interface error occurred.
X'20'	DFSYDRU0 overrides exceed the maximum limit.
X'24'	DFSYDRU0 specifies an invalid destination.
X'28'	DFSYDRU0 specifies an invalid return code.
X'2C'	The OTMAYPRX user exit returned an invalid XCF member name.
X'30'	The OTMAYPRX user exit required an XCF member name that was not returned.
X'34'	The OTMAYPRX user exit returned an invalid return code.
X'38'	The destination is in a different client, and the XCF member name from DFSYDRU0 is invalid.
X'3C'	DFSYDRU0 returned an invalid user data length.

Codes used by OTMA C/I

The OTMA Callable Interface (C/I) uses a number of specific messages and codes.

Detailed information is provided in the following topics:

OTMA post codes

OTMA post codes are posted in an event control block (ECB). You can use these codes to check the status or identify problems with OTMA.

The asynchronous nature of OTMA message delivery and communication state change requires that the program that uses OTMA Callable Interface (C/I) use Event Signaling methods. The functions otma_open and otma_send_receive are asynchronous, the other APIs are not.

The otma_open, otma_openx, otma_send_receive, otma_send_receivex, otma_send_async, and otma_receive_async APIs each have an ECB parameter. This ECB is posted by the function or by an SRB that the function precipitates. The caller of otma_open, otma_openx, otma_send_receive, otma_send_receivex, otma_send_async, and otma_receive_async functions must check this ECB and wait for it to be posted before releasing or inspecting any of the output fields

mentioned in the API, except for the return code in the return code structure. The return code from all six functions indicates failure to initiate communications with a non-zero value. The ECB has the same value in these cases.

The general meanings of the POST codes are shown in the following table:

Table 86. OTMA post codes

Code	Meaning
0	Data transfer or state change expected is completed.
4	Transient problem detected. Try again later.
8	User error.
12	System error.
16	Client or XCF has terminated the function abnormally.
20	Error from IMS.

OTMA C/I return codes

The OTMA Callable Interface (C/I) issues return codes.

The return code structure consists of a return code that indicates the status of a request.

Table 87. OTMA C/I return codes

Code	Meaning
0	Function completed normally.
4	Transient problem detected. Try again later.
8	User error
12	System error
16	Function was Canceled.
20	Error from IMS.

The return code is part of a data structure used by all the API calls and is the post code found in any posted ECB. All numeric values are in decimals.

Four reason code fields are available.

Reason 1
Indicates what area in the OTMA client API reported the error. The value depends on the function that was called and is listed in Table 88 on page 212. All numeric values are in decimals.

Reason 2, Reason 3
Provides additional information about the problem. All numeric values are in decimals.

Reason 4
Indicates the API that was issued.

A vector of reason codes describes the details of any failed or partial result. The meanings are specific to the function and are described in the following table.

The following table describes OTMA C/I return codes and reason codes by function. The description of each function includes the return code (in decimal), four possible reason codes (in decimal), and a general description.

Table 88. OTMA C/I return codes and reason codes by function

Function	Return code (dec)	Reason 1 (dec)	Reason 2 (dec)	Reason 3 (dec)	Reason 4 (dec)	Description
CREATE	0				1	Normal completion.
	8	4			1	The user is not allowed to use OTMA C/I because the user is not permitted to use the RACF IMSXCF.OTMACI resource.
	8	20			1	OTMA C/I was used in OS/390® R2 or below. OTMA C/I should be used on OS/390 R3 or above.
	8	28			1	The session number that is specified is greater than the maximum number allowed (999).
	12	12	BPESVC return code		1	The OTMA C/I service call was rejected by the BPESVC service. See"BPESVC codes" on page 62 for more information about BPESVC return codes.
	12	800			1	Storage obtain failure.
OPEN and OPENX	0				2	Normal completion.
	0	1xx	xcf ixcjoin rc	xcf ixcjoin rsn	2	Member state changed. For more information, see z/OS: IXCJOIN return and reason codes.
	4	80	xcf ixcjoin rc	xcf ixcjoin rsn	2	IMS OTMA is not started, an invalid XCF group name was specified, or an invalid XCF member name was specified. Try again later. Server member is not active. For more information, see z/OS: IXCJOIN return and reason codes.
	8	0	ixcquery rc	ixcquery rsn	2	Your member name is already active. For more information, see z/OS: IXCQUERY return and reason codes.
	8	4			2	The user is not allowed to use OTMA C/I because the user is not permitted to use the RACF IMSXCF.OTMACI resource.
	8	8			2	The user is not allowed to specify the input anchor. The input anchor should be returned from the `otma_create` API or a new anchor should be initialized with 0. If the input anchor is correct, ensure that the input group name, the input member name, and the input partner name are the same as the names specified in the `otma_create` API.
	8	12			2	Client bid is refused.
	8	16			2	Client bid is refused due to security failure.

Table 88. OTMA C/I return codes and reason codes by function (continued)

Function	Return code (dec)	Reason 1 (dec)	Reason 2 (dec)	Reason 3 (dec)	Reason 4 (dec)	Description
	8	20			2	OTMA C/I was used in OS/390 R2 or below. OTMA C/I should be used on OS/390 R3 or above.
	8	28			2	The session number that is specified is greater than the maximum number allowed (999).
	8	112	xcf ixcjoin rc	xcf ixcjoin rsn	2	Member is in an unknown state. For more information, see z/OS: IXCJOIN return and reason codes.
	12	10x	xcf ixcjoin rc	xcf ixcjoin rsn	2	Join sysplex failed. For more information, see z/OS: IXCJOIN return and reason codes.
	12	11x	xcf ixcjoin rc	xcf ixcjoin rsn	2	Join local failed. For more information, see z/OS: IXCJOIN return and reason codes.
	12	12	BPESVC return code		2	The OTMA C/I service call was rejected by the BPESVC service. See "BPESVC codes" on page 62 for more information about BPESVC return codes.
	12	400	xcf ixcquery rc	xcf ixcquery rsn	2	Query sysplex failed. For more information, see z/OS: IXCQUERY return and reason codes.
	12	800	0	0	3	GETMAIN failure.
	20	16	OTMA sense code	OTMA reason code		OTMA rejected the client bid. See the OTMA sense and reason codes for the cause. This could be caused by a security violation.
ALLOC	0	0	0	0	5	Normal.
	4	12	8	0	5	The OTMA C/I cannot dynamically allocate a session because either: • The number of existing sessions is already the maximum allowed, or • C/I cannot obtain any free storage from subpool 230 for the session usage.
	8	4	0	0	5	Null anchor.
	8	16			5	Incorrect input anchor.
	8	20			5	A transaction name or command was entered. However, it was not left-aligned.
	8	24	New state of caller	Old state of caller	5	Caller changed the program state or key -- see reason codes 3 and 4. Program state and key should remain the same for all API calls.
	12	12	BPESVC return code		5	The OTMA C/I service call was rejected by the BPESVC service. See "BPESVC codes" on page 62 for more information about BPESVC return codes.

Table 88. OTMA C/I return codes and reason codes by function (continued)

Function	Return code (dec)	Reason 1 (dec)	Reason 2 (dec)	Reason 3 (dec)	Reason 4 (dec)	Description
SEND RECEIVE and SEND RECEIVEX	0	0			7	Normal.
	0	4			7	Conversational.
	0	44	Maximum number of multi-segments specified in the receive segment list	Actual number of multi-segments sent from IMS	7	The first array element of the receive segment list specifies the maximum number of multi-segments that can be received from IMS. If IMS sends more multi-segments than the number specified in the receive segment list, the last element in the receive segment list will include the size of the rest of the multi-segments. All of the multi-segments will be stored in the receive buffer.
	8	4			7	No anchor.
	8	8			7	Bad session handle.
	8	12	Session state		7	Invalid session state.
	8	16			7	Incorrect input anchor.
	8	24	New state of caller	Old state of caller	7	Caller changed the program state or key -- see reason codes 3 and 4. Program state and key should remain the same for all API calls.
	8	32	Segment number	Maximum Size	7	Segment is too large.
	8	40			7	Buffer and segment length mismatch.
	8	44	The maximum number of multi-segments specified in the receive segment list.	Actual number of multi-segments sent from IMS.	7	The client specified SyncLevel1 in the special option parameter of the otma_alloc API. C/I rejected the IMS output because the size of the receive segment list is too small.
	8	48	Length of receive buffer specified.	Length of receive buffer needed to include all the output.	7	The size of the receive buffer is too short. Check the receive_buffer and receive_length parameters, and correct the application program to use the buffer size returned in reason code 3.
	8	52			7	Either input lterm or modname is NULL. The lterm and modname fields are updated on output so they cannot be set to NULL on input. Leave these fields blank if they are not to be used.

Table 88. OTMA C/I return codes and reason codes by function (continued)

Function	Return code (dec)	Reason 1 (dec)	Reason 2 (dec)	Reason 3 (dec)	Reason 4 (dec)	Description
	8	56	rrs ctxswc rc		7	Switch off failed. For more information, see *OS/390 MVS Programming: Resource Recovery*.
	8	60			7	Input Native token.
	8	64			7	Non-current token.
	8	68			7	The input send length is 0 or less than 0.
	8	80			7	Input rejected. An attempt was made to send a new input message for a non-conversational transaction on an existing session handle. You must free the previous session handle by issuing an OTMA_FREE and then issue an OTMA_ALLOC for the new transaction.
	12	8	Send return code.	Send return code.	7	Send failed. Reason 2 and reason 3 are set by xcf ixcmsg0. See z/OS: IXCJOIN return and reason codes.
	12	12	BPESVC return code		7	The OTMA C/I service call was rejected by the BPESVC service. See "BPESVC codes" on page 62 for more information about BPESVC return codes.
	12	16	rrs ctxswc rc		7	Switch on failed. For more information, see *z/OS MVS Programming: Resource Recovery* (SA22-7616).
	12	20	Session state	Session correlator	Session number	An invalid session state was detected while processing a multi-segment message.
	16					Receive has been Canceled by IMS. Either IMS is down, or OTMA is stopped.
	20	0	0	0	7	IMS has sent DFS message.
	20	NAK code	NAK reason			Either IMS rejected the input message, or a backout was performed.
SEND ASYNC	0	0			10	Normal.
	4	0	0	0	5	Session block obtained
	4	12		0	10	Normal.
	4	12	8	0	5	Unable to obtain a session block
	8	4			10	No anchor.
	8	16			10	Incorrect input anchor.
	8	20			10	Invalid Trancode.
	8	24	New state of caller	Old state of caller	10	Caller changed the program state or key -- see reason codes 3 and 4. Program state and key should remain the same for all API calls.

Table 88. OTMA C/I return codes and reason codes by function (continued)

Function	Return code (dec)	Reason 1 (dec)	Reason 2 (dec)	Reason 3 (dec)	Reason 4 (dec)	Description
	8	32	Segment number	Maximum size	10	Segment is too large.
	8	40			10	Buffer and segment length mismatch
	8	56			10	Invalid send buffer length.
	8	60			10	Missing tpipe name
	8	64			10	Invalid tpipe name
	8	68			10	Invalid tpipe name. First four characters of name share the same tpipe prefix in otma_open or otma_openx.
	8	72			10	Invalid error message parameter specified.
	8	76	0	0	10	Duplicate send call has been issued; a send is already in progress.
	12	8	Send return code	Send return code	10	Send failed.
	12	12	BPESVC return code		10	The OTMA C/I service call was rejected by the BPESVC service. See "BPESVC codes" on page 62 for more information about BPESVC return codes.
	16					Send has been Canceled by IMS. Either IMS is down, or OTMA is stopped.
	20	NAK code	NAK reason			Either IMS rejected the input message, or a backout was performed.
RECEIVE ASYNC	0	0			11	Normal.
	0	44	Maximum number of multi-segments specified in the receive segment list	Actual number of multi-segments sent from IMS	11	The first array element of the receive segment list specifies the maximum number of multi-segments that can be received from IMS. If IMS sends more multi-segments than the number specified in the receive segment list, the last element in the receive segment list will include the size of the rest of the multi-segments. All of the multi-segments will be stored in the receive buffer.
	4	12		0	11	Unable to obtain a session block.
	4	80			11	The IMS OTMA function is not started.
	8	16			11	Incorrect input anchor
	8	20			11	Invalid Transaction code

Table 88. OTMA C/I return codes and reason codes by function (continued)

Function	Return code (dec)	Reason 1 (dec)	Reason 2 (dec)	Reason 3 (dec)	Reason 4 (dec)	Description
	8	24	New state of caller	Old state of caller	11	Caller changed the program state or key -- see reason codes 3 and 4. Program state and key should remain the same for all API calls.
	8	48	Length of receive buffer specified.	Length of receive buffer needed to include all the output.	11	The size of the receive buffer is too short. Check the receive_buffer and receive_length parameters, and correct the application program to use the buffer size returned in reason code 3.
	8	56			11	Invalid send buffer length.
	8	60			11	Missing tpipe name.
	8	64			11	Invalid tpipe name.
	8	68			11	Invalid tpipe name. First four characters of name share the same tpipe prefix in otma_open or otma_openx.
	12	12	BPESVC return code		11	The OTMA C/I service call was rejected by the BPESVC service. See "BPESVC codes" on page 62 for more information about BPESVC return codes.
	16					Receive has been Canceled by IMS. Either IMS is down, or OTMA is stopped.
FREE	0	0			14	Normal.
	4	0			14	Not allocated.
	4	4			14	Quitting.
	8	4			14	Null anchor.
	8	8			14	Obsolete handle.
	8	16			14	Incorrect input anchor.
	8	24	New state of caller	Old state of caller	14	Caller changed the program state or key -- see reason codes 3 and 4. Program state and key should remain the same for all API calls.
	12	12	BPESVC return code		14	The OTMA C/I service call was rejected by the BPESVC service. See "BPESVC codes" on page 62 for more information about BPESVC return codes.
CLOSE	0	0	xcf ixcleav rc	xcf ixcleav rsn	15	Normal completion. For more information, see *z/OS MVS Programming: Sysplex Services Guide* (SA22-7617).
	8	4	0	0	15	Null anchor.
	8	16			15	Incorrect input anchor.

Table 88. OTMA C/I return codes and reason codes by function (continued)

Function	Return code (dec)	Reason 1 (dec)	Reason 2 (dec)	Reason 3 (dec)	Reason 4 (dec)	Description
	12	8	xcf ixcleav rc	xcf ixcleav rsn	15	Non-zero return code from IXCLEAV. For more information, see z/OS: IXCLEAVE return and reason codes.
	12	12			15	One of the OTMA C/I service routines terminated abnormally. The abend could be caused by incorrect input parameters. If not, save the memory dump and contact IBM Software Support for assistance.

Related reference:

- z/OS: IXCQUERY return and reason codes
- z/OS: IXCJOIN return and reason codes
- z/OS: IXCLEAVE return and reason codes

Chapter 16. Repository Server codes

The Repository Server (RS) issues return and reason codes in association with Repository Server messages.

The RS return and reason codes are defined in the FRPSRVRS macro. The FRPSRVRS macro can be found in the IMS.SDFSMAC data set.

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Chapter 17. SQL codes

When IMS runs an SQL statement, it returns information about the statement execution. This information includes the SQL return code (SQLIMSCODE) and the SQL state (SQLIMSSTATE), which indicate whether statement execution was successful.

Application programs that contain executable SQL statements must provide one of the following elements:

- Provide a structure named SQLIMSCA using the INCLUDE SQLIMSCQ statement. The SQLIMSCA includes the SQLIMSCODE and SQLSTATE, SQLIMSERRMC in addition to other status information. You can provide an SQLIMSCA by using the INCLUDE SQLIMSCA statement.

For the complete contents of the SQLIMSCA, see SQL communication area (SQLIMSCA) (Application Programming APIs).

For information on how to use an SQLIMSCA in your application programs, see Checking the execution of SQL statements by using the SQLIMSCA (Application Programming).

SQLIMSCODE

SQLIMSCODE is set by IMS after each SQL statement is run.

SQLIMSCODE = 0
Execution was successful.

SQLIMSCODE > 0
Execution was successful with a warning.

SQLIMSCODE < 0
Execution was not successful.

SQLIMSCODE = 100
"No data" was found. For example, a FETCH statement returned no data because the cursor was positioned after the last row of the result table.

SQLIMSSTATE

SQLIMSSTATE is also set by IMS after the execution of each SQL statement. SQLIMSSTATE is a 5-byte character string variable in the SQLIMSCA.

SQLIMSSTATE provides application programs with common codes for common error conditions (the values of SQLIMSSTATE are product-specific only if the error or warning is product-specific). Furthermore, SQLIMSSTATE is designed so that application programs can test for specific errors or classes of errors. The coding scheme is the same for all IBM relational database products.

SQLIMSERRMC

SQLIMSERRMC is also set by IMS after the execution of each SQL statement. It contains a message text that describes the error.

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Successful execution SQL codes

SQL return codes that are preceded by a plus sign (+) indicate that the SQL statement execution was successful.

000 **The SQL statement executed successfully.**

Explanation: Either an unqualified successful execution occurred or a successful execution occurred with one or more warnings.

If SQLWARN0 is blank, there are no warnings. If SQLWARN0 is W, at least one of the other warning indicators in the SQLIMSCA was set to indicate a warning condition. For example, SQLWARN1 indicates that a value of a string column was truncated when it was assigned to a host variable.

SQLIMSSTATE: 00000 for unqualified successful execution.

SQLIMSSTATE: 01*ddd* for successful execution with warning *ddd*.

+098 **A dynamic SQL statement ends with a semicolon.**

Explanation: The statement string of a PREPARE statement is a valid dynamic SQL statement, but it ends with a semicolon.

System action: The semicolon and any subsequent text are ignored.

Programmer response: Check that the semicolon is used as a statement terminator.

SQLIMSSTATE: 01568

+100 **A row was not found, or the result of a query is an empty segment.**

Explanation: One of the following conditions occurred:

- No row met the search conditions specified in an UPDATE or DELETE statement.
- The result of a SELECT statement was an empty table.
- A FETCH statement was executed when the cursor was positioned after the last row of the result table.

System action: No data was retrieved, updated, or deleted.

SQLIMSSTATE: 02000

SQL error codes

SQL return codes that are preceded by a minus sign (-) indicate that the SQL statement execution was unsuccessful.

-010 **The string constant beginning with *string* is not terminated.**

Explanation: The statement contains a string constant, beginning with *string*, that is not terminated properly.

System action: The statement cannot be processed.

Programmer response: Check the indicated string constant for missing quotation marks or apostrophes.

SQLIMSSTATE: 42603

-084 **Unacceptable SQL statement.**

Explanation: This SQL statement is unacceptable to IMS. One of the following situations occurred:

- An attempt was made to PREPARE or EXECUTE IMMEDIATE an SQL statement that cannot be prepared.
- The embedded SQL statement is not an SQL statement that is supported by IMS.
- The statement referenced an undeclared cursor.
- An attempt was made to prepare an ALLOCATE CURSOR statement but the statement identifier is already associated with a declared cursor.
- A statement that is to be processed remotely referenced an array variable or array element. The remote execution is the result of one of the following actions:
  - Previous execution of a CONNECT statement
  - Use of a three-part name or alias in the current statement that resolves to an object at a remote server

  A statement that runs remotely cannot reference an array, except in the following cases:
  - The statement is a CALL statement.
  - An array element in the statement is a target of a FETCH, SELECT INTO, SET assignment-statement, or VALUES INTO statement.

System action: The statement cannot be processed.

Programmer response: Perform one of the following actions, depending on the situation:

- If the SQL statement cannot be prepared, the problem is in the source of the SQL statement, not the application program. Thus, no action is necessary unless the source of the SQL statement is the application program itself.
- If the SQL statement is not supported by IMS, remove it from the application program and precompile again.
- If an attempt was made to prepare an ALLOCATE CURSOR statement, change the application program to use a statement identifier that is not associated with a declared cursor.
- If the SQL statement references an array, change the application program so that the statement does not run on a remote server.

SQLIMSSTATE: 42612

-101 **The SQL statement exceeds maximum length of 32767.**

Explanation: IMS cannot process the statement because it exceeds maximum length of 32767.

System action: The statement cannot be processed.

Programmer response: Use a shorter and less complex statement.

SQLIMSSTATE: 54001

-104 **Illegal symbol** *token* **was used. Legal symbols might be:** *token-list***.**

Explanation: A syntax error was detected where the symbol *token* occurs in the SQL statement. The list of symbols that might be legal shows some alternate symbols that might be correct at that point, if the preceding part of the statement is correct.

However, the preceding part of the statement might be incorrect. For example, if an important keyword is omitted, IMS detects the error later, and not always immediately after the point where the keyword should appear. The list of alternate symbols are only suggestions. Some of those symbols might not be legal for statements run by IMS.

System action: The statement cannot be processed.

Programmer response: Correct the statement and run it again.

SQLIMSSTATE: 42601

-117 **The numbers of values** *number_value_assigned* **is not equal to the number of columns** *number_columns_specified***.**

Explanation: The number of insert values in the value list of the insert operation is not the same as the number of object columns specified. Alternatively, the number of values on the right side of an assignment in a SET assignment statement or the SET clause of an update operation does not match the number of columns on the left side.

System action: The statement cannot be processed. No data was inserted or updated.

Programmer response: Correct the statement to specify only one value for each of the specified object columns, and run the statement again.

SQLIMSSTATE: 42802

-122 **Field** *field_name* **in the SELECT, WHERE, or ORDER BY list is not valid.**

Explanation: The SELECT statement contains one of these errors:

- The statement contains a field name in the SELECT clause, but the segment that this field belongs is not defined in the From clause.
- A field name in the WHERE clause does not belong to segments defined in FROM clause.
- A field name in the ORDER BY clause does not belong to segments defined in FROM clause.

System action: The statement cannot be processed.

Programmer response: You can correct the statement by:

- Including the fields in the FROM clause that are in the SELECT clause, or
- Removing the fields from the SELECT/WHERE/ ORDER BY clause.

SQLIMSSTATE: 42803

-158 **The number of SELECT fields** *number_field* **and host variables** *number_hostvariables* **is not equal.**

Explanation: The number of fields retrieved in the SELECT statement and the total number of host variables specified in the FETCH statement are not equal. The fields and host variables must have a one-to-one correlation unless the field is a structure.

System action: The SQL statement cannot be processed.

Programmer response: Correct the SQL statement to add a valid number of host variables, and run the statement again.

SQLIMSSTATE:

42811

-198 **The operand of a statement contains all blanks or is an empty string.**

Explanation: This code indicates one of the following problems:

- The operand (a host variable or string constant) that was the object of a PREPARE statement either contained all blanks or was an empty string.
- The SQL statement length was set to 0 or an invalid number.

System action: The statement cannot be processed.

Programmer response: Correct the logic of the application program. Ensure that both a valid SQL statement and a correct length value are provided in the operand of the PREPARE statement before that statement is executed.

SQLIMSSTATE: 42617

-199 **Illegal use of *keyword* was detected. Expected token is *token-list*.**

Explanation: A syntax error was detected in the statement at the point where the keyword specified by *keyword* appears.

A partial list of valid tokens is provided in SQLERRM as *token-list*. Only those tokens that will fit are listed. Some tokens in the list might not be valid in statements to be run by IMS. Those tokens are only valid for sending to other database management systems.

System action: The statement cannot be processed.

Programmer response: Examine the statement in the area of indicated keyword.

- A colon or SQL delimiter might be missing.
- Verify that the clauses are in the correct order.
- If the reserved word that is identified in the messages is listed as a reserved word, make the word a delimited identifier.

SQLIMSSTATE: 42601

-203 **The segment or field name *name* is ambiguous.**

Explanation: An unqualified segment name is ambiguous if the segment name is found in more than one PCB.

An unqualified field name is ambiguous if more than one segment identified in the FROM clause has a field with that name.

System action: The statement cannot be processed.

Programmer response: Qualify the field or segment name, and run the statement again.

Recommendation: To avoid full metadata scans (to identify the associated PCB for the unqualified segment), always qualify the segment.

SQLIMSSTATE: 42702

-204 **The *PCB name* is not valid or was not found.**

Explanation: This code indicates one of the following problems:

- The *PCB name* specified in the SQL statement is not valid.
- The PSB cannot access the specified PCB.

System action: The SQL statement cannot be processed.

Programmer response: Correct the PCB name in the SQL statement, and run the statement again.

SQLIMSSTATE: 42704

-205 **Field name *column_name* is not valid or defined in a segment.**

Explanation: No column with the specified *column_name* occurs in the table *table_name*.

System action: The statement cannot be processed.

Programmer response: Verify that the column and table names are specified correctly (including any required qualifiers) in the SQL statement.

SQLIMSSTATE: 42703

-206 ***object-name* is not valid in the context where it is used.**

Explanation: An object is specified in a context where it is not valid.

`object-name`
The name of the invalid object. Possible reasons for this error include:

Assignment clause
The right side of an assignment clause of an SQL data change statement referenced a column for expression. However, a column can be specified only on the left side of an assignment in an SQL statement.

System action: The statement cannot be processed.

Programmer response: Verify that the column and table designators are specified correctly in the SQL statement. Enclose the *object-name* in apostrophes if it is on the right side of an assignment clause.

SQLIMSSTATE: 42703

-208 **The ORDER BY clause is invalid as *column_name* is not an output column.**

Explanation: The statement is invalid because a column (*column_name*) specified in the ORDER BY list does not appear in the result table (that is, it is not specified in the SELECT-list).

System action: The statement cannot be processed.

Programmer response: Correct the syntax of the statement, either by adding the specified column to the result table, or deleting it from the ORDER BY clause.

SQLIMSSTATE: 42707

-301 The input value cannot be used because of the type or length specified.

Explanation: IMS received data that could not be used as specified in the statement, the input host variable, or the parameter because its data type is incompatible with the requested operation.

System action: The statement cannot be processed.

Programmer response: Correct the application program. Ensure that the data type of the input host variable or parameter in the statement is compatible with the way it is used.

SQLIMSSTATE: 42895

-302 The length that is specified for the SQL string is too long.

Explanation: The length value that is specified for the SQL statement string is too large for the host variable that containing the SQL statement string. For example, you defined a SQL-STATEMENT host variable with a SQL-STATEMENT-TXT of 180 characters. However, you specify the length of the sql statement string (SQL-STATEMENT-LEN) as 182. The length value that is specified is larger than the size of the actual host variable, and thus an error code -302 is returned.

```
01  SQL-STATEMENT.
  49  SQL-STATEMENT-LEN  PIC S9(4) COMP VALUE +182.
  49   SQL-STATEMENT-TXT  PIC X(180) VALUE SPACES.
```

System action: The statement cannot be processed.

Programmer response: Correct the application program. Check that the host variable that stored the SQL statement has a correct length value.

SQLIMSSTATE: 22003 if number too large for target; 22001 otherwise.

-303 The output variable *position-number* is not set because of incompatible data types.

Explanation: An output host variable could not be assigned because the data type of a variable was not compatible with the data type of the corresponding SELECT statement.

position-number
Location of the host variable value in the output SQLIMSDA.

The values of the output host variable and the corresponding list element must be in one of the following categories:

- One value is numeric and one of the following conditions is true:
  - The other value is also numeric.
  - The other value is a character string.
- Both must be character strings.
- Both must be binary strings.

In addition, for *datetime* or *timestamp* values, the target host variable must be a character string variable with a correct length.

System action: The statement cannot be processed. No data is retrieved.

Programmer response: Verify that table definitions are current, and that the target variable has the correct data type. Run the statement again.

SQLIMSSTATE: 42806

-305 The null value must be assigned with an indicator variable specified.

Explanation: A FETCH, SELECT, or VALUES INTO statement resulted in the retrieval of a null value to be inserted into the column, but no indicator variable was specified. An indicator variable must be specified if a column returns a null value.

System action: The SQL statement cannot be processed. No data was retrieved.

Programmer response: Check the definition of the table that is the object of the statement. Correct the application program to provide indicator variables for all host variables into which null values can be retrieved.

SQLIMSSTATE: 22002

-313 The number of host variables and parameter markers is not the same.

Explanation: The number of host variables that are specified in the EXECUTE or OPEN statement is not the same as the number of parameter markers (question marks) in the prepared SQL statement.

System action: The statement cannot be processed.

Programmer response: Correct the application program so that the number of host variables that are specified in the EXECUTE or OPEN statement is the same as the number of parameter markers in the prepared SQL statement.

SQLIMSSTATE: 07001

-350 The field *field name* is not a sensitive field.

Explanation: A field within a PCB cannot be accessed in a SQL statement because it is not defined in the PSB source as a sensitive field.

System action: The SQL statement cannot be processed.

Programmer response: Modify the SQL statement to include only sensitive fields.

SQLIMSSTATE: 42000

-404 The SQL statement specifies a string that is too long.

Explanation: The statement, parameter, or host variable specifies a value that is longer than the maximum length string that can be stored in the target column.

System action: The statement cannot be processed.

Programmer response: Check the length of the target column, parameter, or host variable. Correct the program or SQL statement so that the length of the string does not exceed that maximum.

SQLIMSSTATE: 22001

-407 Key field *field_name* was not set for INSERT statement.

Explanation: The column name list for the INSERT statement omits the foreign key column *column_name* of its parent table.

When you insert a record in a table at a non-root level, you must specify values for all the virtual foreign key fields of the table.

System action: The statement cannot be processed.

Programmer response: Correct the INSERT statement to include the *column_name*.

SQLIMSSTATE: 23502

-408 The value is not compatible with the data type of column *column-name*.

Explanation: A statement failed required assignment rule checking. *name* is the name of the target of the assignment.

The data type that is to be assigned is incompatible with the declared data type of the assignment target. Both data types must be:

- Numeric or character
- Character
- Dates or character
- Times or character
- Timestamps or character

System action: The statement cannot be processed.

Programmer response: Check the SQL statement and the current definition for the object table or host variable, and ensure that the variable or constant that is assigned to the object has the proper data type.

SQLIMSSTATE: 42821

-413 Overflow or underflow condition occurred during a numeric data type conversion.

Explanation: During processing of the SQL statement, an overflow or underflow condition occurred during the conversion from one numeric data type to another. Numeric conversion is performed according to the standard rules of SQL.

System action: The statement cannot be processed. No data was retrieved, updated, or deleted.

Programmer response: Check the syntax of the SQL statement to determine the cause of the error. If the problem is data-dependent, you might need to examine the data that was processed at the time of the error.

SQLIMSSTATE: 22003

-420 The value of a string argument was not acceptable to a numeric field.

Explanation: A string argument did not conform to the requirements of a numeric field. For example, a character string value is passed but did not conform to the rules for forming an SQL integer or decimal constant.

System action: The statement cannot be processed.

Programmer response: Change the argument string value so that it conforms to the requirements of a numeric field.

SQLIMSSTATE: 22018

-490 The number *number* specified is invalid for the FETCH FIRST clause.

Explanation: The SQL statement contains a number (*number*) that is not valid in the context it was specified in. The number that is specified in the FETCH FIRST clause must be greater than zero.

System action: The SQL statement cannot be processed.

Programmer response: Change the value of *number* in the statement to a valid value.

SQLIMSSTATE: 428B7

-514 The cursor *cursor-name* is not in a prepared state.

Explanation: The application program tried to use the cursor specified by *cursor-name*, but the cursor is not in a prepared state. The cursor is associated with a statement that was either never prepared or was already closed.

System action: The statement cannot be processed.

Programmer response: Ensure that you prepare the statement that is named in the DECLARE CURSOR statement for *cursor-name* before you try to open the cursor.

Prepare the statement again after the cursor is closed.

SQLIMSSTATE: 26501

-516 The DESCRIBE statement does not specify a prepared statement.

Explanation: The application program tried to run a DESCRIBE statement, but the statement specified a statement that was not prepared.

System action: The statement cannot be processed.

Programmer response: Verify that the statement name specified in the DESCRIBE statement is a statement that has been prepared. Run the statement again.

SQLIMSSTATE: 26501

-517 The cursor is not used because the SELECT statement is not prepared.

Explanation: The cursor could not be used as specified because the prepared statement named in the declaration for the cursor is not a SELECT statement.

System action: The statement cannot be processed.

Programmer response: Verify that the statement name is specified correctly in the PREPARE statement and the DECLARE CURSOR statement for the cursor. Alternatively, correct the application program logic to ensure that only prepared SELECT statements are used in association with cursor declarations.

SQLIMSSTATE: 07005

-518 The EXECUTE statement does not identify a valid prepared statement.

Explanation: The statement that is identified in the EXECUTE statement was not prepared.

System action: The statement cannot be processed.

Programmer response: Ensure that you prepare the statement before EXECUTE. Also, ensure that the statement prepared statement is not a SELECT statement.

SQLIMSSTATE: 07003

-519 A cursor is open for SQL access to an IMS database.

Explanation: The application program attempted to prepare an SQL statement for IMS database access when a cursor is open for SQL access to an IMS database. Only one prepared statement at a time is allowed for database access and a statement cannot be prepared if a cursor is open for another statement.

System action: The statement cannot be processed. The cursor was not affected.

Programmer response: Correct the logic of the application program so that it does not attempt to PREPARE an SQL statement for IMS database access when there is already an open cursor for IMS database access.

SQLIMSSTATE: 24506

-530 The insert value of the foreign key *key-value* is invalid.

Explanation: An insert or update operation tried to store a value in the foreign key of the object segment; however, this value was not equal to some value of the parent key of the parent segment.

When a row is inserted into a dependent segment, the insert value of a foreign key must be equal to the value of the parent key of some row of the parent segment in the associated relationship.

System action: The INSERT statement cannot be processed.

Programmer response: Check the insert value of the foreign key first, and then compare it with each of the parent key values of the parent segment to determine the cause of the problem.

SQLIMSSTATE: 23503

-531 Cannot update foreign key. It is only used for referential integrity.

Explanation: The foreign key column is not allowed in the SET clause of the UPDATE statement. The foreign key column cannot be updated. It is only used for referential integrity.

System action: The UPDATE statement cannot be run. The table is unchanged.

Programmer response: Correct the UPDATE statement. Remove the foreign key from the SET clause of the UPDATE statement.

SQLIMSSTATE: 23504

-840 Number of items returned exceeds the maximum number of 750.

Explanation: The number of items returned in the SELECT list exceeds the allowable maximum of 750.

System action: The statement cannot be processed.

Programmer response: Determine whether all the information is needed. For example, the number of items that are returned by the SQL statement SELECT * FROM A, B, C is the sum of the number of columns in all three segments. Not all field data might be needed.

Rewrite the SQL statement so that only the necessary

items of information are returned, or break the SQL statement into two or more statements.

SQLIMSSTATE: 54004

-904 The IMS catalog is not enabled.

Explanation: The IMS catalog must be enabled before SQL statements can be run with IMS data.

System action: The SQL statement cannot be processed.

Programmer response: Contact your system administrator to enable the IMS catalog, and run the application again.

SQLIMSSTATE: 57013

-5001 The segment name *segment-name* is not valid or it cannot be found.

Explanation: The *segment name* specified in the SQL statement does not have a valid name or it cannot be found in the IMS catalog metadata.

System action: The SQL statement cannot be processed.

Programmer response: Correct the syntax and run the statement again.

SQLIMSSTATE:

42703

-8001 Search filters for a segment in a WHERE clause must be sequential.

Explanation: An illegal WHERE clause was specified. All search filters for a particular segment must be listed sequentially in the WHERE clause.

System action: The statement cannot be processed.

Programmer response: Correct the WHERE clause in the SQL statement, and run the statement again.

SQLIMSSTATE: 42201

-8002 The use of OR across segment boundaries for a segment is not allowed.

Explanation: An attempt was made in the WHERE clause to perform an OR operation across segment (table) boundaries. OR operations are allowed only on qualifications within the same segment.

System action: The statement cannot be processed.

Programmer response: Correct the WHERE clause in the SQL statement, and run the statement again.

SQLIMSSTATE: 42201

-8003 A general error occurred while parsing the SQL statement.

Explanation: A general parser error occurred while parsing the SQL statement.

System action: The statement cannot be processed.

Programmer response: Contact IBM Software Support.

SQLIMSSTATE: 42601

-8004 IMS returned the PCB status code *pcb_status_code*.

Explanation: IMS returned a PCB status code.

System action: The statement cannot be processed.

Programmer response: Check the PCB status code in "DL/I status code explanations" on page 119. Correct the error and resubmit the statement.

SQLIMSSTATE: 58030

-8005 IMS returned the AIB return code *aib_retcode* and the reason code *aib_rsncode*.

Explanation: IMS returned an AIB error with a return code *aib_retcode* and reason code *aib_rsncode*.

System action: The statement cannot be processed.

Programmer response: Check the AIB return and reason code in "AIB return and reason codes" on page 258. Correct the error and resubmit the statement.

SQLIMSSTATE: 58030

-8006 Aggregation, function, and expression are not supported.

Explanation: The SQL statement contains an aggregation, function, expression, or user-defined function. They are not supported.

System action: The SQL statement cannot be processed.

Programmer response: Modify the SQL statement to remove the user-defined functions.

SQLIMSSTATE: 56074

-8007 The DISTINCT and ALL keywords are not supported.

Explanation: The SQL statement contains a DISTINCT or ALL keyword. These keywords are not supported.

System action: The SQL statement cannot be processed.

Programmer response: Modify the SQL statement to remove the keyword.

SQLIMSSTATE: 56075

-8008 **The secondary field *column_name* can only be used in a search field.**

Explanation: *column_name* is a secondary field. It can be used only as a search field in the WHERE clause of the SQL statement. It cannot be listed in SELECT column list nor ORDER BY clause in the SELECT statement. It cannot be used in the SET clause of the UPDATE statement, nor in the insert column list in the INSERT statement.

System action: The statement cannot be processed.

Programmer response: Correct the SQL statement. Ensure that the secondary field is specified only in the WHERE clause of the SQL statement.

SQLIMSSTATE: 58030

-8009 **A DELETE or UPDATE call tried to modify a key field in the segment.**

Explanation: You cannot update a key field column using the UPDATE statement. Modifying a key field in an IMS segment is not allowed. IMS returned a status code DA.

System action: The statement cannot be processed.

Programmer response: Correct the SQL statement. Remove the key field column from the SET clause of an UPDATE statement.

SQLIMSSTATE: 58030

-8010 **It is invalid to specify multiple PCBs in the same SQL query.**

Explanation: Multiple segments that are defined in the FROM clause of an SQL statement must belong to same PCB.

System action: The statement cannot be processed.

Programmer response: Update the FROM clause in SQL statement to add segments from same PCB and run the statement again.

SQLIMSSTATE: 23600

-8011 **Segments on different hierarchical paths cannot be joined.**

Explanation: The segments that are specified in the query cannot be joined. They are not along the same hierarchic path in the database.

System action: The statement cannot be processed.

Programmer response: Examine the SQL statement to ensure that only the segments on the same hierarchical path are specified.

SQLIMSSTATE: 23601

-8012 **Field *field_name* extends beyond the length of the segment *segment_name*.**

Explanation: For variable-length segments, the LL value that is specified in the INSERT or UPDATE statement must be large enough to hold the specified fields. The message is issued if any of the specified fields extends beyond the specified segment length.

System action: The statement cannot be processed.

Programmer response: Review your SQL statement to ensure that the LL value that is specified can hold the specified fields.

SQLIMSSTATE: 23602

-8013 **The number of fields or segments in the statement is over the maximum of 200.**

Explanation: The number of fields or segments that are specified in the SQL statement is larger than the maximum number of fields and segments that can be parsed and processed by IMS. IMS supports up to 200 fields or segments in a SQL statement.

System action: The statement cannot be processed.

Programmer response: Correct the SQL statement in the application program. Check the number of fields or segments that are specified in the SQL statement and make sure that it does not exceed the maximum of 200.

SQLIMSSTATE: 23603

-8014 **z/OS XML parser API returned code return code and the reason code *reason code*.**

Explanation: The z/OS XML parser API could not parse the XML and returned an error with a return code and reason code.

System action: The statement cannot be processed.

Programmer response: Check the *z/OS XML System Services User's Guide and Reference* for the return and reason code. Correct the error and resubmit the statement.

SQLIMSSTATE: 23604

-8015 **The field *field_name* is already in the ORDER BY list.**

Explanation: Each field name in the ORDER BY clause in the SELECT statement can appear only once. Duplicate field names are not allowed.

System action: The statement cannot be processed.

Programmer response: Correct the SQL statement to include correct field names in the ORDER BY clause.

SQLIMSSTATE: 23605

SQLIMSSTATE values and common error codes

IMS produces SQLIMSSTATE values when it works as an application server or requester.

The SQLIMSSTATE values are based on the SQLSTATE specifications contained in the standards: ISO/IEC 9075:1992, Database Language SQL and ANSI X3.135-1992 Database Language SQL.

SQLIMSSTATE values are returned to the application in the last five bytes of the SQLIMSCA. Each five-character value is a return code that indicates the outcome of the most recently executed SQL statement.

SQLIMSSTATE values are designed so that application programs can test for specific errors or classes of errors. The first character of an SQLIMSSTATE value indicates whether the SQL statement was executed successfully or unsuccessfully (equal to or not equal to zero, respectively).

SQLIMSSTATE values are comprised of a two-character class code value, followed by a three-character subclass code value. Class code values represent classes of successful and unsuccessful execution conditions. An application might define classes beginning with the characters '7' through '9' or 'I' through 'Z' and subclasses for any class beginning with the characters 'I' through 'Z'.

The following table identifies the SQLIMSSTATE class codes. Subsequent tables describe the subcodes for each class code.

Table 89. SQLIMSSTATE Class Codes

Class code	Meaning
01	Warning
07	Dynamic SQL Error
22	Data Exception
23	Constraint Violation
24	Invalid Cursor State
26	Invalid SQL Statement Identifier
42	Syntax Error or Access Rule Violation
54	SQL or Product Limit Exceeded
56	Miscellaneous SQL or Product Error
57	Resource Not Available or Operator Intervention
58	System Error

Table 90. SQLIMSSTATE values

SQLIMSSTATE value	Meaning
01004	The value of a string was truncated when assigned to another string data type with a shorter length.
07001	The number of variables is not correct for the number of parameter markers.
07003	The statement identified in the EXECUTE statement is a select-statement, or is not in a prepared state.

Table 90. SQLIMSSTATE values (continued)

SQLIMSSTATE value	Meaning
07005	The statement name of the cursor identifies a prepared statement that cannot be associated with a cursor.
22001	Character data, right truncation occurred; for example, an update or insert value is a string that is too long for the column, or a datetime value cannot be assigned to a variable, because it is too small.
22002	A null value, or the absence of an indicator parameter was detected; for example, the null value cannot be assigned to a variable, because no indicator variable is specified.
22003	A numeric value is out of range.
22018	An argument to a numeric field cannot be a string value.
23502	An insert or update value is null, but the column cannot contain null values.
23503	The insert or update value of a foreign key is invalid.
23504	A foreign key cannot be updated.
23600	Specification of multiple PCBs in the same SQL query is invalid.
23601	Segments on different hierarchical paths cannot be joined.
23602	The segment length exceeds the specified length.
23603	The number of fields or segments in the statement is over the maximum.
23604	z/OS XML parser API returned an error.
23605	Duplicate field names are invalid.
23609	The column is not of a valid data type for use in the function.
23610	The function does not support the specified data type.
23611	A field value did not conform to the format of the field data type.
23612	ORDER BY with an aggregate field is not supported.
23613	The field cannot be updated because it is overlapped by another field with a different data type.
23614	The specified field is not valid or was not found.
24501	The identified cursor is not open.
24502	The cursor identified in an OPEN statement is already open.
24506	The statement identified in the PREPARE is the statement of an open cursor.
26501	The statement identified does not exist.
42000	The identified field is not a sensitive field.
42201	Search filters for a segment in a WHERE clause must be sequential.
42601	A character, token, or clause is invalid or missing.
42602	A character that is invalid in a name has been detected.
42604	An invalid numeric or string constant has been detected.
42605	The number of arguments specified for a function is invalid.

Table 90. SQLIMSSTATE values (continued)

SQLIMSSTATE value	Meaning
42606	An invalid hexadecimal constant has been detected.
42612	The statement string is an SQL statement that is not acceptable in the context in which it is presented.
42613	Clauses are mutually exclusive.
42614	A duplicate keyword or clause is invalid.
42615	An invalid internal destination was detected.
42622	A name or label is too long.
42702	A column reference is ambiguous, because of duplicate names.
42703	An undefined column or parameter name was detected.
42704	A named object is not valid or was not found.
42707	A column name in ORDER BY does not identify a column of the result table.
42711	A duplicate column name was detected in the object definition or ALTER TABLE statement.
42713	A duplicate object was detected in a list or is the same as an existing object.
42803	A column reference in the identified clause is invalid
42804	The result expressions in a CASE expression are not compatible.
42806	A value cannot be assigned to a variable, because the data types are not compatible.
42810	A base table is not identified in a FOREIGN KEY clause.
42811	The number of columns specified is not the same as the number of columns in the SELECT clause.
42815	The data type, length, scale, value, or CCSID is invalid.
42821	A data type for an assignment to a column or variable is not compatible with the data type.
42889	The table already has a primary key.
42895	For static SQL, an input variable cannot be used, because its data type is not compatible with the parameter of a procedure or user-defined function.
428B7	A number specified in an SQL statement is out of the valid range.
54001	The statement is too long or too complex.
54002	A string constant is too long.
54004	The statement has too many table names or too many items in a SELECT or INSERT list.
54025	The table description exceeds the maximum size of the object descriptor.
54035	An internal object limit exceeded.
56074	Aggregation, function, and expression are not supported.
56075	The DISTINCT and ALL keywords are not supported.

Table 90. SQLIMSSTATE values (continued)

SQLIMSSTATE value	Meaning
57001	The table is unavailable, because it does not have a primary index.
57006	The object cannot be created, because a DROP or CREATE is pending.
57013	A non-database resource is not available. This will affect the successful execution of subsequent statements.
58030	IMS encountered an error and returned a PCB status code or an AIB return code and a reason code.

Chapter 18. Transport Manager Subsystem interface function and return codes

The Transport Manager Subsystem (TMS) interface issues function and return codes.

These codes include the following:

IDENTIFY function codes

The Transport Manager Subsystem (TMS) IDENTIFY function issues return codes about its status.

Return code (hex)
Function and description

0 IDENTIFY initiated. Completion is indicated by a status exit with "identify_complete".

4 The entity name is currently in use or a reserved name was used.

8 Resource failure

Reason code (hex)
Description

4 Storage shortage

8 VTAM storage shortage

C VTAM APPLID not available

10 VTAM not available

14 The TMS instance specified by TMSNAME (or defaulted) is not available.

18 Failure during activation

1C Abnormal termination occurred during IDENTIFY processing.

20 MVS RESMGR failure. Nonzero return code was passed back from the MVS RESMGR macro.

C Environment error

Reason code (hex)
Description

4 User not key 7 or supervisor state

8 TMS code not accessible or wrong level. The Transport Manager code cannot be loaded or is at the wrong level.

C A VTAM SETLOGON request failed.

10 Link to ELXUIID0 failed. An MVS LINK macro (to module ELXUIIDC) failed.

10 One of two situations occurred:

- Unusual VTAM OPEN failure
- OSAM Coupling Facility Structure Name Error

Unusual VTAM OPEN failure

The value from the ACB error field is in ACBERFLG. Some of these failures are caused by VTAM definition errors or operational errors.

Reason code (hex)
Description

nn Refer to VTAM ACBERFLG values

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The decimal value of reason code *nn* can be found as ACBERFLG in the ACB DSECT (IFGACB). Refer to the *z/OS Communications Server: SNA Programming* (SC31-8829) for the meaning of ACBERFLG.

OSAM Coupling Facility Structure Name Error
The job or subsystem receiving this error did not specify (defaults to blanks) or incorrectly specified the OSAM coupling facility structure name. Check your CFOSAM= definition against one or both of the following:
- The coupling facility policy definition
- The structure name being used by other subsystems in this data sharing environment

For more information about the CFOSAM= parameter of CFNAMES control statement for member DFSVSMxx, see the IMS system definition information; you can also find information in this manual for defining coupling facility structure names for sysplex data sharing.

14 At least one parameter value is invalid.

Reason code (hex)	Description
4	ASCTOK is invalid
8	TMSNAME is invalid. Only one name per ASCTOK is allowed.

Related reference:

z/OS: ACB (IFGACB) format

ALLOCATE function codes

The Transport Manager Subsystem (TMS) ALLOCATE function issues return codes about its status.

Return code	Function and description
0	Normal completion. Normal completion, conversation request is proceeding. A status exit routine is driven to indicate completion of the request.
8	Resource failure. **Reason code** **Description** **4** Storage shortage **12** CTOK shortage
16	TMS address space unavailable, this function cannot be initialized. A status exit routine is driven indicating this fact.
20	Invalid parameter. At least one parameter value is invalid. **Reason code** **Description** **0** IDTOKEN is invalid **4** BUFFER is invalid

ACCEPT function codes

The Transaction Manager Subsystem (TMS) ACCEPT function issues return codes about its status.

Reason code	Function and description
0	Accept initiated. Accept initiated. The conversation is operational or has failed through the status exit routine with “accept_complete” reason code.
16	TMS was no longer available. A status exit routine is driven indicating this fact.
20	Invalid parameter.

Reason code	Description
0	IDTOK was invalid
4	BUFFER specification was invalid
8	CTOK was invalid
12	Conversation state invalid for ACCEPT function

SEND function codes

The Transport Manager Subsystem (TMS) SEND function issues return codes about its status.

Reason code	Function and description
0	Data accepted for transport.
4	Filter routine filtered all data, nothing was sent.
8	Temporarily unable to transport, all buffers are busy. ECB was specified.
12	All send buffers are busy, unable to send, no ECB was provided.
16	The conversation is no longer available. A status exit routine is driven indicating this fact.
20	Invalid input parameter.

Reason code	Description
0	CTOKEN was invalid
4	Length or PDR length was invalid
8	`MF=R` invalid for parameter list

DEALLOCATE function codes

The Transport Manager Subsystem (TMS) DEALLOCATE function issues return codes about its status.

Reason code	Function and description
0	DEALLOCATE initiated. If the deallocate is in response to a status exit routine `allocate_request` or a status exit `conversation_deallocated`, you can consider deallocation complete.
0A	DEALLOCATE as abnormal.
16	TMS wais no longer available. A status exit routine was driven indicating this fact.
20	Invalid request.

You had already issued DEALLOCATE or the conversation never completed allocation.

FORGET function codes

The Transport Manager Subsystem (TMS) FORGET function issues return codes about its status.

Reason code	Function and description
0	FORGET completed
4	At least one conversation was not completely deallocated
8	FORGET already in progress or invalid IDTOKEN
12	An MVS LINK macro (to module ELXUIFOC) failed

QUERY function codes

The Transport Manager Subsystem (TMS) QUERY function issues return codes about its status.

Reason code	Function and description
0	QUERY initiated. The user status exit routine was driven.
16	TMS address space was unavailable, this function cannot be initiated

Transport Manager STATUS exit return codes

The Transport Manager Subsystem (TMS) STATUS exit return codes issues return codes about its status.

Value	Exit type
00000000	ACCEPT completed
00000001	ALLOCATE completed
00000002	Conversation deallocated
00000003	Allocation request
00000004	Transport manager address space gone
00000005	VTAM gone
00000006	QUERY reply
00000007	IDENTIFY completed

Reason code	Function and description
0	Good completion of ALLOC, ACCEPT, DEALLOCATE, IDENTIFY function
1	GETMAIN failed
2	GETMAIN VTAM CNOS failure
3	Exceed session limits or token capacity
4	VTAM ALLOC failure
5	Buffer shortage
6	Multi-abend during SEND
7	VTAM SEND failure

8 Abend during RECEIVE
9 DEALLOCATE normal received
10 DEALLOCATE abnormal
11 VTAM RECEIVE failure
12 Logic error: unable to find LUM for conversation
13 User error: invalid length on MF(R) SEND
14 IDENTIFY failed (SETLOGON failed)
15 ALLOCATE failed, name not found
16 ALLOCATE failed, timeout expired
17 ALLOCATE failed, DEALLOCATE issued at other end
18 ALLOCATE failed due to TMS termination failure
19 Conversation deallocated due to `VTAM GONE` state

Chapter 19. CICS DL/I user interface block return codes

After issuing any DL/I call, CICS online programs must check the return code in the UIB before checking the DL/I status code.

If the value in UIBRCODE is not null, the contents of the PCB status code are not meaningful. For more information about defining and addressing a UIB, see Specifying the UIB (CICS online programs only) (Application Programming).

The UIBRCODE contains two bytes, UIBFCTR and UIBDLTR. You should first check the contents of UIBFCTR; the contents of UIBDLTR are meaningful only if UIBFCTR indicates a NOTOPEN or INVREQ condition. Table 91, Table 92, and Table 93 show the return codes from the CICS-DL/I interface.

Table 91. Return codes in UIBFCTR

Condition	ASM	COBOL	PL/I
NORESP (normal response)	X'00'	LOW-VALUES	00000 000
NOTOPEN (not open)	X'0C'	X'0C'	00001 100
INVREQ (invalid request)	X'08'	X'08'	00001 000

Table 92. Return codes in UIBDLTR if UIBFCTR='0C' (NOTOPEN)

Condition	ASM	COBOL	PL/I
Database not open	X'00'	LOW-VALUES	00000 000
Intent scheduling conflict	X'02'	X'02'	00000 010

Table 93. Return codes in UIBDLTR if UIBFCTR='08' (INVREQ)

Condition	ASM	COBOL	PL/I
Invalid argument passed to DL/I	X'00'	LOW-VALUES	00000 000
PSBNF (PSB not found)	X'01'	X'01'	00000 001
PSBSCH (PSB already scheduled)	X'03'	X'03'	00000 011
NOTDONE (request not run)	X'04'	12-4-9	00000 100
PSBFAIL (PSB initialization failed)	X'05'	X'05'	00000 101
TERMNS (termination not successful)	X'07'	X'07'	00000 111
FUNCNS (function unscheduled)	X'08'	X'08'	00001 000
INVPSB (invalid PSB)	X'10'	X'10'	00010 000
DLINA (DL/I not active)	X'FF'	X'FF'	11111 111

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If these codes do not appear to be due to programming errors, they might be caused by not-open or invalid-request conditions.

Not-Open conditions

A NOTOPEN condition is indicated if UIBFCTR contains X'0C'.

UIBDLTR='00'

Explanation: This is returned on a database call if the database was stopped after the PSB is scheduled.

Source: CICS DL/I codes

UIBDLTR='02'

Explanation: This indicates that an intent-scheduling conflict exists. This condition does not occur if you are using IMS program isolation.

Source: CICS DL/I codes

Invalid request conditions

An invalid request is indicated by UIBFCTR=X'08'

UIBDLTR='00'(INVARG)

Explanation: An invalid argument was passed to DL/I indicating one of these problems:
- Count argument exists, but count is too high.
- I/O area is missing.
- Received data length is greater than 65520.
- Call type is invalid.

Source: CICS DL/I codes

UIBDLTR='01'(PSBNF)

Explanation: This is returned after a scheduling call; it indicates that the PSB to be scheduled was not defined in the PSB directory (PDIR).

Source: CICS DL/I codes

UIBDLTR='03'(PSBSCH)

Explanation: This PSB has already been scheduled.

Source: CICS DL/I codes

UIBDLTR='04'(NOTDONE)

Explanation: The XDLIPRE exit routine indicates that a DL/I request should not be issued.

Source: CICS DL/I codes

UIBDLTR='05'(PSBFAIL)

Explanation: The PSB could not be scheduled, possibly because:
- The database has been stopped.
- The master terminal operator has entered a `DUMPDB` command. This command sets the read-only flag in the DMB directory (DDIR). You will not be able to schedule any PSBs with update intent.
- The master terminal operator has entered a `RECOVERDB` command. This command sets the do-not-schedule-flag in the DDIR. You will not be able to schedule any PSB that references the database.
- The END statement in the PDIR generation stream did not specify the DFSIDIR0 operand.

The trace entry, which contains the PCB status, gives you the reason for the scheduling failure.

Source: CICS DL/I codes

UIBDLTR='07'(TERMNS)

Explanation: A terminate request was issued, but no PSB was currently scheduled. It could indicate that the PSB has already taken place because of a terminate request or CICS sync point.

Source: CICS DL/I codes

UIBDLTR='08'(FUNCNS)

Explanation: A database call was issued when the PSB was not scheduled.

Source: CICS DL/I codes

UIBDLTR='10'(INVPSB)

Explanation: SYSSERVE IOPCB specified for local DL/I.

Source: CICS DL/I codes

UIBDLTR='FF'(DLINA)

Explanation: DLI=NO has been specified in the system initialization table (SIT).

Source: CICS DL/I codes

Chapter 20. AIB return and reason codes set by IMS

When certain events occur during DL/I processing, the IMS system issues return and reason codes. These codes are returned in the application interface block (AIB) when you use the AIB interface.

Important: X'000000F0' is a unique AIB return code assigned to the IMS Queue Control Facility manager message requeuer processor (IQCQMRQ0). It is set in the AIBRETRN field of the AIB by IQCQMRQ0 when an error is detected while performing an IMS Queue Control Facility function. For information about AIB reason codes that are associated with AIB return code X'000000F0', see the AIB reason codes information.

Related reference:

IMS Queue Control Facility AIB reason codes

About AIB return and reason codes

DL/I operations report problems by issuing return and reason codes. These codes are returned in an application interface block (AIB) as *AIB return and reason codes*. The AIBERRXT of the AIB block might contain additional information about the problem.

Important: X'000000F0' is a unique AIB return code assigned to the IMS Queue Control Facility manager message requeuer processor (IQCQMRQ0). It is set in the AIBRETRN field of the AIB by IQCQMRQ0 when an error is detected while performing an IMS Queue Control Facility function. For information about AIB reason codes that are associated with AIB return code X'000000F0', see the AIB reason codes information under IMS Queue Control Facility.

The following tables briefly explain each return and reason code, and list the calls for which these codes can be received.

- Table 94 for AIB return codes
- Table 95 on page 244 for database calls
- Table 96 on page 248 for message calls
- Table 97 on page 253 for system service calls

If you receive the X'0900' return code, you must look at the status code in the program communication block (PCB). Also check the status code if you do not receive X'0900' but have a PCB associated with the call. (For detailed explanations of the status codes, see Chapter 9, “DL/I status codes,” on page 105.)

For expanded descriptions of the return and reason codes, see “AIB return and reason codes” on page 258. For information about AIB reason codes that are associated with AIB return code X'000000F0', see the AIB reason codes information under IMS Queue Control Facility.

Table 94. AIB return codes

Return code (hex)	Description
0000	Call was completed successfully.
0004	Call was completed with information.
0008	Call was completed with warning.

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Table 94. AIB return codes (continued)

Return code (hex)	Description
00F0	An error was detected by the Queue Control Facility (QCF) routines.
0100	Call was completed with exception.
0104	Call incomplete -- application error.
0108	Call incomplete -- system error.
010C	Call incomplete -- unavailable data.
0110	Call incomplete -- authorization error.
0900	PCB status code analysis required.

Table 95. Codes for database calls

Return code (hex)	Reason code (hex)	Database calls	Description
0000	0000	CLSE (GSAM) DEQ GU, GHU GN, GHN GNP, GHNP GUR DLET, REPL ISRT (LOAD) ISRT (ADD) FLD POS OPEN (GSAM) RLSE	Call was completed successfully. Proceed.
0004	0004		Segment returned to I/O area. This segment is the last.
0004	0014		No more messages are available. No segment is returned.
0004	0018		No more messages are available. No segment is returned.
0004	0048		AO application waiting for AOI message was posted due to IMS system shutdown. No message segment war returned.
0004	004C		AO application waiting for AOI message was posted due to /PSTOP region command. No message segment was returned.
0100	000C		The output area was not large enough to contain all the data. Only partial data was returned.
0104	0204	CIMS TERM	No value specified for IMS DB ID in AIBRSNM2 field.
0104	0208	CLSE (GSAM) DEQ GU, GHU GN, GHN GNP, GHNP DLET, REPL ISRT (LOAD) ISRT (ADD) FLD POS OPEN (GSAM) RLSE	An invalid PCB name was passed in the AIB.

Table 95. Codes for database calls (continued)

Return code (hex)	Reason code (hex)	Database calls	Description
0104	020C	CLSE (GSAM) DEQ GU, GHU GN, GHN GNP, GHNP DLET, REPL ISRT (LOAD) ISRT (ADD) FLD POS OPEN (GSAM) RLSE	No PSB scheduled. Call before APSB.
0104	0210		The output area length in the AIB was invalid. No data is returned.
0104	0218	CIMS INIT CIMS TERM	Invalid subfunction code.
0104	021C		No AOI token specified in AIB on initial GMSG call.
0104	0220		GMSG call with WAITAOI specified did not specify an AOI token.
0104	0224		AOI token specified on GMSG call contained one or more invalid characters. AOI token might contain characters A-Z, O-9, @, #, and $.
0104	0228	CIMS INIT CIMS TERM CIMS TALL	Invalid AIBLEN must be a minimum of 264 bytes.
0104	0240	CLSE (GSAM) DEQ GU, GHU GN, GHN GNP, GHNP DLET, REPL ISRT (LOAD) ISRT (ADD) FLD POS OPEN (GSAM) RLSE	An invalid AIBRSA1 parameter was passed in the AIB.
0104	0244	CLSE (GSAM) DEQ GU, GHU GN, GHN GNP, GHNP DLET, REPL ISRT (LOAD) ISRT (ADD) FLD POS OPEN (GSAM) RLSE	An invalid AIBRSA3 parameter was passed in the AIB.
0104	0248	GUR	Incorrect PCB was specified for the GUR call.
0104	0404		Invalid function code.
0104	0440		Invalid call from non-CPI-C application.
0104	0444		Invalid from the specific environment.
0104	0448		Invalid call from CPI-C application.
0104	044C		Invalid call from DEP region type.
0104	0450		No messages to retrieve. AO user exit DFSAOE00 does not exist.

Table 95. Codes for database calls (continued)

Return code (hex)	Reason code (hex)	Database calls	Description
0104	0464		Call issued before a PSB was scheduled.
0104	048C		APSB for PSB with no DPSB.
0104	0490		DPSB with no CPI-RR commit.
0104	0494		PSB was not allocated.
0104	054C		Invalid output destination was found.
0104	0550		DEALLOC_ABND issued for destination.
0104	060C		Invalid AUTH class name specified.
0104	0610	CLSE (GSAM) DEQ GU, GHU GN, GHN GNP, GHNP DLET, REPL ISRT (LOAD) ISRT (ADD) FLD POS OPEN (GSAM)	Required I/O area address parameter missing. No data is returned.
0104	0618		I/O area length is longer than the PSB work area defined by the IOASIZE parameter on PSBGEN.
0104	0620		ZZ field of the I/O area is not zero.
0104	0624	GU, GHU GN, GHN GNP, GHNP REPL ISRT (ADD)	The I/O area length that is specified in the AIB= (AIBOALEN field) is larger than the size that is specified on the IOAREALEN parameter.
0104	0754		The segment length is less than 5.
0104	0810		Required option list parameter is missing.
0104	0920		Queue Space Notification Exit (DFSQSPC0) determined that the application has reached its limit of data that can be inserted to the message queue.
0104	0924	ISRT	The number of inserted segments is exceeded.
0104	1004		Command as entered not allowed from an application.
0104	1008		Invalid command verb specified in I/O area.
0104	1010		ICMD call was not issued before RCMD call.
0104	1110	APSB	An Allocate PSB (APSB) call was issued without a preceding CIMS INIT or CIMS CONNECT call.
0108	0004		Error encountered during PC router processing.
0108	0010	CIMS INIT	Unable to obtain private storage. GETMAIN failure trying to obtain required DRA storage.
0108	0014		Unable to obtain global storage.
0108	0018		Internal latch error. For GMSG call, no segment is returned.
0108	001C	CIMS INIT	ATTACH of the DRA TCB failed.
0108	0020	CIMS INIT	Load of required DRA module failed. The name of the module is returned in AIBSNM2. *Or*: Load of DRA startup table (DFScccc0) failed. The table name is returned in AIBRSNM2 (only when AIBRSNM2=DBCTLID

Table 95. Codes for database calls (continued)

Return code (hex)	Reason code (hex)	Database calls	Description
0108	0024	CIMS INIT	OPEN of DRA RELIB failed.
0108	002C	CIMS INIT	MVS Name/Token service failed.
0108	0030		Spool API data set CLOSE error.
0108	0034		Spool API data set deallocation (DYNALLOC) error.
0108	0038		Spool API data set allocation (DYNALLOC) error.
0108	003C		Spool API data set OPEN error.
0108	0040		Spool API WRITE to data set error.
0108	0044		Spool API create output descriptor (OUTADD) error.
0108	0048		Spool API delete output descriptor (OUTDEL) error.
0108	0060		DFSLUMIF failure.
0108	0064		DFSYFND failure.
0108	0068		DFSYLUM failure.
0108	0080		RACINIT failure - LU 6.2 originated transaction.
0108	020C		Invalid AWE encountered during command processing.
0108	0214	CIMS INIT	Required DFSPRP parameters not specified correctly.
0108	0220		PST 62 extension was not found.
0108	0224		Security UTOKEN not found.
0108	0240		Internal error. PST posted with invalid post code. No segment returned.
0108	0244		PST posted during abnormal terminate thread processing. No segment returned.
0108	0304		PSB was not found.
0108	0308		PSB authorization failure.
0108	030C		PSB permanently bad.
0108	0310		Fast Path DB stopped/locked.
0108	0314		PSB already scheduled.
0108	0318		PSB stopped/locked.
0108	031C		I/O error reading PSB/DMB.
0108	0320		PSBW/DMB/PSB pool too small.
0108	0324		Invalid option 'L' or 'LS'.
0108	0328		Fast Path buffer fix error.
0108	032C		Invalid processing intent.
0108	0330		IRLM failure occurred and the catalog PCB cannot be attached.
0108	0334		IMS catalog PSB is involved in OLC.
0108	0338	GUR	Active resource are not found in the catalog.
0108	033C	GUR	Resource is not defined on this IMS.
0108	0340	GUR	Batch region cannot find the resource in the catalog.
0108	0342	GUR	The GUR call was unable to build a valid XML response document.
0108	0344	GUR	Resource does not exist in the catalog.
0108	0540	CIMS INIT CIMS TERM	No active communication with IMS DB.

Table 95. Codes for database calls (continued)

Return code (hex)	Reason code (hex)	Database calls	Description
0108	0544	CIMS INIT	RRS/MVS is not active. The CIMS INIT call cannot be issued. This command only applies when AIBRSNM2=DBCTLID.
0110	000C		Resource specified was not authorized.
0110	0020		Program not authorized to RACF.
0110	0024		User ID not authorized to RACF.
0110	0028		Program not authorized to issue the command.
0110	002C		User ID not authorized to issue the command.
0110	0030		DFSCCMD0 indicated program was not authorized to issue command.
0110	0034		DFSCCMD0 indicated user ID was not authorized to issue command.
0110	0038		ICMD call not authorized from any program (AOIS=N).
0110	003C		RACF not available for authorization check (AOIS=A|R).
0110	0040		DFSCCMD0 not available for authorization check (AOIS=A|C).
0110	0044		Transaction not authorized to RACF.
0110	0048		Transaction not authorized to issue the command.
0110	004C		DFSCCMD0 indicated transaction was not authorized to issue command.
0110	0050		A CPI-C driven application issued an APSB call and the user ID is not authorized to RACF.
0110	0054		Command not authorized to RACF.
0110	0058		Command not authorized to issue the transaction.
0110	005C		DFSCCMD0 indicated that the command was not authorized to be issued by the transaction.
0110	0070	CIMS INIT	The DRA execution library is not authorized.
0900		CLSE (GSAM) DEQ GU, GHU GN, GHN GNP, GHNP DLET, REPL ISRT (LOAD) ISRT (ADD) FLD POS OPEN (GSAM) RLSE	Reason code unmodified on 0900. PCB status code analysis required.

Table 96. Codes for message calls

Return code (hex)	Reason code (hex)	Message calls	Description
0000	0000	AUTH GU GN ICAL ISRT CHNG CMD GCMD PURG SETO	Call was completed successfully. Proceed.

Table 96. Codes for message calls (continued)

Return code (hex)	Reason code (hex)	Message calls	Description
0004	0004		Segment returned to I/O area. This segment is the last.
0004	0014		No more messages are available. No segment is returned.
0004	0018		No more messages are available. No segment is returned.
0004	0048		AO application waiting for AOI message was posted due to IMS system shutdown. No message segment returned.
0004	004C		AO application waiting for AOI message was posted due to /PSTOP region command. No message segment is returned.
00F0	Any	GU GN ISRT CMD GCMD PURG	Invalid call using the MRQPSB block or error detected by the IBM IMS Queue Control Facility for z/OS routines.
0100	000C		The output area was not large enough to contain all the data. Only partial data was returned.
0100	0100	ICAL	An error message is returned in the output response data.
0100	0104	ICAL	The request timed out.
0100	0108	ICAL	The request message is rejected by the external application.
0100	010C	ICAL	An IMS command was issued to cancel the ICAL call.
0100	0110	ICAL	A synchronous program switch request was rejected by IMS or failed during processing.
0104	0208	AUTH GU GN ISRT CHNG CMD GCMD PURG SETO	An invalid PCB name was passed in the AIB.
0104	020C	AUTH GU GN ISRT CHNG CMD GCMD PURG SETO	No PSB scheduled. Call before APSB.
0104	0210	AUTH	The output area length in the AIB was invalid. No data is returned.
		ICAL	The input area length in the AIB is set to zero.
0104	0214	ICAL	The output area length in the AIB is set to zero.
0104	0218		Subfunction unknown or invalid.
0104	021C		No AOI token specified in AIB on initial GMSG call.

Table 96. Codes for message calls (continued)

Return code (hex)	Reason code (hex)	Message calls	Description
0104	0220		GMSG call with WAITAOI specified did not specify an AOI token.
0104	0224		AOI token specified on GMSG call contained one or more invalid characters. AOI token might contain characters A-Z, 0-9, @, #, and $.
0104	0404		Invalid function code.
0104	0440		Invalid call.
0104	0444		Invalid from the specific environment.
0104	0448	SETO	Invalid call from CPI-C application.
0104	044C	SETO	Invalid call from DEP region type.
0104	0450		No messages to retrieve. AO user exit DFSAOE00 does not exist.
0104	048C		APSB for PSB with no DPSB.
0104	0490		DPSB with no CPI-RR commit.
0104	0494		PSB not allocated.
0104	054C	SETO	Invalid output destination.
0104	0550	ISRT SETO	DEALLOC_ABND issued for destination.
0104	0560	CHNG ISRT	An error was encountered when attempting to process a routing request from either the DFSCMPR0 or DFSMSCE0 user routing exit. A1 status code is set.
0104	0564	CHNG ISRT	Either the DFSCMPR0 or DFSMSCE0 user routing exit rejected the call with a A1 status code.
0104	0568	CHNG ISRT	The DFSMSCE0 user routing exit rejected the call with a 3303 abend. A1 status code is set.
0104	056C	CHNG ISRT	The DFSMSCE0 user routing exit rejected the call with a A4 status code.
0104	0570	CHNG ISRT	The DFSMSCE0 user routing exit rejected the call with a E1 status code.
0104	0574	CHNG ISRT	The DFSMSCE0 user routing exit rejected the call with a E2 status code.
0104	0578	CHNG ISRT	The DFSMSCE0 user exit rejected the call with a E3 status code.
0104	057C	CHNG ISRT	An error was encountered while processing a request from either the DFSCMPR0 or DFSMSCE0 user routing exit to override an MSC direct routing request message. Error status QH or XF is set.
0104	060C	AUTH	Invalid AUTH class name specified.
0104	0610	AUTH GU GN ICAL ISRT CHNG CMD GCMD PURG SETO	Required I/O area address parameter is missing. For an ICAL call, the request input area address parameter is missing. No data is returned.
0104	0614	ICAL	The response output area address parameter is missing.

Table 96. Codes for message calls (continued)

Return code (hex)	Reason code (hex)	Message calls	Description
0104	0618		I/O area length is longer than the PSB work area defined by the IOASIZE parameter on PSBGEN.
0104	0620	AUTH	ZZ field of I/O area not zero.
0104	0754	ISRT SETO	The segment length is less than 5.
0104	0810	SETO	Required option list parameter is missing.
0104	0920	ISRT SETO	Queue Space Notification Exit (DFSQSPC0) determined the application has reached its limit of data that can be inserted to the message queue.
0104	1004		Command as entered not allowed from an application.
0104	1008		Invalid command verb specified in I/O area.
0104	1010		ICMD call was not issued before RCMD call.
0104	1020	ICAL	The OTMA descriptor name is not valid.
0104	1024	ICAL	The timeout value is not valid.
0108	0004		Error encountered during PC router processing.
0108	0010	ICAL ISRT CHNG SETO	Unable to obtain private storage.
0108	0014	GU CHNG SETO	Unable to obtain global storage.
0108	0018		Internal latch error. For GMSG call, no segment is returned.
0108	0030	PURG	Spool API data set CLOSE error.
0108	0034	PURG	Spool API data set deallocation (DYNALLOC) error.
0108	0038	ISRT	Spool API data set allocation (DYNALLOC) error.
0108	003C	ISRT	Spool API data set OPEN error.
0108	0040	ISRT	Spool API WRITE to data set error.
0108	0044	CHNG	Spool API create output descriptor (OUTADD) error.
0108	0048	CHNG	Spool API delete output descriptor (OUTDEL) error.
0108	0060	GU ISRT CHNG SETO	DFSLUMIF failure.
0108	0064	ISRT CHNG PURG	DFSYFND failure.
0108	0068		DFSYLUM failure.
0108	0080	AUTH	RACINIT failure - LU 6.2 originated transaction.
0108	020C		Invalid AWE encountered during command processing.
0108	0220	AUTH	PST 62 extension was not found.

Table 96. Codes for message calls (continued)

Return code (hex)	Reason code (hex)	Message calls	Description
0108	0224	AUTH	Security UTOKEN not found.
0108	0240		Internal error, PST posted with invalid post code. No segment returned.
0108	0244		PST posted during abnormal terminate thread processing. No segment returned.
0108	0304		PSB was not found.
0108	0308		PSB authorization failure.
0108	030C		PSB permanently bad.
0108	0310		Fast Path DB stopped/locked.
0108	0314		PSB already scheduled.
0108	0318		PSB stopped/locked.
0108	031C		I/O error reading PSB/DMB.
0108	0320		PSBW/DMB/PSB pool too small.
0108	0324		Invalid option 'L' or 'LS'.
0108	0328		Fast Path buffer fix error.
0108	032C		Invalid processing intent.
0108	056C		Sync point failure occurred. AIBERRXT contains SYNC return code.
0108	0580	ICAL	Unable to send the request message to the external application.
0108	0584	ICAL	Unable to process the response output message from the external application.
0108	0588	ICAL	IMS Connect cannot process the response of the ICAL call.
0108	058C	ICAL	IMS Connect cannot process the response of the ICAL call. However, some raw data is returned.
0110	000C	AUTH	Resource specified was not authorized.
0110	0020		Program not authorized to RACF.
0110	0024		The user ID was not authorized to RACF.
0110	0028		Program not authorized to issue the program.
0110	002C		The user ID was not authorized to issue the program.
0110	0030		DFSCCMD0 indicated that the program was not authorized to issue command.
0110	0034		DFSCCMD0 indicated that the user ID was not authorized to issue command.
0110	0038		ICMD call not authorized from any program (AOIS=N).
0110	003C		RACF not available for authorization check (AOIS=A|R).
0110	0040		DFSCCMD0 not available for authorization check (AOIS=A|C).
0110	0050		A CPI-C driven application issued an APSB call and the user ID is not authorized to RACF.
0110	0054		Command not authorized to RACF.
0110	0058		Command not authorized to be issued by the transaction.
0110	005C		DFSCCMD0 indicated that the command was not authorized to be issued by the transaction.

Table 96. Codes for message calls (continued)

Return code (hex)	Reason code (hex)	Message calls	Description
0900		AUTH GU GN ISRT CHNG CMD GCMD PURG SETO	Reason code unmodified on 0900. PCB status code analysis required.

Table 97. Codes from system service calls.

Return code (hex)	Reason code (hex)	System service calls	Description
0000	0000	APSB CHKP CIMS CONNECT DPSB GMSG ICMD INIT INQY LOG RCMD ROLB ROLS SETS SETU SNAP[2] STAT[3] SYNC XRST	Call was completed successfully. Proceed.
0004	0004	GMSG ICMD RCMD	Segment returned to I/O area. This segment is the last.
0004	0014	GMSG	No more messages are available. No segment is returned.
0004	0018	GMSG RCMD	No more segments are available. No segment is returned.
0004	0048	GMSG	AO application waiting for AOI message was posted due to IMS system shutdown. No message segment returned.
0004	004C	GMSG	AO application waiting for AOI message was posted due to /PSTOP region command. No message segment is returned.
0100	000C	GMSG ICMD INQY RCMD	The output area was not large enough to contain all the data. Only partial data was returned.
0100	0204	CIMS CONNECT	All connect requests were unsuccessful.
0100	0208	CIMS CONNECT	Mixed results. At least one request succeeded, and at least one request failed. Check request return, reason, and error extension codes for further information.
0104	0204	APSB DPSB	No value specified for IMS DB ID in AIBRSNM2 field.

Table 97. Codes from system service calls (continued).

Return code (hex)	Reason code (hex)	System service calls	Description
0104	0208	CHKP INIT INQY LOG ROLB ROLS SETS SETU SNAP[2] STAT[3] SYNC XRST	An invalid PCB name was passed in the AIB. (see note 4 on page 258).
0104	020C	CHKP GMSG ICMD INIT INQY LOG RCMD ROLB ROLS SETS SETU SNAP[2] STAT[3] SYNC XRST	No PSB scheduled. Call before APSB.
0104	0210	GMSG ICMD INQY LOG RCMD SETS SETU	The output area length in the AIB was invalid. No data is returned.
0104	0218	CIMS CONNECT GMSG INQY	Subfunction unknown or invalid.
0104	021C	GMSG	No AOI token specified in AIB on initial GMSG call.
0104	0220	GMSG	GMSG call with WAITAOI specified did not specify an AOI token.
0104	0224	GMSG	AOI token specified on GMSG call contained one or more invalid characters. AOI token might contain characters A-Z, 0-9, @, #, and $.
0104	0228	APSB DPSB	Invalid AIBLEN must be a minimum of 264 bytes.
0104	022C	APSB	MAXTHRD value reached. Cannot allocate a thread.
0104	0404	APSB CIMS CONNECT DPSB GMSG ICMD RCMD	Invalid function code was found.
0104	0440		Invalid call.
0104	0444		Invalid call from the specific environment occurred.
0104	0448	INQY	Invalid call from CPI-C application occurred.
0104	044C		Invalid call from DEP region type was found.
0104	0450	GMSG	No messages to retrieve. AO user exit DFSAOE00 does not exist.

Table 97. Codes from system service calls (continued).

Return code (hex)	Reason code (hex)	System service calls	Description
0104	048C	APSB	APSB for PSB with no DPSB.
0104	0490	APSB DPSB	DPSB with no CPI-RR commit.
0104	0494	DPSB	PSB was not allocated.
0104	0498	DPSB	DPSB call was issued before COMMIT. Forced backout.
0104	054C		Invalid output destination was found.
0104	0550		DEALLOC_ABND issued for destination.
0104	060C		Invalid AUTH class name specified.
0104	0610	CHKP GMSG ICMD INIT INQY LOG RCMD ROLB ROLS SETS SETU SNAP[2] STAT[3] SYNC XRST	Required I/O area address parameter missing. No data is returned.
0104	0618	ICMD	I/O area length is longer than the PSB work area defined by the IOASIZE parameter on PSBGEN.
0104	0620	INQY SETS SETU	A ZZ field of I/O area not zero.
0104	0754		The segment length is less than 5.
0104	0810		Required option list parameter is missing.
0104	0920		Queue Space Notification exit (DFSQSPC0) determined the application reached the limit of data that can be inserted to the message queue.
0104	0924	ISRT	The number of inserted segments is exceeded.
0104	1004	ICMD	Command as entered not allowed from an application.
0104	1008	ICMD	Invalid command verb specified in I/O area.
0104	1010	RCMD	ICMD call was not issued before RCMD call.
0104	1104	CIMS CONNECT	Invalid Alias name was supplied by caller.
0104	1108	CIMS CONNECT	Invalid CONNECT count was found.
0104	110C	CIMS CONNECT	CONNECT request list with no CONNECT count was found.
0104	1110	APSB	An Allocate PSB (APSB) call was issued without a preceding CIMS INIT or CIMS CONNECT call.
0108	0004	GMSG ICMD RCMD	Error encountered during PC router processing.
0108	0010	CIMS CONNECT GMSG ICMD RCMD	Unable to obtain private storage.
0108	0014	GMSG ICMD RCMD	Unable to obtain global storage.

Table 97. Codes from system service calls (continued).

Return code (hex)	Reason code (hex)	System service calls	Description
0108	0018	GMSG	Internal latch error. For GMSG call, no segment is returned.
0108	001C	APSB	ATTACH of the DRA TCB failed.
0108	0020	APSB CIMS CONNECT	The LOAD of the required DRA or ODBA module failed or startup table failed. Error extension contains the four characters that follow DFS in the module name.
0108	0024	APSB	OPEN of the DRA execution library failed.
0108	0028	APSB	Dynamic allocation of the DRA execution library failed.
0108	002C	CIMS CONNECT APSB	MVS Name/Token service failed. Return code from Name Token services is saved in AIBERRXT.
0108	0030		Spool API data set CLOSE error.
0108	0034		Spool API data set deallocation (DYNALLOC) error.
0108	0038		Spool API data set allocation (DYNALLOC) error.
0108	003C		Spool API data set OPEN error.
0108	0040		Spool API WRITE to data set error.
0108	0044		Spool API create output descriptor (OUTADD) error.
0108	0048		Spool API delete output descriptor (OUTDEL) error.
0108	0060	INQY	DFSLUMIF failure.
0108	0064	INQY	DFSYFND failure.
0108	0068	INQY	DFSYLUM failure.
0108	0080		RACINIT failure - LU 6.2 originated transaction.
0108	020C	ICMD	Invalid AWE encountered during command processing.
0108	0214	APSB CIMS CONNECT	The DRA startup table (DFScccc0) required parameters were not specified correctly. Invalid PRP parameter was found. Error extension contains further diagnostic information to determine the cause of the error.
0108	0220		PST 62 extension was not found.
0108	0224		Security UTOKEN not found.
0108	0240	GMSG	Internal error. PST posted with invalid post code. No segment returned.
0108	0244	GMSG	PST posted during abnormal terminate thread processing. No segment returned.
0108	0304	APSB	PSB was not found.
0108	0308	APSB	PSB authorization failure.
0108	030C	APSB	PSB permanently bad.
0108	0310	APSB	Fast Path DB stopped/locked.
0108	0314	APSB	PSB already scheduled.
0108	0318	APSB	PSB stopped/locked.
0108	031C	APSB	I/O error reading PSB/DMB.
0108	0320	APSB	PSBW/DMB/PSB pool too small.
0108	0324	APSB	Invalid option 'L' or 'LS'.
0108	0328	APSB	Fast Path buffer fix error.
0108	032C	APSB	Invalid processing intent.

Table 97. Codes from system service calls (continued).

Return code (hex)	Reason code (hex)	System service calls	Description
0108	0540	APSB CIMS CONNECT DPSB	No active communication with IMS DB.
0108	0544	APSB	RRS/MVS is not active. APSB call cannot be issued.
0108	0548	APSB	SWITCH_CONTEXT failed.
0108	054C	APSB	Database stopped for PSB.
0108	0550	APSB	The recovery token is not unique or the z/OS application region ID is invalid.
0108	0554	APSB DPSB	Recovery token passed is zeros.
0108	0558	APSB	SCHED failed by a /STOP REG command.
0108	0560	APSB	SCHED failed by a /STOP THREAD command.
0108	0564	APSB	SIGNON token was not found.
0108	0568	APSB	Mismatch address space connection occurred.
0108	0600		ODBM failed to create a security environment.
0108	0604		ODBM failed to obtain storage for an AIB block.
0108	0608		ODBM failed to obtain storage for the ODBM Allocate PSB (APSB) block.
0108	060C		ODBM failed to obtain storage for the adapter parameter list (PAPL) block.
0108	0610		ODBM failed to locate the IMS alias name that is specified on the call.
0110	000C		Resource specified was not authorized.
0110	0020	ICMD	Program not authorized to RACF.
0110	0024	ICMD	The user ID was not authorized to RACF.
0110	0028	ICMD	Program was not authorized to issue the command.
0110	002C	ICMD	The user ID was not authorized to issue the command.
0110	0030	ICMD	DFSCCMD0 indicated program was not authorized to issue command.
0110	0034	ICMD	DFSCCMD0 indicated the user ID was not authorized to issue command.
0110	0038	ICMD	ICMD call not authorized from any program (AOIS=N).
0110	003C	ICMD	RACF not available for authorization check (AOIS=A|R).
0110	0040	ICMD	DFSCCMD0 was not available for authorization check (AOIS=A|C).
0110	0050	APSB	A CPI-C driven application issued an APSB call and the user ID is not authorized to RACF.
0110	0054	ICMD	Command was not authorized to RACF.
0110	0058	ICMD	Command was not authorized to be issued by the transaction.
0110	005C	ICMD	DFSCCMD0 indicated that the command was not authorized to be issued by the transaction.

Table 97. Codes from system service calls (continued).

Return code (hex)	Reason code (hex)	System service calls	Description
0900	N/A	CHKP INIT INQY LOG ROLB ROLS SETS SETU SNAP[2] STAT[3] SYNC XRST	Reason code unmodified on 0900. PCB status code analysis required.

Notes:
1. GSCD is a Product-sensitive programming interface.
2. SNAP is a Product-sensitive programming interface.
3. STAT is a Product-sensitive programming interface.
4. When using the AIBTDLI interface for functions that do not require a PCB (such as APSB or GMSG), you can receive this return/reason code instead of X'0104'/X'0404'. You can also receive this return/reason code if the function is invalid and no PCB name is passed in the AIB.

Related reference:

"AIB return and reason codes"

IMS Queue Control Facility AIB reason codes

AIB return and reason codes

When a DL/I problem occurs, IMS returns return and reason codes in an application interface block (AIB) as *AIB return and reason codes*.

Important:

- The AIBERRXT of the AIB block might contain additional information about the problem.
- X'000000F0' is a unique AIB return code assigned to the IMS Queue Control Facility manager message requeuer processor (IQCQMRQ0). It is set in the AIBRETRN field of the AIB by IQCQMRQ0 when an error is detected while performing an IMS Queue Control Facility function. For information about AIB reason codes that are associated with AIB return code X'000000F0', see the AIB reason codes information under IMS Queue Control Facility.

Related reference:

IMS Queue Control Facility AIB reason codes

0000/0000

Explanation: The call was completed successfully.

For GMSG calls, there is at least one more segment to retrieve.

For ICMD calls, when the AIBOAUSE field is zero, no segment was returned and there are no more segments to retrieve. This can occur when the only response to the command is a DFS058 message indicating either COMMAND IN PROGRESS or COMMAND COMPLETE. When the AIBOAUSE field is nonzero, a segment was returned to the I/O area and there is at least one more segment to retrieve.

For RCMD calls, there is at least one more segment to retrieve.

Programmer response: Proceed with processing. For GMSG, ICMD, and RCMD calls, you can issue another GMSG or RCMD call to retrieve the next segment.

Source: DL/I codes

0004/0004 (X'004'/X'004', decimal: 4/4)

Explanation: A message segment was returned to the I/O area. This is the last segment for the message or command response.

For a GUR call, this code indicates that the previously continued GUR call is complete. The GUR continuation token is no longer valid.

Programmer response: Proceed with processing.

Source: DL/I codes

0004/0014 (X'004'/X'014', decimal: 4/20)

Explanation: No more messages were available for processing at this time. No segment is returned.

Programmer response: You may want the AO application to terminate at this time.

Source: DL/I codes

0004/0018 (X'004'/X'018', decimal: 4/24)

Explanation: No more segments are available for this message or command response. No segment is returned.

Programmer response: Process the message or command response previously returned.

Source: DL/I codes

0004/0048 (X'004'/X'048', decimal: 4/72)

Explanation: The Automated Operator (AO) application issued a GMSG call with the WAITAOI subfunction specified. While the AO application was waiting for an AOI message, the region was posted due to an IMS system shutdown. No message segment is returned.

Programmer response: The AO program should terminate.

Source: DL/I codes

0004/004C (X'004'/X'04C', decimal: 4/76)

Explanation: The Automated Operator (AO) application issued a GMSG call with the WAITAOI subfunction. While the AO application was waiting for an AOI message, the region was posted due to a /PSTOP region command. No message segment is returned.

Programmer response: The AO application should terminate.

Source: DL/I codes

00F0/Any (X'0F0'/any', decimal: 240/any)

Explanation: An invalid call using the MRQPSB block was made by an application program that is not the QCF licensed product. The MRQPSB block can only be used by this product.

If the caller is the QCF product, then an error was detected in the call that was issued.

System action: The call is terminated.

Programmer response: Determine if the application program encountering the error is the QCF product. If not, use a PSB other than MRQPSB. If the program is QCF, locate the AIBREASN code and refer to the IMS DFSMRAEQ macro for information on QCF AIBREASN codes.

Source: DL/I codes

0100/000C (X'100'/X'00C', decimal: 256/12)

Explanation: The I/O area was too small to contain all the data; partial data was returned. For ICAL calls, the response area is not large enough to contain the entire response of the synchronous callout message.

The AIBOAUSE field contains the length required to receive all of the data. The AIBOALEN field contains the actual length of the data.

For GUR calls, this code indicates that the response XML document did not fit in the I/O area. A GUR continuation token is set in the AIBRTKN field.

Programmer response: For INQY calls, the call may be reissued with a larger I/O area to retrieve all of the output data. If the data being returned is a message segment resulting from an ICMD or RCMD call, you may reissue the ICMD call with a larger I/O area.

For ICAL calls, check the AIBOALEN that contains the actual length of the response message and resubmit the ICAL with the correct length and response area.

Issue an ICAL call with the RECEIVE subfunction code and expanded response message area to retrieve the complete response message.

For GUR calls, use the AIBRTKN value to continue the GUR call and obtain the rest of the XML data. Multiple sequential calls might be required.

Source: DL/I codes

0100/0100 (X'100'/X'100', decimal: 256/256)

Explanation: The external application that a synchronous callout message was sent to returns an error message.

Programmer response: Take the appropriate action based on the returned error message.

Source: DL/I codes

0100/0104 (X'100'/X'104', decimal: 256/260)

Explanation: The synchronous callout message request timed out.

Programmer response: Adjust the timeout value that is specified in the AIBRSFLD field or in the OTMA descriptor. If no timeout value is specified in either place, the default timeout is set to 10 seconds.

Source: DL/I codes

0100/0108 (X'100'/X'108', decimal: 256/264)

Explanation: The request message is rejected by the external application because the external application cannot process the synchronous callout message.

Programmer response: Check to see if this problem is caused by a temporary error or condition in the external application. Verify that the format of the IMS synchronous callout message can be processed by the external application.

Source: DL/I codes

0100/010C (X'100'/X'10C', decimal: 256/268)

Explanation: The synchronous call was cleared by a command, such as a /STOP or /PSTOP command.

Source: DL/I codes

0100/0110 (X'100'/X'110', decimal: 256/272)

Explanation: The synchronous program switch request failed. The exact cause depends on the extended reason code value.

Table 98. Extended reason codes for a rejected ICAL call with return code 0100 and reason code 0110

Extended reason code	Description
X'0000'	The request message was rejected because the specified transaction is not supported. Either the trancode was not found or the specified transaction was an IMS conversational transaction, a CPIC transaction, or an IMS command transaction.
X'0004'	The request message was rejected because the user is not authorized to issue a synchronous program switch request.
X'0005'	The request message was rejected because the tmember that IMS uses to process synchronous program switch requests (DFSYICAL) is stopped. Issue the command /START TMEMBER DFSYICAL to resolve the problem.
X'0006'	The request message was rejected because the tpipe that IMS uses to process synchronous program switch requests (DFSTPIPE of the OTMA tmember DFSYICAL) is stopped. Issue the command /START TMEMBER DFSYICAL TPIPE DFSTPIPE to resolve the problem.
X'000D'	The request message was rejected because IMS failed to get an internal storage YTIB to process the message.
X'000E'	The request message was rejected because IMS failed to activate DFSYTIB0 to process the message.
X'0010'	The TMEMBER or TPIPE name for late response message routing is invalid because it contains invalid characters. Check the destination descriptor.
X'0011'	The TMEMBER or TPIPE name for late response message routing is missing from the destination descriptor. If either value is specified, both must be included.
X'0012'	The TMEMBER or TPIPE name for late response message routing is incorrect. Check the destination descriptor.
X'0013'	The SMEM and SYNCTP parameters are mutually exclusive.
X'0014'	The TPIPE name for late message processing is either missing or invalid in the destination descriptor.
X'0015'	The request message was rejected because the request was made in a shared queues environment with different IMS MINVERS values. The IMS systems in the shared queues group must have the MINVERS value 13.1.
X'0016'	The request is rejected due to an OTMA global message flood condition. Too many OTMA message blocks (TIB) were allocated in the system.
X'0020'	The request message was rejected because the input data length is incorrect. The length of the segment must match the LLZZ value that is specified on the request. The total length of all segments in the request must match the AIBOALEN value in the AIB.
X'0030'	The request message was rejected because the transaction is unavailable.
X'0031'	The request message was rejected because the transaction is stopped.
X'0033'	The request message was rejected because the destination name for the program switch is an RCNT.

Table 98. Extended reason codes for a rejected ICAL call with return code 0100 and reason code 0110 (continued)

Extended reason code	Description
X'0034'	The request message was rejected because the destination name for the program switch is a CNT.
X'0035'	The request message was rejected because the destination transaction can accept only a single input segment. Multiple input segments were specified for the request.
X'0036'	The request message was rejected because an IMS queue manager encountered an insert error.
X'0037'	The request message was rejected because an IMS queue manager encountered an internal error.
X'0038'	The request message was rejected because a queue overflow was detected.
X'0039'	The request message was rejected because IMS failed to process the Fast Path transaction.
X'003A'	The request message was rejected because IMS queue manager failed to update the message prefix.
X'003B'	The request message was rejected because IMS failed to enqueue the transaction.
X'0060'	The request message was rejected because the synchronous program switch was canceled before a reply was received.
X'0061'	The request message was rejected because the target transaction does not reply to the IOPCB and does not perform a program-to-program switch. The ICAL is rejected to avoid a timeout. This rejection occurs when the REPLYCHK descriptor is set to YES for the destination transaction. If there is an asynchronous response for the ICAL, you can set REPLYCHK to NO and this ICAL is treated as valid.
X'0070'	IMS failed to process the response message for the synchronous program switch ICAL call. The length of an output message segment was greater than the 32K limit.
X'0071'	IMS failed to process the response message for the synchronous program switch ICAL call. IMS is running out of LUMP storage space to process the response message.
X'0072'	IMS failed to process the response message for the synchronous program switch ICAL call. IMS failed to allocate storage from subpool 231, which is required to process the response message.

Programmer response: Take the appropriate action depending on the returned extended reason code value.

Source: DL/I codes

0100/0204 (X'100'/X'204', decimal: 256/516)

Explanation: All connection requests were unsuccessful. No IMS connections were created.

Programmer response: Verify whether IMS is available.

Source: DL/I codes

0100/0208 (X'100'/X'208', decimal: 256/520)

Explanation: At least one request succeeded, and at least one request failed. For further information, check the return code, reason code, and error extension code from the requests.

Programmer response: Verify whether IMS is available.

Source: DL/I codes

0104/0204 (X'104'/X'204', decimal: 260/516)

Explanation: AIBRSNM2 did not contain the IMS/DBCTL DRA startup table suffix on an ODBA APSB or CIMS subfunction INIT or TERM call.

Programmer response: Set AIBRSNM2 to the correct 1 to 4 character DRA startup table suffix before issuing the call.

Source: DL/I codes

0104/0208 (X'104'/X'208', decimal: 260/520)

Explanation: One of the following application programming errors occurred:

- An invalid PCB name was passed in the application interface block (AIB) for a DL/I call requiring a PCB.
- An invalid DL/I call function was specified, and the PCB name was either not specified or not found in the scheduled PSB.

- The program issued a valid DL/I call that does not use a PCB. However, the call is not supported in the caller's environment (for example, GMSG call in a batch environment).

Programmer response: Correct the DL/I call in the program.

Source: DL/I codes

0104/020C (X'104'/X'20C', decimal: 260/524)

Explanation: A CPI-C driven application issued a DL/I call before a program specification block (PSB) was scheduled. You must issue an APSB call to schedule a PSB before issuing any other DL/I call.

Programmer response: Correct the CPI-C driven application so that it issues an APSB call before issuing any other DL/I call.

Source: DL/I codes

0104/0210 (X'104'/X'210', decimal: 260/528)

Explanation: The I/O area length in the application interface block (AIB) in the AIBOALEN field was zero or negative. A negative field might be caused by the application passing the length as a character string instead of binary data. No data is returned to the application.

Programmer response: Correct the program to specify the correct I/O area length in the AIB.

Source: DL/I codes

0104/0214 (X'104'/X'214', decimal: 260/532)

Explanation: You cannot set the output area length to zero.

Programmer response: Examine the output area length, and set a positive value to receive the response message.

Source: DL/I codes

0104/0218 (X'104'/X'218', decimal: 260/536)

Explanation: The subfunction specified in the application interface block (AIB) for the DL/I call was invalid.

Programmer response: Correct the DL/I call in the program. Not all DL/I calls support subfunctions. Refer to the DL/I call documentation for a list of valid subfunctions for the call.

Source: DL/I codes

0104/021C (X'104'/X'21C', decimal: 260/540)

Explanation: The Automated Operator Interface (AOI) token was not specified in the application interface block (AIB) in the AIBRSNM1 field on the initial GMSG call for a message. The first GMSG call issued by an AO application must specify an AOI token. The AOI token must contain blanks when the GMSG call is used to get subsequent segments of the current message.

Programmer response: Correct the AO application to specify an AOI token on the initial GMSG call for a message.

Source: DL/I codes

0104/0220 (X'104'/X'220', decimal: 260/544)

Explanation: A Get Message (GMSG) call with WAITAOI subfunction did not specify an Automated Operator Interface (AOI) token. The WAITAOI subfunction may only be specified when retrieving the first segment of a message. The WAITAOI subfunction requires that an AOI token be specified in the application interface block (AIB) in the AIBRSNM1 field.

Programmer response: Correct the program to specify an AOI token on the initial GMSG call for a message.

Source: DL/I codes

0104/0224 (X'104'/X'224', decimal: 260/548)

Explanation: The Automated Operator Interface (AOI) token specified on a Get Message (GMSG) call contained one or more invalid characters. An AOI token can contain characters A-Z, 0-9, @, #, and $.

For a GUR call, this code indicates that the GUR continuation token passed with the call is invalid.

Programmer response: Correct the program so the AOI token uses only valid characters.

For a GUR call, ensure that the GUR continuation token passed with the call exactly matches the value of the AIBRTKN field from the previous GUR call response.

Source: DL/I codes

0104/0228 (X'104'/X'228', decimal: 260/552)

Explanation: The application interface block (AIB) length specified in AIBLEN was less than the minimum required length.

Programmer response: Response: Insure that the AIB is equal to or greater than 264 bytes and that AIBLEN reflects the correct length.

Source: DL/I codes

0104/022C (X'104'/X'22C', decimal: 260/556)

Explanation: A new ODBA thread request (APSB) cannot be processed because the maximum number of threads are currently allocated. The call is not processed.

Programmer response: Try your request again; otherwise, contact your IMS system programmer.

Source: DL/I codes

0104/0240 (X'104'/X'240', decimal: 260/576)

Explanation: An invalid AIBRSA1 parameter was passed in the AIB.

Programmer response: Verify the AIBRSA1 parameter value.

Source: DL/I codes

0104/0244 (X'104'/X'244', decimal: 260/580)

Explanation: An invalid AIBRSA3 parameter was passed in the AIB.

Programmer response: Verify the AIBRSA3 parameter value.

Source: DL/I codes

0104/0248 (X'104'/X'248', decimal: 260/584)

Explanation: A GUR call did not find the correct PCB name specified to access the IMS catalog. This error has two possible causes:

- No PCB name was specified on the GUR call.
- The PCB name specified was not DFSCAT00.

Programmer response: Specify the DBPCB named DFSCAT00 on the GUR call.

Source: DL/I codes

0104/0404 (X'104'/X'404', decimal: 260/1028)

Explanation: The function code specified on the DL/I call was unknown or invalid. The program might be coded incorrectly, or the program could not be run on a level of IMS that does not support the call.

Programmer response: Make sure the call is coded correctly and that the level of IMS in which the program is executing supports the call function.

Source: DL/I codes

0104/0440 (X'104'/X'440', decimal: 260/1088)

Explanation: A DL/I call that is only valid from a CPI-C driven application was issued by a non-CPI-C driven program.

Programmer response: Correct the program so it either does not issue the call or executes as a CPI-C driven program.

Source: DL/I codes

0104/0444 (X'104'/X'444', decimal: 260/1092)

Explanation: A DL/I call was issued that is only valid from the specific environment.

Programmer response: Correct the program so it either does not issue the call, or runs as a CPI-C driven program or in the correct region type.

Source: DL/I codes

0104/0448 (X'104'/X'448', decimal: 260/1096)

Explanation: A DL/I call that is only valid from a non-CPI-C driven program was issued by a CPI-C driven program. Some DL/I calls are allowed from CPI-C driven programs as long as the call does not use the I/O program communication block (PCB).

Programmer response: Correct the CPI-C driven program so that it either doesn't issue the call or uses an alternate PCB instead of the I/O PCB.

Source: DL/I codes

0104/044C (X'104'/X'44C', decimal: 260/1100)

Explanation: A DL/I call was issued that is invalid from a specific dependent region type.

Programmer response: Correct the program so that it either doesn't issue the call or runs in the correct region type.

Source: DL/I codes

0104/0450 (X'104'/X'450', decimal: 260/1104)

Explanation: There were no messages to retrieve. The Automated Operator (AO) exit routine DFSAOE00 does not exist in the IMS system.

Programmer response: The program should terminate. Contact your IMS system programmer to install DFSAOE00 in your system.

Source: DL/I codes

0104/0464 (X'104'/X'464', decimal: 260/1124)

Explanation: An Open Database Access (ODBA) application issued a DL/I call before a program specification block (PSB) was scheduled. The APSB call must be issued to schedule a PSB before issuing any other call.

Programmer response: Correct the ODBA application so that it issues an APSB call before issuing any other DL/I call.

Source: DL/I codes

0104/048C (X'104'/X'48C', decimal: 260/1164)

Explanation: A CPI-C driven program attempted to allocate a program specification block (PSB) when one was already allocated. This situation can be caused when a CPI-C driven program does not issue a DPSB to deallocate the PSB allocated by a previous APSB call.

Programmer response: Correct the program to issue a DPSB call.

Source: DL/I codes

0104/0490 (X'104'/X'490', decimal: 260/1168)

Explanation: The CPI-C driven program tried to either allocate or deallocate a program specification block (PSB) without committing resources affected by a previous DL/I or SQL call. When DL/I or SQL calls are issued from a CPI-C driven program, a CPI-RR commit (SRRCMIT) call must be issued to commit the resources before the PSB can be deallocated.

Programmer response: Correct the program to issue either a CPI-RR commit or backout for the resources before issuing the DPSB call.

Source: DL/I codes

0104/0494 (X'104'/X'494', decimal: 260/1172)

Explanation: The Common Programming Interface for Communications (CPI-C) driven program or Open Database Access (ODBA) application tried to deallocate a program specification block (PSB), but the PSB was not allocated. Either there was no PSB allocated or the PSB that was allocated was not the same PSB specified on the DPSB call. The error might be caused by one of the following situations:
- Multiple DPSB calls are issued without intervening APSB calls.
- DPSB call is issued after an APSB call fails.
- DPSB call is issued with an incorrect PSB name.
- AIBRSNM2 does not contain the PSB name.

Programmer response: Correct the program to issue one DPSB call for each APSB call, and ensure the PSB names are the same on both calls.

Source: DL/I codes

0104/0498 (X'104'/X'498', decimal: 260/1176)

Explanation: A DPSB call was issued before a commit. A force backout was performed.

Programmer response: Issue a commit before a DPSB call.

Source: DL/I codes

0104/054C (X'104'/X'54C', decimal: 260/1356)

Explanation: A DL/I call specified an invalid message queue destination. This error might be caused by one of the following situations:
- The destination is a dynamic terminal but ETO is not activated.
- The program specified the wrong destination name on a CHNG call.
- The LTERM name defined on an alternate PCB is incorrect.

Programmer response: Correct the program.

Source: DL/I codes

0104/0550 (X'104'/X'550', decimal: 260/1360)

Explanation: The program attempted to insert data to the message queue when a DEALLOCATE_ABEND call was previously issued for the destination. Additional ISRT or SETO calls for this destination are rejected until an application sync point is processed.

The error can also be caused when a SETO DEALLOCATE_ABEND call is issued but there were no previous inserts for the destination.

Programmer response: Analyze the program to determine if the insert logic is in error. A GU or CHKP call might be issued as appropriate to trigger an application sync point and retrieve the next input message; doing this allows further inserts to the destination. CPI-C driven programs may issue a CPI-RR commit request to trigger sync point processing.

Source: DL/I codes

0104/0560 (X'104'/X'560', decimal: 260/1376)

Explanation: A routing request error occurred for one of the following reasons:
- The DFSCMPR0 user routing exit requested that an invalid routing request and the call wasCHNG rejected.
- The DFSMSCE0 user routing exit requested an invalid routing request and the CHNG or ISRT call was rejected.
- IMS encountered an error while processing the message routing request.

Programmer response: If the DFSMSCE0 is being used, look for a DFS070 routing error message and a 6701–MSCE LOGREC. If no error message or LOGREC is issued, use the exit trace (/TRA SET ON EXIT DFSMSCE0 PRCH/PRIS) to determine the routing error.

If the DFSCMPR0 is being used, use the transaction trace (/TRA SET ON TRANSACTION *trancode*) to determine the routing error.

Refer to the IMS diagnosis documents for information

about routing exit errors and for printing and reading the exit trace.

Source: DL/I codes

Related information:

DFS070 (Messages and Codes)

0104/0564 (X'104'/X'564', decimal: 260/1380)

Explanation: Either the DFSCMPR0 user routing exit rejected the CHNG call, or the DFSMSCE0 user exit rejected the CHNG or ISRT call. An A1 DL/I status code is set.

Programmer response: Refer to the DFSCMPR0 or DFSMSCE0 user exit. See TM and MSC Message Routing and Control User exit routine (DFSMSCE0) (Exit Routines) for information about how this error is set.

Source: DL/I codes

0104/0568 (X'104'/X'568', decimal: 260/1384)

Explanation: The DFSMSCE0 user routing exit rejected the CHNG or ISRT call with a 3303 abend.

Programmer response: Refer to the DFSMSCE0 user exit.

Source: DL/I codes

Related reference:

TM and MSC Message Routing and Control User exit routine (DFSMSCE0) (Exit Routines)

Related information:

IMS abend 3303

0104/056C (X'104'/X'56C', decimal: 260/1388)

Explanation: The DFSMSCE0 user routing exit rejected the CHNG or ISRT call with an A4 DL/I status code.

Programmer response: Refer to the DFSMSCE0 user exit. See TM and MSC Message Routing and Control User exit routine (DFSMSCE0) (Exit Routines) for information about how this error is set.

Source: DL/I codes

0104/0570 (X'104'/X'570', decimal: 260/1392)

Explanation: The DFSMSCE0 user routing exit rejected a CHNG or ISRT call with an E1 user exit status code.

Programmer response: Refer to the DFSMSCE0 user exit. See TM and MSC Message Routing and Control User exit routine (DFSMSCE0) (Exit Routines) for information about how this error is set.

Source: DL/I codes

Related reference:

TM and MSC Message Routing and Control User exit routine (DFSMSCE0) (Exit Routines)

Related information:

"E1" on page 130

0104/0574 (X'104'/X'574', decimal: 260/1396)

Explanation: The DFSMSCE0 user routing exit rejected the CHNG or ISRT call with an E2 user exit status code.

Programmer response: Refer to the DFSMSCE0 user exit. See TM and MSC Message Routing and Control User exit routine (DFSMSCE0) (Exit Routines) for information about how this error is set.

Source: DL/I codes

Related information:

"E2" on page 130

0104/0578 (X'104'/X'578', decimal: 260/1400)

Explanation: The DFSMSCE0 user routing exit rejected the CHNG or ISRT call with an E3 user exit status code.

Programmer response: Refer to the DFSMSCE0 user exit. See TM and MSC Message Routing and Control User exit routine (DFSMSCE0) (Exit Routines) for information about how this error is set.

Source: DL/I codes

Related information:

"E3" on page 130

0104/057C (X'104'/X'57C', decimal: 260/1404)

Explanation: A routing request error occurred because of one of the following reasons:

- The DFSCMPR0 user routing exit requested to override a direct routing request and the CHNG call was rejected.
- The DFSMSCE0 user routing exit requested to override a direct routing request and the CHNG or ISRT call was rejected.
- IMS encountered an error while processing the message routing request.

A QH or XF DL/I status code is set.

Programmer response: If the DFSMSCE0 is being used, look for a DFS070 routing error message and a 6701–MSCE LOGREC. If no error message or LOGREC is issued, use the exit trace (/TRA SET ON EXIT DFSMSCE0 PRCH/PRIS) to determine the routing error.

If the DFSCMPR0 is being used, use the transaction trace (/TRA SET ON TRANSACTION *trancode*) to determine the routing error.

Refer to TM and MSC Message Routing and Control

User exit routine (DFSMSCE0) (Exit Routines) for information about routing exit errors and for printing and reading the exit trace.

Source: DL/I codes

Related information:

DL/I code QH

DL/I code XF

DFS070 (Messages and Codes)

0104/060C (X'104'/X'60C', decimal: 260/1548)

Explanation: An invalid class name was specified in the I/O area on the AUTH call. Refer to AUTH call (Application Programming APIs) for a list of valid classes.

Programmer response: Correct the program.

Source: DL/I codes

0104/0610 (X'104'/X'610', decimal: 260/1552)

Explanation: The I/O area address was not specified in the call list. No data is returned to the program.

Programmer response: Correct the program to specify the I/O area address in the call list.

Source: DL/I codes

0104/0614 (X'104'/X'614', decimal: 260/1556)

Explanation: The response output area address was not specified in the call list.

Programmer response: Resubmit the call with the response output area address parameter specified.

Source: DL/I codes

0104/0618 (X'104'/X'618', decimal: 260/1560)

Explanation: The I/O area length is longer than the program specification block (PSB) work area defined by the IOASIZE parameter on PSBGEN. IMS is not able to copy the contents of the I/O area to the PSB work area.

Programmer response: Make sure that the I/O area length specified in the application interface block (AIB) in the AIBOALEN field is correct and is not larger than the size specified in the IOASIZE parameter of the PSB.

Source: DL/I codes

0104/0620 (X'104'/X'620', decimal: 260/1568)

Explanation: The ZZ field of the I/O area was not zero. The program must not use the ZZ field in the I/O area.

Programmer response: Correct the program.

Source: DL/I codes

0104/0624 (X'104'/X'624', decimal: 260/1572)

Explanation: The I/O area length specified in AIBOALEN exceeded the I/O area length that was specified in the `CSLDMI FUNC=ODBMCI IOAREALEN=` parameter.

Programmer response: Ensure that the I/O area length specified in the AIB=(AIBOALEN field) is correct and is not larger than the size specified on the IOAREALEN parameter.

Source: DL/I codes

0104/0754 (X'104'/X'754', decimal: 260/1876)

Explanation: The LL field of the I/O area was less than 5. The length of the segment, excluding the LLZZ field, must be at least 1, and LL must be at least 5.

Programmer response: Correct the program.

Source: DL/I codes

0104/0810 (X'104'/X'810', decimal: 260/2064)

Explanation: The option list parameter was not specified in the call list.

Programmer response: Correct the program.

Source: DL/I codes

0104/0920 (X'104'/X'920', decimal: 260/2336)

Explanation: The Queue Space Notification exit (DFSQSPC0) determined that the program reached its limit of data that can be inserted to the message queue. The program may be in a loop inserting information to the IMS message queues. Additional ISRT or SETO calls for this destination are rejected until an application sync point is processed.

Programmer response: Analyze the program to determine if the insert logic is in error. A GU or CHKP call might be issued as appropriate to initiate an application sync point and retrieve the next input message; doing this allows further inserts to the destination. CPI-C driven programs may issue a CPI-RR commit request to initiate sync point processing.

Source: DL/I codes

0104/0924 (X'104'/X'924', decimal: 260/2340)

Explanation: The number of message segments that are inserted exceeds the number that is specified in the SEGNO keyword of the TRANSACT macro.

Programmer response: Check the output messages and correct them. Use ROLB to backout in-progress messages.

Source: DL/I codes

0104/1004 (X'104'/X'1004', decimal: 260/4100)

Explanation: A valid IMS command was specified in the I/O area of an ICMD call; however, the command as specified was not allowed from an application. For a list of commands that can be specified from an AO application, see Tools for automated operations (Operations and Automation).

Programmer response: Correct the AO application so only valid automated operator commands are issued.

Source: DL/I codes

Related concepts:

Type-1 automated operator (AO) application program (GU, GN, CMD, and GCMD calls) (Operations and Automation)

Type-2 automated operator (AO) application program (GMSG, ICMD, and RCMD calls) (Operations and Automation)

0104/1008 (X'104'/X'1008', decimal: 260/4104)

Explanation: An invalid command verb was specified in the I/O area.

Programmer response: Correct the AO application.

Source: DL/I codes

0104/1010 (X'104'/X'1010', decimal: 260/4112)

Explanation: The automated operator (AO) application issued an Retrieve Command (RCMD) call; however, there were no command response segments to retrieve since the AO application had not issued a prior ICMD call. The AO application must issue an IMS command through the ICMD call before the RCMD call is valid.

Programmer response: Correct the AO application.

Source: DL/I codes

0104/1020 (X'104'/X'1020', decimal: 260/4128)

Explanation: The OTMA descriptor name that you specified in the call list was not valid.

Programmer response: Correct the OTMA descriptor name. The OTMA descriptor name must be defined in the DFSYDT*x* member of IMS.PROCLIB.

Source: DL/I codes

0104/1024 (X'104'/X'1024', decimal: 260/4132)

Explanation: The timeout value that you specified in the call list is not valid.

Programmer response: Correct the timeout value. The timeout value must be between 0 and 999999, in 100^{th} of a second.

- If the specified value is larger than the maximum value, the maximum value is used.
- If the value is set to 0, then the timeout value that is specified in the OTMA descriptor is used. If there is no timeout value in the OTMA descriptor, the system default of 10 seconds is used.

Source: DL/I codes

0104/1104 (X'104'/X'1104', decimal: 260/4356)

Explanation: ODBA CIMS CONNECT call contained an invalid alias name. The alias name must not be null or blanks.

Source: DL/I codes

0104/1108 (X'104'/X'1108', decimal: 260/4360)

Explanation: ODBA CIMS CONNECT call parameter list contained and invalid entry count. The count must be greater than 0.

Source: DL/I codes

0104/110C (X'104'/X'110C', decimal: 260/4364)

Explanation: An ODBA CIMS CONNECT request list contained entries without a valid count.

Source: DL/I codes

0104/1110 (X'104'/X'1110', decimal: 260/4368)

Explanation: An Allocate PSB (APSB) call was issued without a preceding CIMS INIT or CIMS CONNECT call.

Programmer response: Correct the application to issue CIMS INIT or CIMS CONNECT before the APSB.

Source: DL/I codes

0108/0004 (X'108'/X'004', decimal: 264/4)

Explanation: An error was encountered during PC router processing. This problem is a system error.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0108/0010 (X'108'/X'010', decimal: 264/16)

Explanation: A storage allocation request failed to obtain private storage. The call was not processed. This problem is a system error.

Programmer response: Reduce the size of the request data and resubmit the call.

Source: DL/I codes

0108/0014 (X'108'/X'014', decimal: 264/20)

Explanation: A storage allocation request failed to obtain global storage. The call was not processed. This problem is a system error.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0108/0018 (X'108'/X'018', decimal: 264/24)

Explanation: IMS encountered an internal latch error. For Get Messages (GMSG) calls, no segment was returned.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0108/001C (X'108'/X'01C', decimal: 264/28)

Explanation: During the processing of an Open Database Access (ODBA) CIMS AIBSFUNC=INIT or APSB call, the attach of an ODBA task control block (TCB) failed in the Application address space. The call was not processed. This problem is a system error.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0108/0020 (X'108'/X'020', decimal: 264/32)

Explanation: The load of a required database resource adapter (DRA) module or load of the DRA startup table (DFScccc0) failed in the application address space. The name is returned to the calling program in AIBRSNM2.

Programmer response: Insure that the named module is linked into the proper library.

Source: DL/I codes

0108/0024 (X'108'/X'024', decimal: 264/36)

Explanation: The OPEN of the database resource adapter (DRA) library specified in the DRA startup table failed.

Programmer response: Insure the library specified in the DRA startup table (DFScccc0) is correct and accessible, otherwise contact your IMS system programmer.

Source: DL/I codes

0108/0028 (X'108'/X'028', decimal: 264/40)

Explanation: Dynamic allocation of the database resource adapter (DRA) execution library (DSNAME=DRA startup table) failed. The call was not processed. This problem is a system error.

Programmer response: If the DSNAME= library is correct, contact your IMS system programmer.

Source: DL/I codes

0108/002C (X'108'/X'02C', decimal: 264/44)

Explanation: Open Database Access (ODBA) encountered a z/OS Name/Token Service error in the application address space. The call was not processed. This problem is a system error.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0108/0030 (X'108'/X'030', decimal: 264/48)

Explanation: During Spool API processing, a data set CLOSE error was encountered. A X'67D0' log record was written to indicate the cause of the failure.

Programmer response: Contact your IMS system programmer to determine the reason for the CLOSE error.

Source: DL/I codes

0108/0034 (X'108'/X'034', decimal: 264/52)

Explanation: During Spool API processing, a data set deallocation (DYNALLOC) error was encountered. A X'67D0' log record was written to indicate the cause of the failure.

Programmer response: Contact your IMS system programmer to determine the reason for the DYNALLOC error.

Source: DL/I codes

Related reference:

z/OS: Interpreting error reason codes from DYNALLOC

0108/0038 (X'108'/X'038', decimal: 264/56)

Explanation: During Spool API processing, a data set allocation (DYNALLOC) error was encountered. A X'67D0' log record was written to indicate the cause of the failure.

Programmer response: Contact your IMS system programmer to determine the reason for the DYNALLOC error.

Source: DL/I codes

Related reference:

z/OS: Interpreting error reason codes from DYNALLOC

0108/003C (X'108'/X'03C', decimal: 264/60)

Explanation: During Spool API processing, a data set OPEN error was encountered. A X'67D0' log record was written to indicate the cause of the failure.

Programmer response: Contact your IMS system programmer to determine the reason for the OPEN error.

Source: DL/I codes

0108/0040 (X'108'/X'040', decimal: 264/64)

Explanation: During Spool API processing, an error was encountered while trying to write to the data set. A X'67D0' log record was written to indicate the cause of the failure.

Programmer response: Contact your IMS system programmer to determine the reason for the write error.

Source: DL/I codes

0108/0044 (X'108'/X'044', decimal: 264/68)

Explanation: During Spool API processing, an error was encountered while trying to create an output descriptor (OUTADD). A X'67D0' log record was written to indicate the cause of the failure.

Programmer response: Contact your IMS system programmer to determine the reason for the OUTADD error.

Source: DL/I codes

0108/0048 (X'108'/X'048', decimal: 264/72)

Explanation: During Spool API processing, an error was encountered while trying to delete an output descriptor (OUTDEL). A X'67D0' log record was written to indicate the cause of the failure.

Programmer response: Contact your IMS system programmer to determine the reason for the OUTDEL error.

Source: DL/I codes

0108/0060 (X'108'/X'060', decimal: 264/96)

Explanation: During call processing, IMS issued a DFSLUMIF call which failed. This problem is a system error. A X'67D0' log record was written to indicate the cause of the failure.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0108/0064 (X'108'/X'064', decimal: 264/100)

Explanation: During call processing, IMS issued a DFSYFND call that failed. A X'67D0' log record was written to indicate the cause of the failure. This problem is a system error.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0108/0068 (X'108'/X'068', decimal: 264/104)

Explanation: During call processing, IMS issued a DFSYLUM call that failed. A X'67D0' log record was written to indicate the cause of the failure. This problem is a system error.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0108/0080 (X'108'/X'080', decimal: 264/128)

Explanation: A RACF RACINIT failure occurred for an LU 6.2 originated transaction. An accessor environment element (ACEE) could not be created for the authorization check for the AUTH call.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0108/020C (X'108'/X'20C', decimal: 264/524)

Explanation: While processing the IMS command issued by an automated operator (AO) application, the command processor encountered an invalid asynchronous work element (AWE).

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0108/0214 (X'108'/X'214', decimal: 264/532)

Explanation: A database resource adapter (DRA) startup table parameter is incorrectly specified. AIBERRXT contains information regarding the error as follows:

- `MnMx` = MinThrd or MaxThrd is not between 1 and 999.
- `FPB` = FPBUF or FPBOF is not between 0 and 999.
- `CNBA`= CNBA is less than FPBUF.

The call was not processed.

Programmer response: Correct and rebuild the DRA startup table.

Source: DL/I codes

0108/0220 (X'108'/X'220', decimal: 264/544)

Explanation: The partition specification table (PST) LU 6.2 extension address was zero. This address, obtained during message GU processing, is required to obtain the user token for an LU 6.2 originated transaction.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0108/0224 (X'108'/X'224', decimal: 264/548)

Explanation: The user security token (UTOKEN) was zero. The UTOKEN is obtained during the message GU processing and is required to build the accessor environment element (ACEE) for the authorization check for an LU 6.2 originated transaction.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0108/0240 (X'108'/X'240', decimal: 264/576)

Explanation: The dependent region was posted with an invalid post code. No segment was returned. This problem is a system error.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0108/0244 (X'108'/X'244', decimal: 264/580)

Explanation: The dependent region was posted unexpectedly during abnormal terminate thread processing. No segment was returned. This problem is a system error.

This code can be issued if you stop one of the partitions of a multi-partition PHIDAM database, and issue GETNEXT requests until running into the stopped partition.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0108/0304 (X'108'/X'304', decimal: 264/772)

Explanation: The application attempted to allocate a program specification block (PSB) that IMS could not find. The application program might have specified an incorrect PSB name, or the PSB might not have been generated in the IMS system.

Programmer response: Analyze the application program to determine if the cause of the error is the PSB. If the PSB name is correct, make sure the PSB is defined to the IMS system.

Source: DL/I codes

0108/0308 (X'108'/X'308', decimal: 264/776)

Explanation: IMS encountered a program specification block (PSB) authorization failure while attempting to allocate the PSB. Security checking used resource access security (if ISIS=R or C). Either RACF (or equivalent product) or the RASE user exit indicated that the PSB was not authorized for this dependent region.

Programmer response: Contact your IMS system programmer to determine whether the PSB is defined to RACF, to the DFSRAS00 user exit, or both for use in this dependent region.

Source: DL/I codes

0108/030C (X'108'/X'30C', decimal: 264/780)

Explanation: The program attempted to allocate a program specification block (PSB) that is marked permanently bad. IMS cannot allocate the PSB.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0108/0310 (X'108'/X'310', decimal: 264/784)

Explanation: The program specification block (PSB) cannot be allocated because a database was stopped or locked.

Programmer response: Determine why the database is stopped or locked. If appropriate, the IMS commands `/START` and `/UNLOCK` can be used to change the state of the database.

Source: DL/I codes

0108/0314 (X'108'/X'314', decimal: 264/788)

Explanation: The program specification block (PSB) could not be allocated, because it was already scheduled and it does not support parallel scheduling.

Programmer response: If the PSB should support parallel scheduling, contact your IMS system programmer to make sure the APPLCTN macro specifies SCHDTYP=PARALLEL for the PSB.

Source: DL/I codes

0108/0318 (X'108'/X'318', decimal: 264/792)

Explanation: The program specification block (PSB) could not be allocated because it was stopped or locked.

Programmer response: Determine why the PSB is

stopped or locked. If appropriate, the IMS commands /START and /UNLOCK can be used to change the state of the PSB.

Source: DL/I codes

0108/031C (X'108'/X'31C', decimal: 264/796)

Explanation: An I/O error was encountered while reading the program specification block (PSB) or data management block (DMB).

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0108/0320 (X'108'/X'320', decimal: 264/800)

Explanation: Either the PSB work (PSBW) pool was too small for the program specification block (PSB), or the DMB pool (DLDP) was too small for the data management block (DMB).

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0108/0324 (X'108'/X'324', decimal: 264/804)

Explanation: The program specification block (PSB) was generated with a PROCOPT of L or LS in a non-HSAM program communication block (PCB).

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0108/0328 (X'108'/X'328', decimal: 264/808)

Explanation: During program specification block (PSB) allocation, a Fast Path buffer fix error was encountered.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0108/032C (X'108'/X'32C', decimal: 264/812)

Explanation: During program specification block (PSB) allocation, an invalid processing intent was encountered.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0108/0330 (X'108'/X'330', decimal: 264/816)

Explanation: The request to access the IMS catalog through the catalog PCB cannot be completed because of an IRLM failure. IMS attempted to attach the catalog PCB to your PCB but could not schedule the PSB because of the IRLM failure.

Programmer response: Resolve the IRLM failure, and reissue the call.

Source: DL/I codes

0108/0334 (X'108'/X'334', decimal: 264/820)

Explanation: The request to access the IMS catalog through the catalog PCB cannot be completed because an online change is in progress for the IMS catalog resources. IMS attempted to attach the catalog PCB to your PCB but could not schedule the PSB because of the online change.

Programmer response: Reissue the call after the online change is complete.

Source: DL/I codes

0108/0338 (X'108'/X'338', decimal: 264/824)

Explanation: The requested catalog member is not in the catalog. IMS searched for a member with the timestamp of the active ACB library member, but no member with a matching timestamp was found.

This code is also returned if an unqualified GUR call is made for a catalog record for which there is no corresponding active ACB library member.

Programmer response: Qualify your GUR call with a valid ACB generation timestamp value.

Source: DL/I codes

0108/033C (X'108'/X'033C', decimal: 264/828)

Explanation: The requested catalog member is not in the catalog. IMS searched for a member with the timestamp of the active ACB library member, but no member with a matching timestamp was found.

This code is also returned if an unqualified GUR call is made for a catalog record for which there is no corresponding active ACB library member. This can happen when the resource is not defined to this IMS.

Programmer response: Qualify your GUR call with a valid ACB generation timestamp value.

Source: DL/I codes

0108/0340 (X'108'/X'0340', decimal: 264/832)

Explanation: A GUR call did not find the specified IMS catalog resource. This error has two possible causes depending on the type of region where the GUR call is made.

- In a DL/I batch environment, a GUR call was made without a qualifying ACB generation time stamp.
- In a DBB batch environment, the PSB used by the DBB region does not reference the resource specified in the GUR call,.

Programmer response: Qualify your GUR call with a valid ACB generation timestamp value.

Source: DL/I codes

0108/0342 (X'108'/X'342', decimal: 264/834)

Explanation: The GUR call was unable to build a valid XML response document.

Programmer response: Ensure that all IMS systems sharing access to the catalog database are configured with the same service level.

Source: DL/I codes

0108/0344 (X'108'/X'0344', decimal: 264/836)

Explanation: The requested catalog member is not in the catalog database.

Programmer response: Verify that the catalog has been loaded with the resource referenced in the GUR call.

Source: DL/I codes

0108/0540 (X'108'/X'540', decimal: 264/1344)

Explanation: No active communications with IMS or DBCTL were available. The call was not processed.

Programmer response: Contact your IMS system programmer.

Check that the application, which encountered this problem, ran on the same LPAR as the IMS or DBCTL you are attempting to connect to. Check that the DBCTLID parameter in DRA module DFSxxxx0 contains the IMS or DBCTL that you expect.

If you are using Open Database Manager (ODBM), also check also that the SCI address space for the IMSplex is running.

Source: DL/I codes

0108/0544 (X'108'/X'544', decimal: 264/1348)

Explanation: RRS/MVS was not active at the time that Open Database Access (ODBA) attempted to establish a connection to IMS or Data Communications Control (DCCTL). RRS/MVS is required for ODBA. The call was not processed.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0108/0548 (X'108'/X'548', decimal: 264/1352)

Explanation: The SWITCH_CONTEXT call failed during Open Database Access (ODBA) APSB call processing. The call was not processed. This problem is a system error.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0108/054C (X'108'/X'54C', decimal: 264/1356)

Explanation: A pseudoabend 0458 was returned on an Open Database Access (ODBA) APSB call. One of the Fast Path databases used by the program specification block (PSB) named in AIBRSNM1 was stopped or locked by a prior program failure. The call is not processed.

Programmer response: Determine the reason for the Fast Path database being stopped. After the problem that caused the database to be stopped has been corrected, resubmit the request.

Source: DL/I codes

Related information:

IMS abend 0458

0108/0550 (X'108'/X'550', decimal: 264/1360)

Explanation: The recovery token was not unique or the z/OS application address space ID was invalid. The call was not processed. This problem is a system error.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0108/0554 (X'108'/X'554', decimal: 264/1364)

Explanation: The recovery token was zero. The call was not processed. This problem is a system error.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0108/0558 (X'108'/X'558', decimal: 264/1368)

Explanation: An Open Database Access (ODBA) Allocate PSB (APSB) schedule failed for a /STOP REGION command. The call was not processed.

Programmer response: No action is required.

Source: DL/I codes

0108/0560 (X'108'/X'560', decimal: 264/1376)

Explanation: An Open Database Access (ODBA) Allocate PSB (APSB) schedule failed for a /STOP REGION ABDUMP command. The call was not processed.

Programmer response: No action is required.

Source: DL/I codes

0108/0564 (X'108'/X'564', decimal: 264/1380)

Explanation: A pseudoabend 0141 was received on an Open Database Access (ODBA) Allocate PSB (APSB) request. The call was not processed. This problem is a system error.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

Related information:

IMS abend 0141

0108/0568 (X'108'/X'568', decimal: 264/1384)

Explanation: A pseudoabend 0145 was received on an Open Database Access (ODBA) Allocate PSB (APSB) request. The call was not processed. This problem is a system error.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

Related information:

IMS abend 0145

0108/056C (X'108'/X'56C', decimal: 264/1388)

Explanation: A sync point failure occurred. AIBERRXT contains the SYNC return code.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0108/0580 (X'108'/X'580', decimal: 264/1408)

Explanation: The request message could not be sent to the external application, or the synchronous callout activation PTF was not installed.

Possible extended reason codes are:

Extended reason code	Explanation
X'0024'	Request is rejected because of OTMA TPIPE flood condition. Too many OTMA TPIPEs were allocated in the system. See the MAXTP limit in the OTMA client descriptor.

Programmer response: See the extended reason code for details. If needed, examine the X'67D0' log record to obtain the error information.

Source: DL/I codes

0108/0584 (X'108'/X'584', decimal: 264/1412)

Explanation: The response output message from the external application could not be processed by IMS.

Programmer response: IMS cannot process the response message from the external application in order to return the message to the ICAL call. Either IMS OTMA experienced an internal error, or the format of the response message is incorrect.

Source: DL/I codes

0108/0588 (X'108'/X'588', decimal: 264/1416)

Explanation: IMS Connect failed to process the response, and the response data was not returned.

Programmer response: Reissue the ICAL call from the IMS application.

Source: DL/I codes

0108/058C (X'108'/X'58C', decimal: 264/1420)

Explanation: IMS Connect failed to process the response, and the complete or partial raw data from the external client application was returned.

Programmer response: Reissue the ICAL call from the IMS application.

Source: DL/I codes

0108/0600 (X'108'/X'600', decimal: 264/1536)

Explanation: ODBM Create security environment failed.

Source: DL/I codes

0108/0604 (X'108'/X'604', decimal: 264/1540)

Explanation: ODBM failed to obtain storage for an AIB block.

Source: DL/I codes

0108/0608 (X'108'/X'608', decimal: 264/1544)

Explanation: ODBM failed to obtain storage for the ODBM Allocate PSB (APSB) block.

Source: DL/I codes

0108/060C (X'108'/X'60C', decimal: 264/1548)

Explanation: ODBM failed to obtain storage for the adapter parameter list (PAPL) block .

Source: DL/I codes

0108/0610 (X'108'/X'610', decimal: 264/1552)

Explanation: ODBM failed to locate the IMS alias name specified on the call.

Source: DL/I codes

0108/0900 (X'108'/X'900', decimal: 264/2304)

Explanation: While IMS was processing the call, it received an unknown return code. This unknown code, which is stored in field AIBERRXT, might contain additional information such as an abend code, character string, or other diagnostic information that is useful in determining the cause or reason for the error.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0110/000C (X'110'/X'00C', decimal: 2724/12)

Explanation: The user was not authorized for access to the resource name in the class requested in the AUTH call. No installation data was returned.

Programmer response: Check the program to ensure the authorization check was performed on the correct resource. If it was, check with the person who handles security in your installation to determine whether RACF authorization is required for the resource.

Source: DL/I codes

0110/0020 (X'110'/X'020', decimal: 2724/32)

Explanation: An automated operator (AO) application tried to issue an IMS command. Security checking determined that the AO application is not authorized to RACF.

Programmer response: Contact your RACF administrator to authorize your AO application to RACF.

Programmer response: Contact your IMS system programmer to authorize your AO application to RACF.

Source: DL/I codes

0110/0024 (X'110'/X'024', decimal: 2724/36)

Explanation: An automated operator (AO) application tried to issue an IMS command. Security checking determined that the user ID was not authorized to RACF.

Programmer response: Contact your RACF administrator to authorize your user ID to RACF.

Source: DL/I codes

0110/0028 (X'110'/X'028', decimal: 2724/40)

Explanation: An automated operator (AO) application tried to issue an IMS command. Security checking determined that the AO application is not authorized to issue the command.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0110/002C (X'110'/X'02C', decimal: 2724/44)

Explanation: An Automated Operator (AO) application tried to issue an IMS command. Security checking determined that the user ID was not authorized to issue the command.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0110/0030 (X'110'/X'030', decimal: 2724/48)

Explanation: An automated operator (AO) application tried to issue an IMS command. The Command Authorization exit routine (DFSCCMD0) indicated that the program was not authorized to issue the command.

Programmer response: Contact your IMS system programmer to determine why DFSCCMD0 does not recognize your AO application.

Source: DL/I codes

0110/0034 (X'110'/X'034', decimal: 2724/52)

Explanation: An automated operator (AO) application tried to issue an IMS command. The Command Authorization exit routine (DFSCCMD0) indicated the user ID was not authorized to issue the command.

Programmer response: Contact your IMS system

programmer to determine why DFSCCMD0 does not recognize your user ID.

Source: DL/I codes

0110-0038 (X'110'/X'038', decimal: 2724/56)

Explanation: An automated operator (AO) application tried to issue an IMS command. The ICMD call was not authorized from any program because the IMS execution parameter **AOIS=** was specified as N.

Programmer response: Contact your IMS system programmer to have the AOIS= execution parameter changed to allow commands from an AO application.

Source: DL/I codes

0110/003C (X'110'/X'03C', decimal: 2724/60)

Explanation: An Automated Operator (AO) application tried to issue an IMS command. RACF was not available for the authorization check. The IMS execution parameter **AOIS=** was specified as either A or R.

Programmer response: Contact your IMS system programmer to determine why RACF is not available to the IMS system.

Source: DL/I codes

0110/0040 (X'110'/X'040', decimal: 2724/64)

Explanation: An automated operator (AO) application tried to issue an IMS command. The Command Authorization exit routine (DFSCCMD0) was not available for the authorization check. The IMS execution parameter **AOIS=** was specified as either A or C.

Programmer response: Contact your IMS system programmer to determine why DFSCCMD0 was not included in the IMS system.

Source: DL/I codes

0110/0044 (X'110'/X'044', decimal: 2724/68)

Explanation: An automated operator (AO) application program tried to issue an IMS command. Security checking determined that the transaction was not authorized to RACF.

Programmer response: Contact your RACF administrator to authorize your transaction to RACF.

Source: DL/I codes

0110/0048 (X'110'/X'048', decimal: 2724/72)

Explanation: An automated operator (AO) application program tried to issue an IMS command. Security checking determined that the transaction was not authorized to issue the command.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0110/004C (X'110'/X'04C', decimal: 2724/76)

Explanation: An automated operator (AO) application program tried to issue an IMS command. The Command Authorization exit routine (DFSCCMD0) indicated the transaction was not authorized to issue the command.

Programmer response: Contact your IMS system programmer to determine why DFSCCMD0 does not recognize your transaction.

Source: DL/I codes

0110/0050 (X'110'/X'050', decimal: 2724/80)

Explanation: A CPI-C driven application issued an Allocate PSB (APSB) call. IMS determined that the user ID was not authorized by RACF (or equivalent) to use the program specification block (PSB). Field AIBERRXT of the application control block (ACB) contains additional information as follows:

- Bytes 0 to 1 - SAF return code
- Byte 2 - RACF or installation exit return code
- Byte 3 - RACF or installation exit reason code

See the RACF manual, *z/OS Security Server RACROUTE Macro Reference* (SA22-7692) for a description of the codes.

Programmer response: Contact your Security administrator to authorize your user ID to use the PSB.

Source: DL/I codes

Related reference:

z/OS: SAF return codes

z/OS: RACROUTE return codes and reason codes

0110/0054 (X'110'/X'054', decimal: 2724/84)

Explanation: An automated operator (AO) application program tried to issue an IMS command. Security checking determined that the command was not authorized to RACF as a user ID.

Programmer response: Contact your RACF Administrator to authorize your command to RACF.

Source: DL/I codes

0110/0058 (X'110'/X'058', decimal: 2724/88)

Explanation: An automated operator (AO) application program tried to issue an IMS command. Security checking determined that the command was not authorized to RACF to be issued by the transaction.

Programmer response: Contact your IMS system programmer.

Source: DL/I codes

0110/005C (X'110'/X'05C', decimal: 2724/92)

Explanation: An automated operator (AO) application program tried to issue an IMS command. The Command Authorization exit routine (DFSCCMD0) indicated the command was not authorized to be issued by the transaction.

Programmer response: Contact your IMS system programmer to determine why DFSCCMD0 does not recognize your command.

Source: DL/I codes

0110/0070 (X'110'/X'070', decimal: 2724/112)

Explanation: The DRA execution library is not authorized.

Programmer response: Verify that the application is authorized.

Source: DL/I codes

0900

Explanation: The DL/I call, which requires a PCB for processing, encountered an error during processing. The cause of this error does not currently have a unique AIB return and reason code defined. The AIB (AIBRSA1 field) contains the PCB address. You must analyze the status code in the PCB to determine the cause of the error. The reason code is not modified when the return code is 0900.

Programmer response: IMS intends to define unique AIB return and reason codes for most if not all DL/I call processing errors. The error that causes a X'0900' return code may become a unique return and reason code in the future.

Source: DL/I codes

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Bibliography

This bibliography lists all of the publications in the IMS Version 13 library, supplemental publications, publication collections, and accessibility titles cited in the IMS Version 13 library.

Title	Acronym	Order number
IMS Version 13 Application Programming	APG	SC19-3646
IMS Version 13 Application Programming APIs	APR	SC19-3647
IMS Version 13 Commands, Volume 1: IMS Commands A-M	CR1	SC19-3648
IMS Version 13 Commands, Volume 2: IMS Commands N-V	CR2	SC19-3649
IMS Version 13 Commands, Volume 3: IMS Component and z/OS Commands	CR3	SC19-3650
IMS Version 13 Communications and Connections	CCG	SC19-3651
IMS Version 13 Database Administration	DAG	SC19-3652
IMS Version 13 Database Utilities	DUR	SC19-3653
IMS Version 13 Diagnosis	DGR	GC19-3654
IMS Version 13 Exit Routines	ERR	SC19-3655
IMS Version 13 Installation	INS	GC19-3656
IMS Version 13 Licensed Program Specifications	LPS	GC19-3663
IMS Version 13 Messages and Codes, Volume 1: DFS Messages	MC1	GC19-4240
IMS Version 13 Messages and Codes, Volume 2: Non-DFS Messages	MC2	GC19-4241
IMS Version 13 Messages and Codes, Volume 3: IMS Abend Codes	MC3	GC19-4242
IMS Version 13 Messages and Codes, Volume 4: IMS Component Codes	MC4	GC19-4243
IMS Version 13 Operations and Automation	OAG	SC19-3657
IMS Version 13 Release Planning	RPG	GC19-3658
IMS Version 13 System Administration	SAG	SC19-3659
IMS Version 13 System Definition	SDG	GC19-3660
IMS Version 13 System Programming APIs	SPR	SC19-3661
IMS Version 13 System Utilities	SUR	SC19-3662

Supplementary publications

Title	Order number
Program Directory for Information Management System Transaction and Database Servers V13.0	GI10-8914
Program Directory for Information Management System Transaction and Database Servers V13.0 Database Value Unit Edition V13R1	GI10-8966
Program Directory for Information Management System Transaction and Database Servers V13.0 Transaction Manager Value Unit Edition V13R1	GI10-9001
IRLM Messages and Codes	GC19-2666

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Publication collections

Title	Format	Order number
IMS Version 13 Product Kit	CD	SK5T-8864

Accessibility titles cited in the IMS Version 13 library

Title	Order number
z/OS TSO/E Primer	SA22-7787
z/OS TSO/E User's Guide	SA22-7794
z/OS ISPF User's Guide Volume 1	SC34-4822

Product Number: 5635-A04
5655-DSM
5655-TM2

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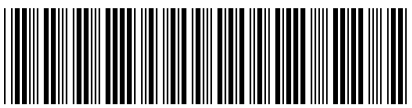

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