

IMS
Version 11

*Commands, Volume 1:
IMS Commands A - M*



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Note

Before using this information and the product that it supports, be sure to read the general information under “Notices” on page 727.

This edition applies to IMS Version 11 (program number 5635-A02) and to all subsequent releases and modifications until otherwise indicated in new editions.

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About this information

These topics provide command syntax and usage information for the IMS™ type-1 and type-2 commands /ACTIVATE through /MSVERIFY. The topics also describe the IMS command language and how to send commands to IMS in different environments. Information about all non-type-1 and non-type-2 IMS commands is in *IMS Version 11 Commands, Volume 3: IMS Component and z/OS Commands*.

This information is available in 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, your installation's IMS system, and have general knowledge of the tasks involved in project planning.

Recommendation: Before using this information, you should be familiar with the following resources:

- *IMS Version 11 Operations and Automation*
- *z/OS JES2 Commands*
- *z/OS JES3 Commands*
- *z/OS MVS™ System Commands*

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

You can gain an understanding of basic IMS concepts by reading *An Introduction to IMS*, an IBM Press publication. An excerpt from this publication is available in the IBM Knowledge Center.

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 IMS home page at ibm.com/ims and link to the Training and Certification page.

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 11, unless otherwise indicated.

IMS provides an integrated IMS Connect function, which offers a functional replacement for the IMS Connect tool (program number 5655-K52). In this information, the term IMS Connect refers to the integrated IMS Connect function that is part of IMS Version 11, 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.

How to read syntax diagrams

The following rules apply to the syntax diagrams that are used in this information:

- Read the syntax diagrams from left to right, from top to bottom, following the path of the line. The following conventions are used:
 - The >>--- symbol indicates the beginning of a syntax diagram.
 - The ---> symbol indicates that the syntax diagram is continued on the next line.
 - The >--- symbol indicates that a syntax diagram is continued from the previous line.
 - The --->< symbol indicates the end of a syntax diagram.
- Required items appear on the horizontal line (the main path).

▶▶—required_item————▶▶

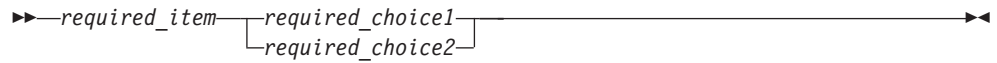
- Optional items appear below the main path.

▶▶—required_item—┐optional_item┘————▶▶

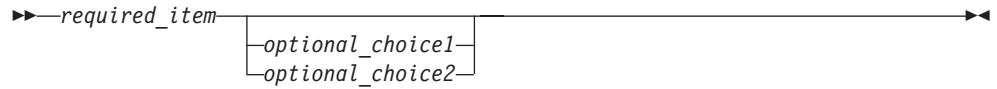
If an optional item appears above the main path, that item has no effect on the execution of the syntax element and is used only for readability.

▶▶—required_item—┐optional_item┘————▶▶

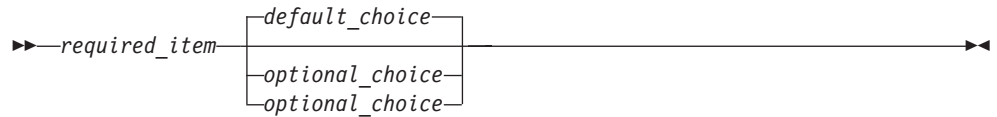
- If you can choose from two or more items, they appear vertically, in a stack. If you *must* choose one of the items, one item of the stack appears on the main path.



If choosing one of the items is optional, the entire stack appears below the main path.



If one of the items is the default, it appears above the main path, and the remaining choices are shown below.



- An arrow returning to the left, above the main line, indicates an item that can be repeated.



If the repeat arrow contains a comma, you must separate repeated items with a comma.



A repeat arrow above a stack indicates that you can repeat the items in the stack.

- Sometimes a diagram must be split into fragments. The syntax fragment is shown separately from the main syntax diagram, but the contents of the fragment should be read as if they are on the main path of the diagram.



fragment-name:



- In IMS, a b symbol indicates one blank position.
- Keywords, and their minimum abbreviations if applicable, appear in uppercase. They must be spelled exactly as shown. Variables appear in all lowercase italic letters (for example, *column-name*). They represent user-supplied names or values.
- Separate keywords and parameters by at least one space if no intervening punctuation is shown in the diagram.

- Enter punctuation marks, parentheses, arithmetic operators, and other symbols, exactly as shown in the diagram.
- Footnotes are shown by a number in parentheses, for example (1).

Accessibility features for IMS Version 11

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 11. 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 11 ISPF panel functions by using a keyboard or keyboard shortcut keys.

For information about navigating the IMS Version 11 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 11 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 **Feedback** link 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.

Changes to the IMS library

Changes to the IMS library for IMS Version 11 include minor title changes to all the publications, merging four sets of publications, a change to how *IMS Messages and Codes* are delivered, and a reorganization of *IMS Version 11 Exit Routines*. The library is no longer provided in BookManager format. In addition, as of the May, 2012, a master index is no longer provided.

The titles of all PDF publications in the IMS Version 11 library have been changed so that the publication titles match the contents view (navigation tree) titles in IBM Knowledge Center. For example, the *IMS Diagnosis Guide* has been renamed to *IMS Diagnosis*. In addition, the titles for the three *IMS Command Reference* PDF volumes have been renamed so that their titles better reflect the contents of each publication, as follows:

- *IMS Version 11 Commands, Volume 1: IMS Commands A-M*
- *IMS Version 11 Commands, Volume 2: IMS Commands N-V*
- *IMS Version 11 Commands, Volume 3: IMS Component and z/OS Commands*

Four sets of publications have been streamlined:

- To eliminate redundancy and group relevant application programming planning information with associated application programming tasks, the *IMS Application Programming Planning Guide* has been merged with the *IMS Application Programming Guide*, in a new title: *IMS Version 11 Application Programming*.
- To group diagnosis reference information with associated diagnosis tasks, the *IMS Diagnosis Reference* has been merged with the *IMS Diagnosis Guide*, in a new title: *IMS Version 11 Diagnosis*.
- To group all system administration tasks, regardless of whether the tasks relate to using a single IMS or an IMSplex, the *IMS IMSplex Administration Guide* has been merged with the *IMS System Administration Guide*, in a new title: *IMS Version 11 System Administration*.
- To group system definition reference information with associated system definition tasks, the *IMS System Definition Reference* has been merged with the *IMS System Definition Guide*, in a new title: *IMS Version 11 System Definition*.

IMS Version 11 Exit Routines is now organized by the call interface and available services for each group of exit routines, as follows:

- IMS system exits, database manager exits, and transaction manager exit routines are grouped under “IMS control region exit routines.” These exit routines use IMS interfaces and callable services, as described in the topic “Overview of exit routines for IMS.”
- Exit routines that run in an address space with BPE support, including those for CQS, BPE-based DBRC, and most CSL components, are grouped under “Base Primitive Environment-based exit routines.” BPE-based exit routines use the interfaces and services provided by the Base Primitive Environment, as described in the topic “BPE user-supplied exit routine interfaces and services.”
- The CQS exit routines are now divided into two groups: those that run in the CQS address space and have access to BPE services are grouped under “BPE-based CQS user-supplied exit routines,” and those that execute in a CQS client address space are grouped under “CQS client exit routines.”

- Standard DBRC exit routines are grouped under “IMS system exit routines,” while the variants that run in BPE are group under “BPE-based DBRC exit routines.”
- CSL SCI exit routines are now divided into two categories: those that run in the CSL SCI address space are grouped under “BPE-based SCL SCI user exit routines,” and those that run in the address space of a registered IMSplex member are grouped under “CSL SCI IMSplex member exit routines.”
- Exit routines that have specific guidelines, including those for IMS Connect, CQS clients, and CSL SCI IMSplex members, are described in the sections for those routines.

Chapter 1. IMS command language overview

You can use the IMS master terminal, TSO SPOC, or the OM API to receive messages, issue commands, and receive command responses.

IMS supports two types of command formats to manage IMS systems and resources: IMS type-1 commands and IMS type-2 commands.

You can enter IMS type-1 commands through multiple terminal types and applications, and most can be entered through the OM API. IMS type-2 commands can be entered only from the OM API. z/OS commands can be entered only from a z/OS system console, not from an IMS master terminal.

IMS type-1 commands

IMS type-1 commands can be entered from IMS terminals, master terminals, system consoles, EMCS consoles, IMS application programs through CMD calls and ICMD calls, and LU 6.2 and OTMA applications. IMS type-1 commands are in the original or classic IMS command syntax, and are preceded by a command recognition character if the command is issued from one of these interfaces.

Most IMS type-1 commands can also be entered from the OM API, but not all of them. If the command is issued from the OM API, the command recognition character is optional. Use RACF® or an equivalent security product for security checking. IMS type-1 command output from the OM API is in message format within an XML tag structure.

IMS type-2 commands

IMS type-2 commands can be entered only from the OM API, not from a master or remote terminal. Either RACF (or an equivalent security product) or command security can be used for security checking. IMS type-2 command output is in XML tag structure.

Both IMS type-1 commands and type-2 commands can be entered from the OM API (for example, TSO SPOC, IMS Control Center, or user-written programs using OM API).

Subsections:

- “How to enter IMS commands” on page 2
- “Command responses” on page 12
- “Sending messages to the z/OS system console” on page 14
- “Sending messages to the IMS master terminal” on page 14
- “IMS terminal command examples” on page 14
- “TSO SPOC command examples” on page 15
- “OM API command examples” on page 15
- “IMS type-1 command format” on page 16
- “Command processing in an IMSplex” on page 25
- “IMS type-2 command format” on page 21
- “Command characteristics” on page 26
- “Terminal security defaults for IMS type-1 commands” on page 26
- “Commands recovered during emergency restart” on page 28

- “IMS type-1 commands logged to the secondary master terminal” on page 30
- “Command security when using OM” on page 36
- “IMS type-1 commands supported from an AO application” on page 31
- “Commands mirrored on an XRF alternate” on page 36
- “Commands supported on the XRF alternate” on page 38
- “Commands and keywords supported on an RSR tracking subsystem” on page 39
- “IMS-supported terminals in an RSR environment” on page 42
- “IMS type-1 commands supported from LU 6.2 devices and OTMA” on page 42
- “Terminal security defaults for LU 6.2 devices and OTMA” on page 43
- “Commands and keywords supported by the OM API” on page 43
- “Equivalent IMS type-1 and type-2 commands” on page 47

Related reference:

“IMS type-1 command format” on page 16

“IMS type-2 command format” on page 21

How to enter IMS commands

These topics describe how to enter various types of IMS commands.

Subsections:

- “IMS MFS 3270 master terminal format”
- “Using Multiple Console Support (MCS) consoles” on page 5
- “Outstanding reply numbers on z/OS consoles” on page 5
- “Maximum length of command input from z/OS consoles” on page 5
- “Multisegment command input” on page 6
- “Commands in a DBCTL environment” on page 7
- “Commands from an LU 6.2 device” on page 8
- “Qualifying network LU names and commands” on page 8
- “Issuing commands to the OM API” on page 9
- “Batch SPOC format” on page 10

Related concepts:

 REXX SPOC API (Operations and Automation)

 Controlling IMS with the TSO SPOC application (Operations and Automation)

IMS MFS 3270 master terminal format

You can use the IMS master terminal for messages, commands, and responses.

The IMS master terminal consists of two components of the IBM 3270 Information Display System:

- A 3270 display screen with 24 lines by 80 columns; a screen size of 1920 characters
- A 3270 printer

All IMS system messages for the master terminal are sent to the display screen.

The format of the display screen is normally divided into five areas:

- System status area (line 1)
- Message area (lines 2-10)
- Display area (lines 12-21)
- Warning message area (line 22)
- User input area (lines 23 and 24)

The following figure shows the format of the master terminal display screen.

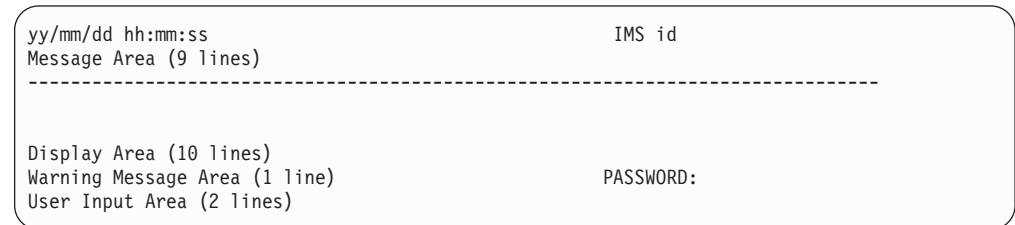


Figure 1. Master terminal format

The following figure shows the format of the master terminal display screen in an extended recovery facility (XRF) environment.

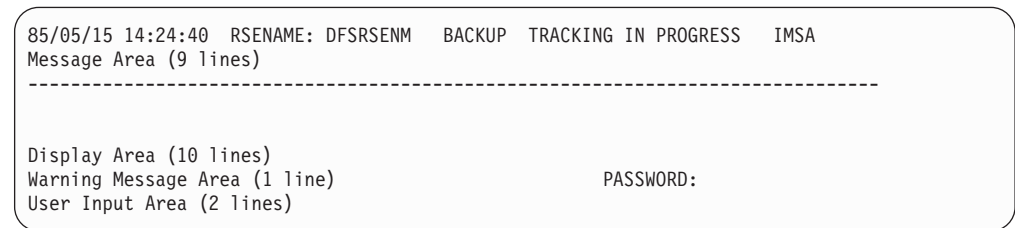


Figure 2. Master terminal format in XRF environment

System status area

This area (line 1) displays the date, time, and IMS identifier:

Date The current date

Time The current time

IMS Identifier

IMS system ID

If the system is XRF capable, the following information is also displayed on the status line:

RSEname

Recoverable service element name

System

ACTIVE or BACKUP (field is completed following the initialization phase)

Phase Blank or one of the following:

Initialization

Active or alternate system is in initialization phase

Synchronization

Alternate system processing SNAPQ checkpoint

Tracking in progress

Alternate system synchronized with active system and in the process of tracking active system

Takeover in progress

Alternate system in the process of taking over from active system

Awaiting I/O prevention

New active system is in I/O toleration mode and is awaiting completion of I/O prevention on the failing system prior to becoming a true active system

Message area

This area (lines 2 through 10) displays IMS system messages, messages from other terminals and programs, and responses to IMS commands, except responses to a /DISPLAY command. If the message area is full and more output needs to be displayed, a warning message is sent. Press the PA1 key to receive more output. New data is displayed on the top line followed by a blank line to separate new data from old messages.

Display area

This area (lines 12 through 21) displays the output from a /DISPLAY command. If the response to the command exceeds the size of the area, a warning message is sent.

Warning message area

This area (line 22) can contain one of the following warning messages:

MASTER LINES WAITING

A message being displayed in the message area has exceeded the available space and is only partially displayed.

MASTER MESSAGE WAITING

The message area is full, and a message from another terminal or program is waiting to be displayed.

DISPLAY LINES WAITING

The output of a /DISPLAY command exceeds the size of the display area.

USER MESSAGE WAITING

A message requiring the screen to be formatted differently is waiting to be displayed.

In all cases, press the PA1 key to receive the waiting output.

The literal PASSWORD is followed by an unprotected field with the nondisplay attribute at the end of line 22.

User input area

This area (lines 23 and 24) is used to enter IMS commands. It consists of two 79-character segments, so you can enter multisegment commands such as /BROADCAST, /CHANGE, /RMxxxxxx, and /SSR. For example, to send a message to all active terminals, enter /BROADCAST ACTIVE on line 23 and enter the message text on line 24. The cursor is initially positioned by IMS to line 23, your first input line.

Using Multiple Console Support (MCS) consoles

You can enter IMS commands from Multiple Console Support (MCS) or Extended Multiple Console Support (E-MCS) consoles.

Use the CMDMCS keyword for the IMS, DBC, or DCC procedures during IMS system definition to enable commands to be entered from MCS or E-MCS consoles.

In a DB/DC environment, if Multiple Console is enabled (CMDMCS other than 'n' specified), IMS commands can be entered from an MCS or E-MCS console by prefixing the command by either the CRC or IMSID. For example, if the CRC is '#', a valid command would be #DIS A. If the IMSID is 'IMSP', a valid command would be IMSPDIS A.

Each segment of an IMS command must begin with one of the following:

- The command-recognition character for the IMS subsystem
- The IMS ID of the IMS subsystem

For multisegment commands, each segment, except the last, must end with the command recognition character or IMS ID followed by the ENTER key. The last segment must end with only the EOM (end-of-message, or ENTER) character.

You can send commands to all the IMS systems in an IMSplex by using an automated operations single-point-of-control (SPOC) application that sends commands and receives the responses to those commands through the Operations Manager (OM) application programming interface (API).

When you are using a Resource Manager (RM) structure in an IMSplex, it is best to issue commands to the Operations Manager (OM) through the TSO SPOC.

Outstanding reply numbers on z/OS consoles

Outstanding reply numbers are used only on z/OS system consoles. They are used to pass input directly to IMS. Terminals defined to IMS do not use outstanding reply numbers.

As an example, IMS might display the following on the z/OS console:

```
*48 DFS996I *IMS READY*
```

To communicate with IMS through the z/OS system console, you must reply with the outstanding reply number (in this example, the number is 48). A reply might look like this:

```
R 48,/START DC
```

After IMS responds to the command, the next outstanding reply number is displayed with the DFS996I message, as follows:

```
DFS058I START COMMAND COMPLETED  
*49 DFS996I *IMS READY*
```

Maximum length of command input from z/OS consoles

For single-segment commands that are entered from the z/OS console, the maximum character length (including command recognition characters) is 118.

This limit comes from the implementation of the WTOR macro.

Multisegment command input

Multisegment commands require an EOS (end-of-segment) indicator for all segments preceding the last segment, and an EOM (end-of-message) indicator for the last segment.

The EOS and EOM will vary, depending on the type of terminal entering the command. For example, on the system console, EOS is indicated by the ENTER key and EOM is indicated by entering a period followed by the ENTER key.

The following are multisegment commands:

- /ALLOCATE
- /BROADCAST
- /CHANGE
- /ERESTART
- /LOOPTEST
- /OPNDST
- /RMxxxxxx
- /SSR

The period is used both as a delimiter for comments on IMS commands and as an EOM indicator for some terminal types. The following four examples illustrate the use of the period in both contexts.

Example 1 for multisegment commands

System console entry:

```
24,/BRO MASTER. END OF DAY MESSAGE
25,I AM GOING HOME. PLEASE TAKE OVER.
```

Response on master terminal:

```
I AM GOING HOME. PLEASE TAKE OVER.
```

Explanation: The first input segment (reply 24) contains only the command and consists of a comment (END OF DAY MESSAGE) separated from the command itself (BRO MASTER) by a period. The second input segment (reply 25) consists of the data to be broadcast. The first period in segment 2 is part of the data and the second period in segment 2 is the EOM indicator for the system console.

Example 2 for multisegment commands

System console entry:

```
26,/CHANGE DIRECT
27,ORY MFS. MODIFICATION.
```

Explanation: MODIFICATION in segment 2 is a comment and is separated from the command by the first period. The second period in segment 2 is the EOM indicator for the system console.

The above 2 segments are combined and the following is input to the command processor:

```
/CHANGE DIRECTORY MFS. MODIFICATION
```

Example 3 for multisegment commands

System console entry:

```
28,/CHANGE LINK 1
29,2 3 FORCSESS.
```

Explanation: Certain forms of reply to the system console “outstanding reply” can compress out leading blanks from input segments. In example three, the command processed by the /CHANGE command processor would be: /CHANGE LINK 12 3 FORCSESS. To obtain the desired command, /CHANGE LINK 1 2 3 FORCSESS, one of the following forms of reply could be used:

```
R 29,'/CHANGE LINK 1'
R 30,' 2 3 FORCSESS.'
```

or

```
29,/CHANGE LINK 1
30, 2 3 FORCSESS
```

Example 4 for multisegment commands

LU2 or 3270 Display Terminal entry:

```
/FORMAT DFSM04
/BRO LTERM WTOR (eos)
this is segment 1 (eos)
this is segment 2 (eos)
this is segment 3 (eom)
```

Explanation: The remote terminal is first formatted by the /FORMAT command, where default format DFSM04 supports the input of 4 segments.

For LU2 and 3270 display terminals, enter a /FORMAT DFSM04 command before entering the multisegment command.

Commands in a DBCTL environment

In a DBCTL environment, there are no outstanding reply numbers for z/OS consoles, and therefore none should be entered. For a command, just enter the command recognition character (slash or other character preceding the verb) or IMS ID, followed by the command. DBCTL does not respond with the DFS996I outstanding reply number.

Examples for DBCTL commands

System console entry for single-segment command:

```
¢DIS DB PAYROLL
```

Explanation: ¢ is the command-recognition character for the DBCTL subsystem.

```
IMS1DIS DB PAYROLL
```

Explanation: IMS1 is the IMS ID for the DBCTL subsystem.

System console entry for multisegment command:

```
/RMI DBRC='IC DBD(DEDBDD01) AREA (DD01AR0) ICDSN(FVT31.DEDBDD01.DD01
AR0.IC.DUMMY1) ICDSN2/
/(FVT31.DEDBDD01.DD01AR0.IC2.DUMMY1) HSSP'
```

Explanation: The first segment of the /RMI command has the command recognition character at the beginning of the segment and at the end of the segment, to indicate another segment follows. The last segment has the command recognition character at the beginning of the segment only.

Commands from an LU 6.2 device

To enter a command from an LU 6.2 device, allocate a conversation using an IMS command verb as the TPNAME.

The “/” must be included in the command word. The password option is not valid. (The password must be supplied as a part of the LU 6.2 ALLOCATE from the partner.) The normal LU 6.2 security provisions apply for this transaction.

Restriction: The APPC synchronization level of CONFIRM is ignored for commands from LU 6.2 devices.

The following three examples show the sequence of steps used to issue commands by allocating a synchronous conversation on an LU 6.2 device:

Example 1 for commands from an LU 6.2 device

```
ALLOCATE
  -LUNAME=luname of IMS
  -TPNAME=/DISPLAY                (Single segment command)
SEND
  -DATA=LTERM VA01 VA02.comments (Data after period treated as comments)
PREPARE_TO_RECEIVE
RECEIVE                          (Get header)
RECEIVE                          (Get output for LTERM VA01)
RECEIVE                          (Get output for LTERM VA02)
RECEIVE                          (Get time stamp)
RC=DEALLOCATE
```

Example 2 for commands from an LU 6.2 device

```
ALLOCATE
  -LUNAME=luname of IMS
  -TPNAME=/CHANGE                (Multisegment command)
SEND
  -DATA=NODE                     (Can spread over several SENDs)
SEND
  -DATA=VA02 ASR OFF.comments    (Data after period treated as comments)
PREPARE_TO_RECEIVE
RECEIVE                          (Get DFS058 CHANGE COMMAND COMPLETED)
RC=DEALLOCATE
```

Example 3 for commands from an LU 6.2 device

```
ALLOCATE
  -LUNAME=luname of IMS
  -TPNAME=/BROADCAST
SEND
  -DATA=NODE VAT0*               (1st SEND: the destination)
SEND
  -DATA=HELLO, HOW ARE YOU ALL?  (Subsequent SENDs: message to broadcast)
PREPARE_TO_RECEIVE
RECEIVE                          (Get DFS058 BROADCAST COMMAND COMPLETED)
RC=DEALLOCATE
```

Qualifying network LU names and commands

Qualifying LU names gives the system administrator the liberty of using the same name for LUs on different systems by adding the network identifier. This eliminates the necessity to have unique names for every LU on every system in your complex.

A network-qualified LU name consists of a network identifier of the originating system that is 1 to 8 characters long, a period, and then the LU name, which is 1 to

8 characters long. IMS commands that include network-qualified LU names must be enclosed in single quotes. For example: 'NETID001.LUAPPC02'. No blanks are allowed in a network-qualified LU name.

The parameter ALL for either the network identifier or the LU name cannot be substituted in a command for a network-qualified LU name. ALL cannot represent all of the LU names or all of the networks.

The LU name in the LU 6.2 descriptors can be network-qualified.

The network-qualified LU name is optional on commands that support the LUNAME keyword.

Issuing commands to the OM API

You can issue commands to the OM API and receive responses from the API by using a single point of control (SPOC) application (such as the TSO SPOC, which is shipped with IMS) or the Control Center.

Related concepts:

 CSL OM automated operator program clients (System Programming APIs)

TSO SPOC format

The TSO SPOC is an IBM-supplied application that can issue operator commands in an IMSplex.

The TSO SPOC application uses an ISPF panel interface and communicates with an Operations Manager (OM) address space. OM then communicates with all of the other address spaces in the IMSplex (for example, IMS) as required for operations. TSO SPOC can issue all type-2 commands and it has a set of panels dedicated to the task of managing resources (also known as issuing DRD-related commands).

There can be more than one TSO SPOC in an IMSplex. However, the TSO SPOC is optional in an IMSplex.

The TSO SPOC provides the following functions to an IMSplex:

- Presents a single system image for an IMSplex by allowing the user to issue commands to all IMS systems in the IMSplex from a single console.
- Displays consolidated command responses from multiple IMS address spaces.
- Sends a message to an IMS terminal connected to any IMS control region in the IMSplex by using the IMS /BROADCAST command.

There are several ways to issue commands in the IMS TSO SPOC application:

- By command line
- By retrieving a command
 - Using the ISPF RETRIEVE command
 - Using a command listed in the response area
 - Using the Command status panel
- By defining and using command shortcuts

You can use these methods in any combination at any time.

The following figure shows the format of the TSO SPOC screen.

File	Display	View	Options	Help

PLEX1		IMS Single Point of Control		
Command ==> _____				
----- Plex . _____ Route . _____ Wait . _____				
Response for:				
CSLM000I (C) Copyright IBM Corp. 2000. All rights reserved.				
F1=Help	f3=Exit	F4=Showlog	F6=Expand	F9=Retrieve F12=Cancel

Figure 3. TSO SPOC screen format

You can issue both IMS type-1 commands and type-2 commands using the TSO SPOC interface. Enter the command next to the command prompt (Command ==> in the figure above). Enter the IMSplex name in the Plex field. Enter the list of IMS systems to which to route the command, if applicable, in the Route field. After you type the command, press Enter. The command issued is shown in the Response for: field and the actual command response is shown below the Response for: field.

Entering comments from a TSO SPOC

For type-1 IMS commands, a period ends a command and anything after it is a comment. The following example shows a type-1 IMS command with a comment.

```
/DISPLAY ACT .a test comment
```

For type-2 commands, the comment must be enclosed in a slash and asterisk. At the end of the last parameter of the command, type a forward slash followed by an asterisk, then the comment text, followed by an asterisk and slash. The comment text must not have an embedded asterisk slash in it. The following is an example of a command with a comment:

```
QUERY TRAN NAME(PART) SHOW(QCNT) /*Show queue count for tran part*/
```

Control Center format

The IMS Control Center, included in the IBM DB2 Universal Database™ Control Center, uses the IMS Single Point of Control (SPOC) functions to enable IMS systems management from a workstation.

You can issue and view IMS type-1 and type-2 commands from the IMS Control Center. There are online wizards that help you build and issue commands. The Control Center command output is similar to the output displayed from the TSO SPOC. The same information is provided, but formatted in a graphical interface based on the Windows system.

For information about installing and using the IMS Control Center, see the IBM Knowledge Center.

Batch SPOC format

The Batch SPOC is a utility program that uses OM services to submit IMS operator commands to an IMSplex. The utility program is not specific to DRD commands; it accepts any commands that are supported by the OM API.

The Batch SPOC utility is invoked by use of standard JCL statements. The following example shows a simple invocation:


```
//SPOCJOB JOB ,
// MSGCLASS=H,NOTIFY=&SYSUID,USER=&SYSUID/*
//SPOC EXEC PGM=CSLUSPOC,
// PARM=('IMSPLEX=PLEX1,ROUTE=IMS3,WAIT=30')
//STEPLIB DD DISP=SHR,DSN=IMS.SDFSRESL
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
  QRY IMSPLEX SHOW(MEMBER,TYPE, +
                    STATUS)
  QRY TRAN NAME(INV1*) SHOW(ALL) /* inventory appl */
/*EOF
```

The program parameters define the IMSPlex environment. The parameter keywords are:

IMSPLEX

The 1-to-5 character suffix of the IMSPlex name. This parameter is required.

ROUTE

The SYSIDs of IMSPlex members that are to run the command. If ROUTE is not specified, all members of the IMSPlex will run the command. If more than one member is specified, enclose the list in parenthesis and separate the names with commas.

WAIT

Specifies the wait time for individual commands. The wait value is in minutes and seconds (MMM:SS) or just seconds (SSSSS). OM will return a single response as soon as a response is received from all of the members of the IMSPlex. If the interval expires, OM will return any responses from IMSPlex members, plus an indication that some did not reply. The Batch SPOC will wait for each command to complete before issuing the next command. The default wait value is five minutes (5:00). The WAIT time applies to every command in the SYSIN file. The user can specify a wait time of zero seconds; in this case, the Batch SPOC issues a command but does not wait for the response.

The SYSIN file is provided by the user and contains the commands that the user wants to run. The commands are run serially. When one command completes, the next command is run until all records from the SYSIN file are processed.

Continuation of the SYSIN control statements is specified by a plus sign (+) or a minus sign (-) as the last non-blank character of the line. A plus sign removes the leading spaces from the next line; a minus sign keeps leading spaces. Comments can be included within the SYSIN file and are specified as:

```
/* this is a comment */
```

The SYSPRINT file will have the formatted command response. If more than one command is issued, the responses will appear in the same order as the commands appear in the SYSIN file. The default record length is 133. The command response is formatted in a similar format as the TSO SPOC display. If the records are too long, they wrap to the next line. The user may specify DCB information in the JCL or in the data set allocation to allow longer records in the SYSPRINT file.

System Display and Search Facility (SDSF) can be used to view batch job output. The following is an example of batch job output:

```
=====
Log for. . . : QRY IMSPLEX SHOW(MEMBER,TYPE,STATUS)
IMSPlex . . . : PLEX1
Routing . . . :
Start time. . . : 2005.132 15:36:28.11
Stop time . . . : 2005.132 15:36:29.17
```

```

Return code . . . : 00000000
Reason code . . . : 00000000
Command master. . : SYS3
IMSpIex MbrName CC Member Type Status
CSLPLEX1 OM1 0 SYS3 DBDC ACTIVE
CSLPLEX1 OM1 0 IMS2 DBDC ACTIVE
=====

```

If no wait time, WAIT=0, is specified, the command response is not available and therefore are not printed. The SYSPRINT file will only have short summary information for each command. The following is an example of bath job output with no response:

```

=====
Log for. . . : QRY IMSPLEX SHOW(MEMBER,TYPE,STATUS)
IMSpIex . . . . . : PLEX1
Routing . . . . . :
Start time. . . . : 2006.075 15:36:28.11
=====

```

Command responses

With the exception of the /DISPLAY command, /FORMAT command, and type-2 commands returned through the OM API, responses to IMS commands are prefixed by the letters DFS*nnn*; *nnn* identifies the message.

A response to an IMS command is an acknowledgment from IMS to the originating terminal that the command has been received. Responses that go to the system console have an IMS ID that identifies the IMS system that issued the message. For example, the response to /DBDUMP DATABASE MSDB would be:

```
DFS058I (time stamp) DBDUMP COMMAND IN PROGRESS (IMS id)
```

At system definition, the TIMESTAMP/NOTIMESTP parameter of the COMM macro determines whether the time stamp is present or absent. If the time stamp feature is included, the date and time of the response appear between the response prefix and the text.

The DFS058 COMMAND COMPLETED/IN PROGRESS response indicates whether IMS accepted the command. If some parameters of the command are not accepted, the response includes the EXCEPT phrase and indicates the parameters that were not accepted. If IMS does not have the space for all of the not-accepted parameters, it truncates the EXCEPT phrase and terminates it with ...etc.. Commands that specify the ALL parameter are most likely to be truncated. Truncated EXCEPT phrases on commands are normally caused by:

- Misspelling a parameter
- Specifying an invalid parameter for the command
- Specifying the ALL parameter for resources when some of them are already in the requested state

Related reference:

 XML tags returned as CSL OM responses (System Programming APIs)

Command responses to OM

| When an IMS type-2 command or IMS type-1 command is issued from the
| Operations Manager (OM) API, OM routes it (through the Structured Call Interface
| (SCI)) to one or more IMS systems based on the command routing. Each IMS

returns the command response to OM. The command responses from each IMS are grouped together by OM and returned to the caller.

For each IMS command that is issued from OM API, the response is encapsulated in XML tags.

The type-2 command responses to OM also include a return code, reason code, and a possible completion code. The return or reason code returned for the command might also indicate an error from a Common Service Layer (CSL) request.

When the following type-1 commands are issued from OM API, the DFS058I COMMAND IN PROGRESS message is not returned. Instead, the messages that result as a part of command processing are returned to OM. Following is the list of commands that do not return the DFS058I COMMAND IN PROGRESS message:

- /DBDUMP DB
- /DBRECOVERY AREA
- /DBRECOVERY DB
- /DBRECOVERY DATAGRP
- /LOCK DB
- /START AREA
- /START DB
- /START DATAGRP
- /STOP ADS
- /STOP AREA
- /STOP DB
- /STOP DATAGRP
- /UNLOCK DB
- /VUNLOAD AREA

Related concepts:

 How to interpret CSL request return and reason codes (System Programming APIs)

Related reference:

 Return and reason codes for commands to OM (Messages and Codes)

Responses to LU 6.2 devices

The response to a command from an LU 6.2 device is sent synchronously if the initiating conversation is not deallocated by the remote device. If the conversation is deallocated, the command response is sent asynchronously using the LUNAME of the device and a TPN of DFSCMD. The remote device must allocate separate DFSCMD conversations to receive each asynchronous message.

When the following commands are entered from LU 6.2 devices:

- /DBDUMP DATABASE
- /DBRECOVERY AREA
- /DBRECOVERY DATABASE
- /START AREA
- /START DATABASE
- /START REGION
- /STOP AREA

- /STOP DATABASE
- /STOP REGION

The DFS058 COMMAND COMPLETED message is generated instead of the DFS058 COMMAND IN PROGRESS message. If the LU 6.2 conversation is synchronous (the conversation still exists), the DFS058 COMMAND COMPLETED message is the last message the operator receives. If the LU 6.2 conversation is asynchronous (the conversation is deallocated), the order of delivery of the DFS058 message can vary.

Sending messages to the z/OS system console

Each z/OS system console in the sysplex has a unique LTERM name.

In an XRF environment, the real z/OS system console name is the RSE name specified in the HSB member. For a non-XRF subsystem, the real system console name is the IMS ID. The generic z/OS system console name is always “WTOR”. The generic name is translated to the real LTERM name when a message is sent to the z/OS system console.

Because each z/OS system console has a unique LTERM name, a message can be sent to any z/OS system console in the sysplex if the real LTERM name (not the generic name) is used.

Sending messages to the IMS master terminal

Each IMS master terminal (MTO) in the sysplex has a unique LTERM name, and if they are VTAM® terminals they also have unique node names.

Each IMS assigns its primary MTO the default LTERM name “DFSPMTO” as a generic name. Each secondary MTO is assigned “DFSSMTO” as the default generic name. You can override either of these default generic names during IMS system definition by using the DFSDCxxx member of IMS.PROCLIB. The generic name is translated to the real LTERM name when a message is sent to the MTO.

Restriction: If you use the DFSDCxxx member to override a default generic name, you must not specify a statically-defined node name. Also, the node name you specify must have the same physical characteristics as the default node you are overriding. If you change the DFSDCxxx member, you must perform a cold start of IMS.

In a shared-queues environment, because each MTO has a unique LTERM name, a message can be sent to any MTO in the sysplex if you use the real LTERM name (not the generic name).

Related reference:

 DFSDCxxx member of the IMS PROCLIB data set (System Definition)

IMS terminal command examples

Some command examples show the format of commands entered and received from an IMS terminal--entry terminal (ET), master terminal (MT), or response terminal (RT). One or more examples are given for each command.

The examples show:

Entry ET:

How the command looks as entered from the entering terminal (ET).

Response ET:

The IMS response transmitted to the entering terminal (ET).

Entry MT:

How the command looks as entered from the master terminal (MT).

Many IMS commands reference other terminals. Examples of these commands include:

Response RT:

The IMS response transmitted to the referenced terminal or terminals (RT).

The ET and RT responses might or might not print or display, depending on what type of terminal is referenced and whether the MSGDEL (message delete) option was specified for the terminal at system definition time.

TSO SPOC command examples

Some command examples show the input and output of commands from a TSO SPOC. Both type-2 commands and type-1 commands can be entered from a TSO SPOC. One or more examples are given for each command.

The examples show:

TSO SPOC input:

How the command looks as entered from the TSO SPOC.

TSO SPOC output:

The command response as displayed by the TSO SPOC.

Explanation: An explanation of the command and response.

Some type-2 commands include a section describing the environment of the IMSplex prior to entering the command. A response panel, log panel, or both displays when a command is entered from a TSO SPOC. Output data from the response panels are included in the examples, but output data from the log panels are not. The log panels display the OM return and reason codes for the command.

OM API command examples

Some command examples show the input and output of commands to and from the OM API. Both type-2 commands and type-1 commands can be entered from the OM API. One or more examples are given for each command.

The examples show:

OM API input:

How the string looks as built by the AOP client.

OM API output:

The response with XML tags sent from OM.

Explanation: An explanation of the command and response.

Some type-2 commands include a section describing the environment of the IMSplex prior to entering the command.

IMS type-1 command format

This section describes the general format for an IMS type-1 command.

Subsections:

- "Command recognition character"
- "Verb"
- "Keywords"
- "Parameters"
- "Null keywords" on page 20
- "Comments" on page 20
- "Passwords" on page 20

Command recognition character

The slash (/) is the command recognition character for IMS commands. In a DBCTL environment, another character can be defined as the command recognition character and would replace the slash.

Verb

The /VERB (such as /STOP) is the first command element and identifies the action to be taken. To abbreviate a verb, use only the slash and the first three characters. Enter the characters using either uppercase or lowercase letters.

Keywords

IMS keywords are reserved words identifying IMS resources that relate to transaction management, databases, or the IMS system. Many commands require one or more keywords.

Table 58 on page 57 is a list of available keywords and their synonyms. The alphabetic list of keywords after Table 58 on page 57 explains the use of the keyword for each IMS command it affects.

Restriction: Keywords and their synonyms are reserved words. Do not use reserved words to name system resources such as transactions, programs, logical terminals, databases, and MFS block names.

Keywords are shown in uppercase. The keyword or an allowable synonym can be entered in uppercase or lowercase.

Parameters

Parameters refer to installation defined or created resources, such as nodes, databases, or physical terminals, or IMS reserved parameters. Parameters in IMS

commands must be replaced with parameter values. Reserved parameters have a unique meaning to IMS and refer to system resources or functions.

The format of the parameters that can be entered is determined by the command and keyword with which they are associated. Use the syntax example provided at the beginning of each command description to determine the valid parameter formats for that command.

When commands are entered, parameters are separated from a keyword by a space or an equal sign (=). Multiple parameters are separated by a comma, a blank, or a comma followed by a blank. The last parameter of one keyword is separated from the next keyword either by a space, a comma, or an equal sign.

In the syntax examples, default parameters appear above the syntax line. Optional parameters appear below the syntax line.

In the syntax examples, a repeat-line is shown as follows:



The repeat-line indicates that multiple parameters can be entered. To save time while entering multiple parameters for the LINE, PTERM, NODE, and LINK keywords, inclusive parameters can be specified in some commands.

Restriction: Use of the ALL parameter, generic parameters, or excessive use of multiple or inclusive parameters in the large terminal network can cause some of the following problems:

- “Lock out” of the operator for the duration of the command processing
- Creation of large multisegment output messages
- Command action for only part of the terminal resources intended
- Temporary storage shortages
- Artificially high storage pools within IMS, VTAM, or both

Reserved words

The resources you define, such as nodes, physical terminals, and databases, may be referenced as parameter values in IMS commands. Do not use reserved words to name these resources, or IMS might not interpret the command as expected. For example, if you define a node called TKOTRA and issue a /DISPLAY NODE TKOTRA command, IMS will list all the nodes that have an attribute of TKOTRA, instead of the specific node named TKOTRA.

ALL parameter

Entering the reserved parameter ALL specifies all defined resources related to that keyword. ALL cannot be used with every command.

ALL=NO or ALL=DIS can be specified on the KEYWD macro to prevent use of the ALL parameter. ALL=NO and ALL=DIS can be specified for all keywords. ALL=NO indicates that the ALL parameter is invalid on all the commands for the keyword. ALL=DIS indicates that the ALL parameter is invalid on all the /DISPLAY commands for the keyword.

Inclusive parameters

Inclusive parameters are used to specify a group of parameters by entering only the first and last parameters of the group. Inclusive parameters can be used for the following resources:

- Line
- Link
- Static node
- PTERM

To use inclusive parameters, enter the first parameter, a hyphen, then the last parameter (parameter1-parameter2).

For the LINE, PTERM, and LINK keywords, the group of parameters specified is assumed to be based on numeric sequence; that is, entering 3-6 specifies parameters 3, 4, 5, and 6. Inclusive parameters are limited to the PTERM keyword when it appears with the LINE keyword in a command. For the NODE keyword, the group of parameters must be static and based on the IMS definition sequence, not numeric or alphabetic sequence.

Generic parameters

You can use generic parameters to specify a group of resources whose names match a 1- to 8-character alphanumeric mask. Generic parameters apply to both type-1 and type-2 commands.

A generic parameter can include one or more of the following wildcard characters:

- * Matches zero or more characters. When used alone, it matches all the names for the keyword or resource.
- % Matches exactly one character.

The following examples illustrate some uses of wildcard characters:

- C0*** Matches any string of any length that begins with C0. For instance: C0, C00, C00P
- %%S** Matches any 3-character string that ends with S. For instance: IMS, XYS
- C0*%1** Matches any string of 5 or more characters that starts with C0, ends with 1, and has at least 2 characters between C0 and 1. For instance: CONV1, CONV21, CONV221, CONV23B1

Specifying an asterisk alone as the generic parameter (such as NAME(*)) is equivalent to specifying ALL (such as NAME(ALL)). However, depending on the installation, other generic parameters can mean ALL. For example, the generic parameter %%% means ALL to an installation whose resource names are all 4 characters long. Some commands support NAME(*) and do not support NAME(ALL) for a wildcard name.

When a generic parameter is used, IMS uses a serial search of all resources to match the generic name. Using a serial search of all resources can have performance implications in larger systems.

Restriction: For type-1 commands, if you specify ALL=NO on the KEYWD macro, you cannot use an asterisk (*) or ALL for the keyword. However, if you specify

ALL=NO on the KEYWD macro, you can use other generic parameters that are equivalent to ALL. If you are using BASIC EDIT, and you enter a command with a generic parameter containing two asterisks in a row at the end of the command, the command is discarded.

The following table lists some of the type-1 commands and keywords that support generic parameters.

Table 1. Type-1 commands and keywords that support generic parameters

Command	Keyword supported
/BROADCAST	LTERM, NODE, USER
/CHANGE	NODE
/CLSDST	NODE
/DISPLAY	LTERM, MSNAME, NODE, TRAN, USER
/DISPLAY ASMT	LTERM, MSNAME, NODE, USER
/DISPLAY CONV	NODE, USER
/IDLE	NODE
/OPNDST	NODE
/PSTOP	LTERM, TRAN
/PURGE	LTERM, MSNAME, TRAN
/RSTART	NODE, USER
/START	LTERM, MSNAME, NODE, TRAN, USER
/STOP	LTERM, MSNAME, NODE, TRAN, USER
/TRACE	NODE

Restriction: Generic parameters are not supported in NODE, USER, or TRAN CLASS combinations.

Group parameters

A group parameter allows easy specification of a group of resources, where the resources in the group are defined and managed by the installation. Group parameters apply to both type-1 and type-2 command.

Group parameters are supported with the DATAGRP keyword for the /DBRECOVERY, /START, /STOP, and UPDATE (type-2) commands. A group name is one to eight characters long. It is associated with a list of databases, DEDB areas, or database data sets.

A database group name and its associated databases or DEDB areas is defined in the DBRC RECON data set using the DBRC INIT.DBDSGRP command with parameters GRPNAME and DBGRP.

A database data set (DBDS) group name and its associated DBDSs is defined in the DBRC RECON data set using the DBRC INIT.DBDSGRP command with parameters GRPNAME and MEMBERS.

- Adding resources to a group
Use the CHANGE.DBDSGRP command with the GRPNAME and ADDDB parameters to add databases or areas to a database group.

Use the `CHANGE.DBDSGRP` command with the `GRPNAME` and `ADDMEM` parameters to add DBDSs to a DBDS group.

- Deleting resources from a group

Use the `CHANGE.DBDSGRP` command with the `GRPNAME` and `DELDDB` parameters to delete databases or areas from a database group.

Use the `CHANGE.DBDSGRP` command with the `GRPNAME` and `DELMEM` parameters to delete DBDSs from a DBDS group.

- Displaying resources in a group

Use the `LIST.DBDSGRP` command or the online `/RMLIST` command to display the databases or areas in a database group, or the DBDSs in a DBDS group.

Groups defined for commands should contain only databases and areas for use with the `DATAGROUP` keyword.

Null keywords

Null keywords are used to help clarify the syntax of the command being entered but have no effect on the command. Null keywords can be used within IMS commands at any time. However, they cannot be used with type-2 commands. Null keywords are reserved words. Do not use them to name system resources. The following are IMS null keywords:

- AFTER
- FOR
- ON
- SECURITY
- TO

Comments

You can add comments or notes to the end of a command. When you add comments, identify the end of the command by entering a period after the last parameter. If you do not enter a period, residual data from a 3270 affects command processing.

Passwords

Depending on the password security arrangement of the defined IMS system and the terminal where the command is entered, a password can be required after the command verb, or after a parameter or a keyword of certain commands.

If a command password is required, it must be entered immediately after `/VERB` and is normally enclosed in parentheses. No spaces or intervening characters are allowed between the `/VERB` and the left parenthesis.

When using MFS, if a command password is required, the installation-defined MFS format must contain a defined password field. The password must be entered into the password field defined by the format displayed. If command entry field of the format is defined to accept the command verb only, message DFS1051 is issued when an attempt is made to enter `/VERB(password)`.

None of the IMS-supplied default formats (exception for the master terminal format) have a password field defined.

You must use RACF or an equivalent security product to require a command verb password associated with the user ID signed on to the dynamic terminal.

The /IAM, /LOCK, and /UNLOCK command keywords and parameters support passwords.

The /IAM, /LOCK, and /UNLOCK command parameters also support passwords when defined for users using RACF for static and dynamic resources. The password associated with a signed on user and specified after a command resource parameter will be used to perform a reverification check, if the resource is defined to RACF with 'REVERIFY' specified in the APPLDATA field. If the resource passes the RACF authorization check, and RVFY=Y is specified as an IMS startup parameter, IMS will verify that the password following the parameter is the same as the password entered during signon for the user that entered the command. If 'REVERIFY' is specified for a resource, but a password is not provided, or the wrong password is provided, the command processing for that resource will be rejected. This is also true for the /SET TRANSACTION and /SET CONVERSATION commands.

The use of passwords is not shown in the examples.

Related reference:

Chapter 5, "List of reserved words," on page 85

 IMS Command Language Modification facility (DFSCKWD0) (Exit Routines)

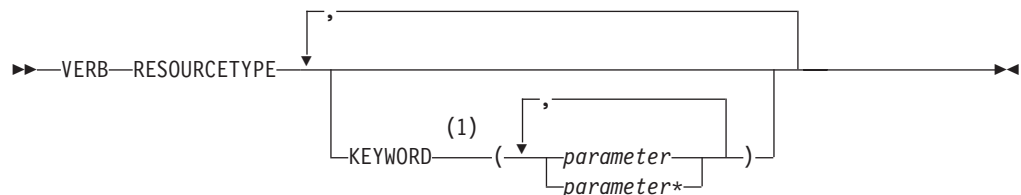
IMS type-2 command format

IMS type-2 commands use a different format from the format used by IMS type-1 commands.

Type-2 commands can be issued only through the Operations Manager (OM) APIs by an automated operator program (AOP). An example of an AOP is the IBM-supplied TSO single point of control (SPOC) application. These commands cannot be entered from the system console, the MTO, an end-user terminal, or an IMS AOI application program. Type-2 commands are not passed to the IMS AOI user exits and are also not logged to the IMS secondary master.

Almost all commands issued through the OM API (including the IMS type-1 commands) do not require a command recognition character (for example, a slash). If one is supplied, the OM API will ignore it. The only exception to this rule is the type-1 /EXIT command, which requires a slash when entered from a TSO SPOC application.

The command format with common keywords is as follows:



Notes:

- 1 For some commands, KEYWORD is required, not optional.

The following is a list of the parameters with a short description of each.

VERB Identifies the action to be taken. The command verb can be abbreviated.

RESOURCE TYPE

Identifies the type of resource the command acts upon. The following is a list of the resource types:

AREA An area resource in an IMS.

DATAGRP

The members of a data group in an IMS.

DB The database in an IMSplex.

DBDESC

The databases descriptor in an IMSplex.

IMS Status and attributes of an IMS.

IMSPLEX

A group of IMS systems, CSL (SCI, OM, RM) members and CQs.

LE Language Environment® runtime parameter definitions.

MEMBER

An IMSplex component (For example, an IMS, OM, RM, or SCI).

MSLINK

Logical links.

MSPLINK

Physical links.

MSNAME

Logical link paths.

ODBM

Open Database Manager (ODBM), a component of the Common Service Layer (CSL).

OLC An online change process.

OLREORG

An online reorganization of a HALDB partition.

OTMADESC

IMS Open Transaction Manager Access (OTMA) destination descriptor.

PGM A program in an IMS.

PGMDESC

A program descriptor in an IMS.

RTC A Fast Path routing code.

RTCDESC

A Fast Path routing code descriptor.

STRUCTURE

A resource structure managed by RM.

TRAN An IMS resource that is a message destination.

TRANDESC

An IMS descriptor that is a message destination.

KEYWORD()

Optional command elements, depending upon the specific command.

parameter

Identifies an IMS-defined value or an installation-defined or created resource. Most parameters can end with a wildcard (an asterisk - *). Parameters are listed in parentheses and must be replaced with parameter values. Multiple parameters are separated by a comma.

If an optional keyword is specified without any parameters listed within the parentheses, the keyword is assigned a null value and is treated as if the keyword was not specified at all.

Generic parameters

You can use generic parameters to specify a group of resources whose names match a 1- to 8-character alphanumeric mask. Generic parameters apply to both type-1 and type-2 commands.

A generic parameter can include one or more of the following wildcard characters:

- * Matches zero or more characters. When used alone, it matches all the names for the keyword or resource.
- % Matches exactly one character.

The following examples illustrate some uses of wildcard characters:

- C0*** Matches any string of any length that begins with C0. For instance: C0, C00, C00P
- %%S** Matches any 3-character string that ends with S. For instance: IMS, XYS
- C0*%%1** Matches any string of 5 or more characters that starts with C0, ends with 1, and has at least 2 characters between C0 and 1. For instance: CONV1, CONV21, CONV221, CONV23B1

Specifying an asterisk alone as the generic parameter (such as NAME(*)) is equivalent to specifying ALL (such as NAME(ALL)). However, depending on the installation, other generic parameters can mean ALL. For example, the generic parameter %%%% means ALL to an installation whose resource names are all 4 characters long. Some commands support NAME(*) and do not support NAME(ALL) for a wildcard name.

When a generic parameter is used, IMS uses a serial search of all resources to match the generic name. Using a serial search of all resources can have performance implications in larger systems.

The following table lists some of the type-2 commands and keywords that support generic parameters.

Table 2. Type-2 commands and keywords that support generic parameters

Command	Keyword supported
DELETE	NAME with DB, DBDESC, PGM, PGMDESC, RTC, RTCDESC, TRAN, or TRANDESC
EXPORT	NAME with DB, DBDESC, PGM, PGMDESC, RTC, RTCDESC, TRAN, or TRANDESC

Table 2. Type-2 commands and keywords that support generic parameters (continued)

Command	Keyword supported
IMPORT	NAME with DB, DBDESC, PGM, PGMDDESC, RTC, RTCDESC, TRAN, or TRANDESC
QUERY	NAME with AREA, DB, DBDESC, MSLINK, MSNAME, MSPLINK, PGM, PGMDDESC, RTC, RTCDESC, TRAN, or TRANDESC
QUERY LE	LTERM, TRAN, USERID, PROGRAM
UPDATE	NAME with AREA, DB, DBDESC, MSLINK, MSNAME, MSPLINK, PGM, PGMDDESC, RTC, RTCDESC, TRAN, or TRANDESC

Restriction: Generic parameters are not supported in a TRAN CLASS combination.

Related concepts:

-  Issuing type-2 IMS commands (System Programming APIs)
-  Type-2 command environment (System Administration)

Sending commands to the IMSplex

After setting up an IMSplex, you can issue commands using the TSO single point of control (SPOC) interface.

You can also write an automated operator program that can issue the same commands. The TSO SPOC provides integrated online help.

The IMS Application Menu provides a common interface to enable you to start applications such as TSO SPOC, Syntax Checker, IVP, and more.

Important: SPOC applications (including the TSO SPOC and the Batch SPOC utility) issue the CSLOMCMC request. You therefore need to be aware of the parameters and return and reason codes of the CSLOMCMC request.

If you write automated programs, those programs must include logic to handle the responses from the commands; the automated programs have to parse the XML statements.

Most commands that are issued to an IMSplex are issued to OM. The exceptions are:

- BPE commands, which can be issued directly to CSL members and to CQS.
- The SHUTDOWN command, which can be issued directly to SCI to shut down one or more CSL members.
- Query requests issued by a z/OS master console to the CSL.

In an IMSplex, the format, behavior, and responses to certain IMS commands have changed. Some IMS commands are no longer recoverable; others are not supported in an IMSplex. Some commands are supported only in an IMSplex.

Related concepts:

-  Other sample applications verified by the IVP (Installation)
-  Controlling IMS with the TSO SPOC application (Operations and Automation)

➡ IMS Application Menu (System Administration)

Related reference:

➡ CSLOMCMD: command request (System Programming APIs)

Command processing in an IMSplex

In an IMSplex environment, IMS commands issued through OM can behave differently than when those same commands are issued to an individual IMS subsystem.

Type-2 commands can be issued only through the OM API. Type-1 IMS commands can be issued through the OM API or to individual IMS systems through end-user terminals, master terminals, system consoles, or AOI applications. The following sections describe some of the behavioral differences.

Command routing

Commands that are issued to OM are, by default, routed to all the IMSplex components that are active and have registered interest in processing those commands. If you want to route a command to one or more specific IMS systems in the IMSplex, use the ROUTE() parameter on the command request.

OM selects one IMSplex member (that is, IMS or RM) that is registered for the command to be the command master for each command from the OM API. The command master performs global command actions where applicable. An XRF alternate system is not a command master candidate until it takes over.

Type-2 command responses may differ depending on which IMSplex member was the command master. For example, for a QUERY TRAN NAME(tranname) QCNT (GT 1) SHOW(ALL) command, only the command master returns the global queue counts, unless it does not have access to the shared queues (for example, the command master is local queues enabled).

If a command is routed to multiple IMS systems and the command fails on some of those systems as a result of environmental reasons (such as /DBR to an XRF alternate system), the overall OM return code will not reflect the environmental error.

If a command fails on all systems to which it is routed because of environmental reasons, IRC_LIST and IRSN_LISTNONE are produced. For type-1 commands, any error messages that are associated with the invalid environment errors will also be sent back for display. For type-2 commands, the return and reason code returned by the IMS system are from OM.

Command behavior and the Resource Manager

Depending on whether an IMSplex is defined with a Resource Manager (and there is a resource structure available to RM), command behavior can be affected. When a resource structure is not defined, resource status must be maintained on local IMS systems in the IMSplex. In this case, commands have only a local effect.

If RM is defined with a resource structure and STM is enabled in the IMSplex, RM maintains global resource information, including resource status, for nodes, LTERMS, and users. In this scenario, resource status is maintained both globally and locally. Usually, if a user signs off or a client shuts down, resources status is

maintained globally but deleted locally. If you do not want TM resources to be updated in RM, you can specify STM=NO in the PROCLIB member, DFSDCxxx.

As an alternative to STM=NO, users can choose to disable resource sharing for static ISC resources only. If this option is set, the command status for static ISC resources is always considered local as if there were no resource structure. Commands processed for a static ISC node or subpool only modify local status. Status is not updated in the resource structure. The purpose of the option is to remove the unique name restriction for static ISC-related resources so that static ISC LTERM and subpool names can be active multiple times concurrently in an IMSplex.

Another behavior that is worth noting is how command processing clients process type-1 commands (related to nodes, LTERMS, and users) that are routed to the entire IMSplex. In general, OM chooses one of the command processing clients in the IMSplex to be the “master” to coordinate the processing of the type-1 commands. Whether the master (or a non-master) IMS will process a type-1 command depends on where the command resource status is kept. If the command resource status is kept in a resource structure, the type-1 command will usually be processed by a non-master client where the command resource is active. If the command resource is not active on any of the command processing clients in the IMSplex, OM will still route the type-1 command to all clients in the IMSplex, but only the master client will process the command. If the type-1 command is being routed to all the clients in the IMSplex, command processing clients where the command resource is not active will reject the type-1 command.

Related reference:

- ➡ DFSDCxxx member of the IMS PROCLIB data set (System Definition)
- ➡ Initialization exit routine (DFSINTX0) (Exit Routines)

Command characteristics

Command characteristics and operations (the way commands actually work) are affected by terminal security defaults, command recoverability, and whether commands are logged to the secondary master terminal, supported from an AOI application, mirrored on the XRF alternate, supported from the XRF alternate, and supported from LU 6.2 devices.

Terminal security defaults for IMS type-1 commands

| When neither RACF (RACF=NONE) nor the command security exit (DFSCCMD0) is used, all type-1 commands are allowed from the master terminal, except those that apply to the terminals from which the commands are issued. Only some commands are allowed from a remote terminal in this case.

| The following table shows the terminal security defaults for IMS commands from the master terminal and remote terminals when neither RACF (RACF=NONE) nor the command security exit (DFSCCMD0) is used. Only the commands shown in the table are allowed in these environments.

Table 3. Terminal security defaults for IMS type-1 commands

Master terminal	Remote terminal
/ACTIVATE	
/ALLOCATE	

Table 3. Terminal security defaults for IMS type-1 commands (continued)

Master terminal	Remote terminal
/ASSIGN	
/BROADCAST	/BROADCAST
/CANCEL	/CANCEL
/CHANGE	
/CHECKPOINT	
/CLSDST	
/COMPT	
/CQCHKPT	
/CQQUERY	
/CQSET	
/DBDUMP	
/DBRECOVERY	
/DELETE	
/DEQUEUE	
/DIAGNOSE	/DIAGNOSE
/DISPLAY	
/END	/END
/ERESTART	
/EXCLUSIVE	/EXCLUSIVE
/EXIT	/EXIT
/FORMAT	/FORMAT
/HOLD	/HOLD
	/IAM
/IDLE	
/INITIATE	
/LOCK	/LOCK
/LOG	/LOG
/LOOPTEST	/LOOPTEST
/MODIFY	
/MONITOR	
/MSASSIGN	
/MSVERIFY	
/NRESTART	
/OPNDST	
/PSTOP	
/PURGE	
/QUIESCE	
/RCLSDST	/RCLSDST
	/RCOMPT
/RDISPLAY	/RDISPLAY

Table 3. Terminal security defaults for IMS type-1 commands (continued)

Master terminal	Remote terminal
/RECOVER	
/RELEASE	/RELEASE
/RESET	/RESET
/RMxxxxxx	/RMLIST
/RSTART	
/RTAKEOVER	
/SECURE	
/SET	/SET
/SIGN	/SIGN
/SMCOPY	
/SSR	
/START	
/STOP	
/SWITCH	
/TERMINATE	
/TEST	/TEST
/TRACE	
/UNLOCK	/UNLOCK
/UPDATE	
/VUNLOAD	

Commands recovered during emergency restart

Certain commands that successfully alter IMS resources are written to the system log as X'02' or X'22' log records and are reprocessed during emergency restart.

IMS type-1 commands that are recovered during emergency restart write an X'02' log record. Type-2 commands that are recovered during emergency restart write an X'22' log record. The following table lists the commands, along with the exceptions, that are recovered during emergency restart.

Table 4. Commands recovered during emergency restart

Command	Exceptions
/ASSIGN	
/CHANGE	/CHANGE DESCRIPTOR
CREATE	
/DELETE	
DELETE	
/END	
/EXCLUSIVE	
/EXIT	
/HOLD	

Table 4. Commands recovered during emergency restart (continued)

Command	Exceptions
/LOCK	/LOCK LTERM, /LOCK NODE, /LOCK PTERM
/LOG	
/MONITOR	
/MSASSIGN	
/PSTOP	/PSTOP LTERM
/PURGE	/PURGE APPC, /PURGE LTERM
/RELEASE	
/RSTART	
/SET	/SET LTERM, /SET TRAN
/SMCOPY	
/START	/START APPC, /START ISOLOG, /START TRKARCH, /START PROG
/STOP	/STOP APPC
/TEST MFS	/TEST LINE, /TEST NODE, /TEST USER
/UNLOCK	/UNLOCK LTERM, /UNLOCK NODE, /UNLOCK PTERM, /UNLOCK SYSTEM
UPDATE DB	
UPDATE MSLINK	
UPDATE MSNAME	
UPDATE MSPLINK	
UPDATE PGM	
UPDATE RTC	
UPDATE TRAN	UPDATE TRAN START(TRACE), UPDATE TRAN STOP(TRACE)

Restriction: If an IMS outage (abend, modify, or cancel of IMS) occurs immediately after a command is entered, the command status might not be carried across an emergency restart or XRF takeover.

The command log records are logged asynchronously (no check write or wait write). If there is no other IMS activity that forces the log buffer to be written to the OLDS or WADS data set, the status set by the command, for restart purposes, did not occur.

There are many events in IMS where log records are check-written to the log. Any one of these events subsequent to the command causes the command log record to be written to the OLDS or WADS data set.

Command processing in a dynamic resource definition environment

IMS processes commands differently in a dynamic resource definition (DRD) environment than in a non-DRD environment.

If you are running without DRD enabled, the control blocks that manage the resources (DDIRs, PDIRs, SMBs, and RCTEs) are loaded from the MODBLKS data set at cold start. If a type-1 command is issued to change the attribute of a resource

(such as the database access type or the transaction class), the internal control blocks are updated and the changes are recovered across a warm or emergency restart. If you perform a cold start, however, the control blocks are reloaded from the MODBLKS data set, so the updated attributes revert to the original values unless you have updated your MODBLKS data set.

If you are running with DRD enabled, any changes that you make to resource definitions by using type-1 or type-2 commands persist across a warm or emergency restart. These changes also persist across a cold start if the updated resource definitions are exported to an RDDS, and then imported from the RDDS during cold start. When you export the resource definitions to an RDDS, all the current attribute values are exported. If you change the value of one of the attributes by using a type-1 or type-2 command (such as the database access type or the transaction class), the updated attribute is exported. The updated attribute values are then imported during cold start if automatic import is enabled.

Related concepts:

 Considerations for using dynamic resource definition (System Definition)

IMS type-1 commands logged to the secondary master terminal

The secondary master terminal provides a hardcopy log of system activity, including checkpoint information and error messages.

If the hardcopy logging facility has been selected and not disabled (using the /SMCOPY command), certain IMS commands and responses are logged on the secondary master terminal.

You can select whether only commands issued from the master terminal are logged, only commands entered from other terminals are logged, or both are logged. Only the commands listed in the following table are logged to the secondary master terminal.

Table 5. IMS type-1 commands logged to the secondary master terminal

Commands	Commands (continued)
/ACTIVATE	/QUIESCE
/ALLOCATE	/RCLSDST
/ASSIGN	/RCOMPT
/CHECKPOINT	/RECOVER
/CLSDST	/RMCHANGE
/COMPT	/RMDELETE
/CQCHKPT	/RMGENJCL
/CQQUERY	/RMINIT
/CQSET	/RMLIST
/DBDUMP	/RMNOTIFY
/DBRECOVERY	/RSTART
/DELETE	/RTAKEOVER
/DEQUEUE	/SECURE
/DIAGNOSE	/START
/DISPLAY	/STOP
/IDLE	/SWITCH
/INITIATE OLREORG	/TERMINATE OLREORG
/MODIFY	/TRACE
/MONITOR	/UPDATE MSLINK
/MSASSIGN	/UPDATE OLREORG

Table 5. IMS type-1 commands logged to the secondary master terminal (continued)

Commands	Commands (continued)
/OPNDST	/UNLOCK SYSTEM
/PSTOP	/VUNLOAD
/PURGE	

IMS type-1 commands supported from an AO application

Automated operator (AO) applications are application programs that issue IMS operator commands using DL/I calls.

AO applications can use two different DL/I calls to issue commands: CMD and ICMD. This section lists which IMS commands can be issued using each of these calls and describes command security for AO applications.

AO applications using the CMD and ICMD call can use RACF, DFSCCMD0, or both for security.

The TSO SPOC and REXX SPOC API are IMS applications that use OM API and cannot issue commands through DL/I calls.

Issuing IMS type-1 commands by using the CMD call

If you are using the CMD call to issue IMS commands, transactions can be defined as AO applications with AOI= on the TRANSACT system definition macro. AO transactions are invoked in the same way any IMS transaction is invoked. AO transactions run as IMS applications with the authority to issue a planned series of IMS commands. For example, an AO application can be called in by an AO transaction after a normal restart of IMS to start IMS resources. The AO application would consist of those commands regularly used by the master terminal operator (MTO) after IMS is active. Fast Path exclusive transactions cannot be defined as AO transactions.

When RACF (or an equivalent product) is used for type-1 AOI security, the AOI= parameter on the TRANSACT macro defines which transactions can issue commands. RACF (or an equivalent product) defines which commands are allowed for each authorized transaction. These definitions in RACF give control to the authorized user who entered the transaction or to the transaction name or the command name itself. The AOI= parameter on the TRANSACT macro contains the controlling specification.

The following table shows the IMS commands that can be issued in an AO application using the CMD call. Each row includes an IMS command, restrictions, and the application environment (MPP or BMP running under DB/DC, or MPP or BMP running under DCCTL).

Table 6. IMS type-1 commands supported from an AO application using CMD

IMS command	Restrictions	Application environment	
		MPP or BMP running under DB/DC	MPP or BMP running under DCCTL
/ACTIVATE		Yes	Yes
/ALLOCATE		Yes	Yes

Table 6. IMS type-1 commands supported from an AO application using CMD (continued)

IMS command	Restrictions	Application environment	
		MPP or BMP running under DB/DC	MPP or BMP running under DCCTL
/ASSIGN		Yes	Yes
/BROADCAST		Yes	Yes
/CHANGE		Yes	Yes
/CHECKPOINT	simple form (no keywords), SNAPQ, or STATISTICS	Yes	Yes
/CLSDST		Yes	Yes
/COMPT		Yes	Yes
/CQCHKPT		Yes	Yes
/CQQUERY		Yes	Yes
/CQSET		Yes	Yes
/DBDUMP		Yes	Yes
/DBRECOVERY		Yes	Yes
/DELETE		Yes	Yes
/DEQUEUE		Yes	Yes
/DIAGNOSE		Yes	Yes
/DISPLAY		Yes	Yes
/END	with keywords	Yes	Yes
/EXCLUSIVE	with keywords	Yes	Yes
/EXIT	with LINE and NODE keywords	Yes	Yes
/FORMAT	with LTERM keyword	Yes	Yes
/IDLE		Yes	Yes
/INITIATE	OLREORG	Yes	No
/LOCK	without LTERM, NODE, or PTERM keywords	Yes	Yes
/LOG		Yes	Yes
/LOOPTEST		Yes	Yes
/MONITOR		Yes	Yes
/MSASSIGN		Yes	Yes
/OPNDST		Yes	Yes
/PSTOP		Yes	Yes
/PURGE		Yes	Yes
/QUIESCE		Yes	Yes
/RDISPLAY		Yes	Yes
/RECOVER		Yes	No
/RMCHANGE		Yes	Yes

Table 6. IMS type-1 commands supported from an AO application using CMD (continued)

IMS command	Restrictions	Application environment	
		MPP or BMP running under DB/DC	MPP or BMP running under DCCTL
/RMDELETE		Yes	Yes
/RMGENJCL		Yes	Yes
/RMINIT		Yes	Yes
/RMLIST		Yes	Yes
/RMNOTIFY		Yes	Yes
/RSTART		Yes	Yes
/SECURE		Yes	Yes
/SMCOPY		Yes	Yes
/SSR		Yes	Yes
/START		Yes	Yes
/STOP		Yes	Yes
/SWITCH		Yes	Yes
/TERMINATE	OLREORG	Yes	No
/TEST MFS	with LINE/NODE keywords	Yes	Yes
/TRACE		Yes	Yes
/UNLOCK	without LTERM, NODE, PTERM, or SYSTEM keywords	Yes	Yes
/VUNLOAD		Yes	No

If the 3270 message facility service (MFS) bypass option is selected, the output message specified is MODNAME=DFSEDTN, and the terminal is in preset mode, then the only command recognized by IMS is the /RESET command issued from an unformatted screen. All other commands are passed to the application program.

Issuing IMS type-1 commands by using the ICMD call

The following table shows by application program type the commands that can be issued in an AO application using the ICMD call. This includes DRA thread running under DBCTL or DB/DC; BMP running under DBCTL; MPP, BMP, IFP running under DB/DC; and MPP, BMP, or IFP running under DCCTL. Commands that cause the IMS control region to terminate, such as /CHE FREEZE, cannot be issued.

You can secure the commands issued by an ICMD call using RACF (or the equivalent) or the Command Authorization user exit, DFSCCMD0. RACF lets you specify which commands the applications can issue. DFSCCMD0 and RACF let you do authorization checking during ICMD processing. The authorization checking can be controlled either through the transaction name, the command name, or the user ID of the signed on user. The AOI= parameter on the TRANSACT macro allows you to specify which authorization checking is to be used.

Table 7. IMS type-1 commands supported from an AO application using ICMD

IMS Command	Application environment			
	DBRA thread running under DBCTL or DB/DC	BMP running under DBCTL	MPP, BMP, or IFP running under DB/DC	MPP, BMP, or IFP running under DCCTL
/ACTIVATE	N/A	N/A	Yes	Yes
/ALLOCATE	N/A	N/A	Yes	Yes
/ASSIGN	N/A	N/A	Yes	Yes
/BROADCAST	N/A	N/A	Yes	Yes
/CANCEL	N/A	N/A	No	No
/CHANGE	Yes	Yes	Yes	Yes
/CHECKPOINT (simple form)	Yes	Yes	Yes	Yes
/CHECKPOINT SNAPQ	N/A	N/A	Yes	Yes
/CHECKPOINT STATISTICS	Yes	Yes	Yes	Yes
/CLSDST	N/A	N/A	Yes	Yes
/COMPT	N/A	N/A	Yes	Yes
/CQCHKPT	N/A	N/A	Yes	Yes
/CQQUERY	N/A	N/A	Yes	Yes
/CQSET	N/A	N/A	Yes	Yes
/DBDUMP	Yes	Yes	Yes	N/A
/DBRECOVERY	Yes	Yes	Yes	N/A
/DELETE	Yes	Yes	Yes	Yes
/DEQUEUE	Yes	Yes	Yes	Yes
/DIAGNOSE	Yes	Yes	Yes	Yes
/DISPLAY	Yes	Yes	Yes	Yes
/END	N/A	N/A	Yes	Yes
/ERESTART	No	No	No	No
/EXCLUSIVE	N/A	N/A	Yes	Yes
/EXIT	N/A	N/A	Yes	Yes
/FORMAT	N/A	N/A	Yes	Yes
/HOLD	N/A	N/A	No	No
/IAM	N/A	N/A	No	No
/IDLE	N/A	N/A	Yes	Yes
/INITIATE OLREORG	Yes	Yes	Yes	No
/LOCK DB	Yes	Yes	Yes	N/A
/LOCK PGM	Yes	Yes	Yes	Yes
/LOCK TRAN	N/A	N/A	Yes	Yes
/LOG	Yes	Yes	Yes	Yes
/LOOPTEST	N/A	N/A	Yes	Yes

Table 7. IMS type-1 commands supported from an AO application using ICMD (continued)

IMS Command	Application environment			
	DBRA thread running under DBCTL or DB/DC	BMP running under DBCTL	MPP, BMP, or IFP running under DB/DC	MPP, BMP, or IFP running under DCCTL
/MODIFY	No	No	No	No
/MONITOR	N/A	N/A	Yes	Yes
/MSASSIGN	N/A	N/A	Yes	Yes
/MSVERIFY	N/A	N/A	No	No
/NRESTART	No	No	No	No
/OPNDST	N/A	N/A	Yes	Yes
/PSTOP	Yes	Yes	Yes	Yes
/PURGE	N/A	N/A	Yes	Yes
/QUIESCE	N/A	N/A	Yes	Yes
/RCLSDST	N/A	N/A	No	No
/RCOMPT	N/A	N/A	No	No
/RDISPLAY	N/A	N/A	Yes	Yes
/RECOVER	Yes	Yes	Yes	No
/RELEASE	N/A	N/A	No	No
/RESET	N/A	N/A	No	No
/RMCHANGE	Yes	Yes	Yes	Yes
/RMDELETE	Yes	Yes	Yes	Yes
/RMGENJCL	Yes	Yes	Yes	Yes
/RMINIT	Yes	Yes	Yes	Yes
/RMLIST	Yes	Yes	Yes	Yes
/RMNOTIFY	Yes	Yes	Yes	Yes
/RSTART	N/A	N/A	Yes	Yes
/RTAKEOVER	No	No	No	No
/SECURE	N/A	N/A	Yes	Yes
/SET	N/A	N/A	No	No
/SIGN	N/A	N/A	No	No
/SMCOPY	N/A	N/A	Yes	Yes
/SSR	No	Yes	Yes	Yes
/START	Yes	Yes	Yes	Yes
/STOP	Yes	Yes	Yes	Yes
/SWITCH	Yes	Yes	Yes	Yes
/TERMINATE OLREORG	Yes	Yes	Yes	No
/TEST MFS LINE or NODE or USER	N/A	N/A	Yes	Yes
/TRACE	Yes	Yes	Yes	Yes
/UNLOCK DB	Yes	Yes	Yes	N/A

Table 7. IMS type-1 commands supported from an AO application using ICMD (continued)

IMS Command	Application environment			
	DBRA thread running under DBCTL or DB/DC	BMP running under DBCTL	MPP, BMP, or IFP running under DB/DC	MPP, BMP, or IFP running under DCCTL
/UNLOCK PGM	Yes	Yes	Yes	Yes
/UNLOCK TRAN	N/A	N/A	Yes	Yes
/VUNLOAD	Yes	Yes	Yes	N/A

The following commands and keywords are not permitted:

- /CHECKPOINT keywords ABDUMP, DUMPQ, FREEZE, PURGE, and QUIESCE
- The commands /END, /EXIT, and /EXCLUSIVE if they have no keywords
- /LOCK keywords LTERM, NODE, and PTERM
- /UNLOCK keywords LTERM, NODE, PTERM, and SYSTEM

Related concepts:



Tools for automated operations (Operations and Automation)



Security for AO application programs (System Administration)

Command security when using OM

For IMS command security, you have your choice of OM command security using RACF or equivalent, or IMS command security.

Recommendation: Use OM command security instead of IMS security.

By allowing OM to perform the security checks, commands which fail security authorization are not routed to IMS, reducing processing overhead and network traffic. When IMS command security is used, it is up to the user to ensure that all IMS systems use the same security profiles or user exits. If IMS systems in the same IMSplex use different security rules, the results of command security checking may be unpredictable.

Related reference:



IMS commands, RACF access authorities and resource names table (System Administration)

Commands mirrored on an XRF alternate

Certain commands that successfully alter IMS resources are written to the system log as X'02' or X'22' log records.

IMS type-1 commands that alter resources write an X'02' log record. Type-2 commands that alter resources write an X'22' log record. In an XRF environment, the X'02' or X'22' log records are read and processed by the alternate system as it tracks the active system. The effect of these commands is mirrored on the alternate system when it takes over and becomes the active system. These commands, along with exceptions, are listed in the following table.

Table 8. List of IMS commands mirrored on an XRF alternate

Command	Exceptions
/ASSIGN	/ASSIGN is mirrored only if the assignment does not involve the master terminal.
/CHANGE	
CREATE	
/DELETE	
DELETE	
/END	
/EXCLUSIVE	
/EXIT	
/HOLD	
/LOCK	
/LOG	
/MONITOR	
/MSASSIGN	
/PSTOP	/PSTOP REGION
/PURGE	/PURGE APPC
/RELEASE	
/RESET	
/RSTART	
/SECURE	/SECURE APPC
/SET	
/SMCOPY	
/START	/START APPC, /START REGION
/STOP	/STOP APPC, /STOP REGION
/TEST	/TEST is usually not mirrored on an XRF alternate system. However, /TEST MFS is mirrored if the alternate system is tracking the state of the terminal that entered the /TEST MFS command.
/TRACE	/TRACE is usually not mirrored on an XRF alternate system. However, /TRACE SET LINE and /TRACE SET LINK are mirrored for lines and links that can be restarted. /TRACE SET NODE is mirrored for all node types.
/UNLOCK	/UNLOCK SYSTEM
UPDATE DB	
UPDATE DBDESC	
UPDATE MSLINK	
UPDATE MSNAME	
UPDATE MSPLINK	
UPDATE PGM	
UPDATE PGMDESC	
UPDATE RTC	
UPDATE RTCDESC	

Table 8. List of IMS commands mirrored on an XRF alternate (continued)

Command	Exceptions
UPDATE TRAN	UPDATE TRAN START(TRACE), UPDATE TRAN STOP(TRACE)
UPDATE TRANDESC	

Commands supported on the XRF alternate

The commands that are valid on the XRF alternate, along with the exceptions, are shown in the following table.

Table 9. List of commands supported on the XRF alternate

Command	Exceptions
/ACTIVATE	
/CANCEL	
/CHANGE	
/CLSDST	
/COMPT	
/DISPLAY	/DISPLAY QCNT
/END	
/ERESTART	
/FORMAT	
/IDLE	
/NRESTART	
/OPNDST	
/PSTOP REGION	
QUERY AREA	
QUERY DB	QUERY DB SHOW(WORK)
QUERY DBDESC	
QUERY IMS	
QUERY IMSPLEX	
QUERY LTERM	QUERY LTERM SHOW(GLOBAL)
QUERY MEMBER	
QUERY NODE	QUERY NODE SHOW(GLOBAL)
QUERY OTMADESC	
QUERY OTMATI	
QUERY PGM	QUERY PGM SHOW(WORK)
QUERY PGMDESC	
QUERY RTC	QUERY RTC SHOW(WORK)
QUERY RTCDESC	
QUERY TRAN	QUERY TRAN SHOW(WORK)
QUERY TRANDESC	
QUERY USER	QUERY USER SHOW(GLOBAL)

Table 9. List of commands supported on the XRF alternate (continued)

Command	Exceptions
/RCLSDST	
/RCOMPT	
/RDISPLAY	
/RMLIST	
/SECURE	
/SMCOPY	
/START DC	
/START LUNAME	
/START REGION	
/START RTCODE	
/START SURVEILLANCE	
/STOP	
/STOP BACKUP	
/STOP DC	
/STOP LUNAME	
/STOP REGION	
/STOP RTCODE	
/STOP SURVEILLANCE	
/SWITCH	
/TEST	
/TRACE	
UPDATE MSLINK TKOTRC()	
UPDATE TRAN SET(MAXRGN)	
UPDATE TRAN START STOP(TRACE)	

Commands and keywords supported on an RSR tracking subsystem

Only commands and keywords required to manage RSR tracking are supported on an RSR tracking subsystem.

For example, commands and keywords relating to transactions are not supported, because transactions are not allowed on a tracking subsystem. See Table 10 on page 40 for the commands and keywords supported on an IMS DB/DC tracking subsystem. The subset of commands and keywords relating to databases are the only ones allowable on a DBCTL tracking subsystem.

Commands entered on an IMS tracking subsystem that are not supported on a tracking subsystem result in message

```
DFS136I  COMMAND xxxxxxxxxx INVALID FOR TRACKER
```

Commands entered on a DCCTL tracking subsystem that are not supported on the tracking subsystem or on DCCTL result in message

```
DFS136I  COMMAND xxxxxxxxxx INVALID FOR DCCTL
```

Keywords entered on an IMS tracking subsystem that are not supported on a tracking subsystem result in message

DFS110 COMMAND KEYWORD yyyyyyyyyyy INVALID FOR TRACKER

Keywords entered on a DBCTL or DCCTL tracking subsystem that are not supported on a tracking subsystem or with DBCTL or DCCTL result in message

DFS110 KEYWORD yyyyyyyyyyy INVALID FOR DBCTL|DCCTL

The following table lists the commands and keywords that are allowed on an IMS DB/DC RSR tracking. The table also includes comments.

Table 10. Commands and keywords allowable on an IMS DB/DC RSR tracking subsystem

Commands	Keywords	Comments
/ACTIVATE	NODE	
/ASSIGN	COMPONENT, ICOMPONENT, LINE, LTERM, NODE, PTERM, USER	
/BROADCAST	ACTIVE, LINE, LTERM, NODE, PTERM, USER	Non-VTAM lines are not supported.
/CANCEL		
/CHANGE	CPLOG	Specifies the number of system log records between system-generated checkpoints.
/CHECKPOINT	ABDUMP, DUMPQ, FREEZE, SNAPQ, STATISTICS	Simple checkpoint (that is, with no keywords) is also supported.
/CLSDST	NODE, USER	
/COMPT	CNS, CRD, NODE, NOTRDY, PCH, PDS, PRT, RDR, READY, TDS, UDS, USER, VID, WPM1, WPM2, WPM3	
/DBRECOVERY	AREA, DATABASE, DATAGROUP, LOCAL, NOFEOV	Command only valid for a DATABASE level tracking system. Keywords only valid for areas and databases tracked at the DATABASE level.
/DEQUEUE	LINE, LTERM, NODE, PTERM, PURGE, PURGE1, USER	
/DIAGNOSE	ADDRESS, BLOCK, LTERM, NODE, OPTION, SNAP, TRAN, USER	
/DISPLAY	ACTIVE, AREA, ASSIGNMENT, DATABASE, DBD, DC, LINE, LTERM, MODE, MODIFY, MONITOR, NODE, OLDS, POOL, PTERM, SHUTDOWN STATUS, TRACE, TRACKING STATUS, USER, XTRC	• For /DISPLAY P00L ALL, only pools needed on the tracking subsystem are displayed. • For /DISPLAY P00L pool, some parameters are not supported. • For /DISPLAY STATUS with no keywords, only resources needed on a tracking subsystem are displayed. • For /DISPLAY TRACE ALL, only resources needed on a tracking subsystem are displayed.
/END	LINE, NODE, PTERM, USER	

Table 10. Commands and keywords allowable on an IMS DB/DC RSR tracking subsystem (continued)

Commands	Keywords	Comments
/ERESTART	BUILDQ, CHECKPOINT, COLDBASE, COLDCOMM, COLDSYS, FORMAT, NOPASSWORD, NOTERMINAL, NOUSER, OVERRIDE, PASSWORD, TERMINAL, USER	
/FORMAT	LTERM	
/IDLE	LINE, NODE, NOSHUT	
/LOG		
/MODIFY	ABORT, COMMIT, LTERM, PASSWORD, PREPARE, TERMINAL	The following parameters are supported: ACBLIB, BLDL, FMTLIB, MODBLKS, and RACF.
/NRESTART	BUILDQ, CHECKPOINT, FORMAT, NOBUILDQ, NOPASSWORD, NOTERMINAL, NOUSER, PASSWORD, TERMINAL, USER	
/OPNDST	ID, LOGOND, MODE, NODE, Q, UDATA, USER, USERD	
/PSTOP	LINE, LTERM, PTERM	Non-VTAM lines are not supported.
/PURGE	LINE, LTERM, PTERM	Non-VTAM lines are not supported.
QUERY	AREA, DB, IMS, MEMBER	
/RCLSDST		
/RCOMPT	CNS, CRD, NODE, NOTRDY, PCH, PDS, PRT, RDR, READY, TDS, UDS, USER, VID, WPM1, WPM2, WPM3	
/RDISPLAY		
/RMxxxxxx	LTERM	Only applies to tracking subsystem RECON data set.
/RSTART	LINE, LOPEN, NODE, PTERM, USER	Non-VTAM lines are not supported.
/RTAKEOVER	UNPLAN, NOREVERSE	
/SIGN	ON, USERD	
/SMCOPY	ON, TERMINAL	
/START	AREA, AUTOARCH, DATABASE, DATAGROUP, DC, ISOLOG, LINE, LOCAL, LTERM, NODE, OLDS, PTERM, SERVGRP, USER, WADS	/START AREA, /START DATABASE, and /START DATAGROUP are only valid on a DATABASE level tracking subsystem. Non-VTAM lines are not supported.
/STOP	ADS, AUTOARCH, DC, LINE, LTERM, NODE, OLDS, PTERM, SERVGRP, TRKAUTOARCH, USER, WADS	Non-VTAM lines are not supported.
/SWITCH	CHECKPOINT, OLDS	
/TEST MFS	LINE, NODE, PTERM, USER	

Table 10. Commands and keywords allowable on an IMS DB/DC RSR tracking subsystem (continued)

Commands	Keywords	Comments
/TRACE	LEVEL, LINE, MODULE,NODE, ON, OPTION, SET, TABLE, UNITYPE, USER, VOLUME	No LUMI, RETR, SCHD, or SUBS TABLE tracing is allowed on a tracking subsystem.
UPDATE AREA	START(ACCESS), STOP(ACCESS)	
UPDATE DATAGRP	START(ACCESS), STOP(ACCESS)	
UPDATE DB	START(ACCESS), STOP(ACCESS)	

IMS-supported terminals in an RSR environment

Since IMS-supported terminals are not supported for an RSR tracking subsystem, some type-1 commands are not supported on an RSR tracking subsystem (that is, they will cause a DFS058 COMMAND COMPLETED EXCEPT ... message to be issued).

These type-1 commands are:

- /BROADCAST LINE
- /BROADCAST PTERM
- /PSTOP LINE [PTERM]
- /PURGE LINE [PTERM]
- /RSTART LINE [PTERM]
- /START LINE [PTERM]
- /STOP LINE [PTERM]

If the parameter ALL is used with one of these commands, the IMS-supported terminals affected are simply skipped.

IMS type-1 commands supported from LU 6.2 devices and OTMA

Only certain IMS type-1 commands are valid from LU 6.2 devices and OTMA.

The IMS type-1 commands that are supported from LU 6.2 devices and OTMA are listed in the following table:

Table 11. IMS type-1 commands supported from LU 6.2 devices and OTMA

Commands	Commands (continued)
/ALLOCATE*	/PURGE
/ASSIGN	/QUIESCE
/BROADCAST*	/RDISPLAY
/CHANGE*	/RMCHANGE*
/CHECKPOINT	/RMDELETE*
/CLSDST	/RMGENJCL*
/COMPT	/RMINIT*
/DBDUMP	/RMLIST*
/DBRECOVERY	/RMNOTIFY*

Table 11. IMS type-1 commands supported from LU 6.2 devices and OTMA (continued)

Commands	Commands (continued)
/DELETE	/RSTART
/DEQUEUE	/SECURE
/DIAGNOSE	/SMCOPY
/DISPLAY	/SSR
/IDLE	/START
/LOG	/STOP
/LOCK	/SWITCH
/MODIFY	/TRACE
/MONITOR	/UNLOCK
/MSASSIGN	
/MSVERIFY	
/OPNDST*	
/PSTOP	

Note: * Multisegment commands are not supported by OTMA.

Terminal security defaults for LU 6.2 devices and OTMA

Only some IMS type-1 commands from LU 6.2 devices and OTMA are authorized in an environment in which RACF is not used (RACF=NONE) and the command security exit (DFSCCMD0) is also not used.

The following table shows the terminal security defaults for IMS type-1 commands from LU 6.2 devices and OTMA when RACF is not used (RACF=NONE) and the command security exit (DFSCCMD0) is also not used. Only the commands shown in the table will be authorized in these environments.

Table 12. Terminal security defaults for IMS type-1 commands from LU 6.2 devices and OTMA

LU 6.2 Devices	OTMA
/BROADCAST	/LOC
/LOC	/LOG
/LOG	/RDISPLAY
/RDISPLAY	
/RMLIST	

Commands and keywords supported by the OM API

Some IMS commands are supported by the OM API.

The following table is a list of IMS command verbs and primary keywords that can be issued through the Operations Manager (OM) API. The command verb can be specified in the long form or short form, as specified in column one and two respectively. The primary keyword is the first keyword following the command verb, as specified in column three.

Restriction: The OM API supports only the short form of the keywords that are described in the following table. For example, the keyword ACTIVE (used on the /BROADCAST command) has a short form of ACT. The OM API supports only the ACT keyword, not ACTIVE.

Table 13. Commands supported by the OM API

Command (long form)	Command (short form)	Primary keywords (short form)
/ACTIVATE	/ACT	LINK, NODE
/ALLOCATE	/ALL	LU
/ASSIGN	/ASS	CLASS, CPRI, INPUT, LCT, LPRI, LTERM, NPRI, OUTPUT, PARLIM, PLCT, SEGNO, SEGSZ, TRAN, USER
/BROADCAST	/BRO	ACT, LINE, LTERM, MASTER, NODE, PTERM, USER
/CHANGE	/CHA	APPC, CCTL, CPLOG, DESC, DIR, FDR, LINK, NODE, PSWD, SUBSYS, SURV, TRAN, UOR, USER
/CHECKPOINT	/CHE	DUMPQ, FREEZE, PURGE, STATISTICS
/CLSDST	/CLS	NODE
/CQCHKPT	/CQC	SHAREDQ, SYSTEM
/CQQUERY	/CQQ	STATISTICS
/CQSET	/CQS	SHUTDOWN
CREATE	CRE	DB, DBDESC, OTMADESC, PGM, PGMDESC, RTC, RTCDESC, TRAN, TRANDESC
/DBDUMP	/DBD	DB
/DBRECOVERY	/DBR	AREA, DB, DATAGRP
/DELETE	/DEL	DESC, PSWD, TERMINAL
DELETE	DEL	DB, DBDESC, LE, OTMADESC, PGM, PGMDESC, RTC, RTCDESC, TRAN, TRANDESC
/DEQUEUE	/DEQ	AOITKN, LINE, LTERM, LU, MSNAME, NODE, SUSPEND, TMEM, TRAN, USER

Table 13. Commands supported by the OM API (continued)

Command (long form)	Command (short form)	Primary keywords (short form)
/DISPLAY	/DIS	ACT, AFFIN, AOITKN, APPC, AREA, ASMT, CCTL, CONV, CPLOG, CQS, DB, DBD, DESC, FDR, FPV, HSB, HSSP, LINE, LINK, LTERM, LU, MASTER, MODIFY, MSNAME, NODE, OASN, OLDS, OTMA, OVERFLOWQ, PGM, POOL, PSB, PTERM, Q, QCNT, RECOVERY, RTC, SHUTDOWN, STATUS, STRUC, SUBSYS, SYSID, TIMEOVER, TMEM, TRACE, TRACKING, TRAN, UOR, USER
/END	/END	LINE, NODE, USER
/ERESTART	/ERE	BACKUP, COLDDBASE, COLDCOMM, COLDSYS, NULL
/EXCLUSIVE	/EXC	LINE, NODE, USER
/EXIT	/EXI	CONV
EXPORT	EXP	DEFN
/IDLE	/IDL	LINE, LINK, NODE
IMPORT	IMP	DEFN
INITIATE	INIT	OLC, OLREORG
/LOCK	/LOC	DB, PGM, TRAN
/LOG	/LOG	
/MODIFY	/MOD	ABORT, COMMIT, PREPARE
/MONITOR	/MON	LINE
/MSASSIGN	/MSA	LINK, MSNAME, SYSID, TRAN
/NRESTART	/NRE	CHKPT, NULL
/OPNDST	/OPN	NODE
/PSTOP	/PST	LINE, LINK, LTERM, MSPLINK, REGION, TRAN
/PURGE	/PUR	APPC, FPPROG, FPRGN, LINE, LTERM, MSNAME, TRAN

Table 13. Commands supported by the OM API (continued)

Command (long form)	Command (short form)	Primary keywords (short form)
QUERY	QRY	AREA, DB, DBDESC, IMS, IMSPLEX, LE, LTERM, MEMBER, MSLINK, MSNAME, MSPLINK, NODE, ODBM, OLC, OLREORG, OTMADESC, OTMATI, PGM, PGMDISC, POOL, RTC, RTCDESC, STRUCTURE, TRAN, TRANDESC, USER, USEREXIT, USERID
QUEUE	QUE	LTERM, TRAN
/QUIESCE	/QUI	NODE
/RDISPLAY	/RDI	MASTER
/RECOVER	/REC	ADD, REMOVE, START, STOP, TERMINATE
REFRESH	/RFR	USEREXIT
/RMCHANGE	/RMC	
/RMDELETE	/RMD	
/RMGENJCL	/RMG	
/RMINIT	/RMI	
/RMLIST	/RML	
/RMNOTIFY	/RMN	
/RSTART	/RST	LINE, LINK, MSPLINK, NODE, USER
/RTAKEOVER	/RTA	DUMPQ, FREEZE, UNPLAN
/SECURE	/SEC	APPC, OTMA
/SMCOPY	/SMC	MASTER, MSG, TERMINAL
/START	/STA	APPC, AREA, AUTOARCH, CLASS, DATAGRP, DB, DC, DESC, ISOLOG, LINE, LTERM, LU, MADSIOT, MSNAME, NODE, OLDS, OTMA, PGM, REGION, RTC, SB, SERVGRP, SLDSREAD, SUBSYS, SURV, THREAD, TMEM, TRAN, TRKARCH, USER, VGR, WADS, XRCTACK

Table 13. Commands supported by the OM API (continued)

Command (long form)	Command (short form)	Primary keywords (short form)
/STOP	/STO	ADS, APPC, AREA, AUTOARCH, BACKUP, CLASS, DATAGRP, DB, DC, LINE, LTERM, LU, MADSIOT, MSNAME, NODE, OLDS, OTMA, PGM, REGION, RTC, SB, SERVGRP, SLDSREAD, SUBSYS, SURV, THREAD, TMEM, TRAN, USER, VGR, WADS, XRCTrack
/SWITCH	/SWI	OLDS, SYSTEM, WADS
TERMINATE	TERM	OLC, OLREORG
/TEST	/TES	MFS
/TRACE	/TRA	SET
/UNLOCK	/UNL	DB, PGM, SYSTEM, TRAN
UPDATE	UPD	AREA, DATAGRP, DB, DBDESC, IMS, LE, MSLINK, MSNAME, MSPLINK, ODBM, OLREORG, OTMADESC, PGM, PGMDESC, POOL, RTC, RTCDESC, TRAN, TRANDESC
/VUNLOAD	/VUN	AREA

Equivalent IMS type-1 and type-2 commands

Certain IMS type-1 commands and type-2 commands perform similar tasks.

The following table shows the different instances of the IMS type-1 commands and type-2 commands that perform similar tasks.

Table 14. Type-2 equivalents for the /ASSIGN command

Task	/ASSIGN command	Similar IMS type-2 command
Changes the value for the limit count of a transaction.	/ASSIGN LCT <i>new_lmct_number</i> TO TRAN <i>trannname</i>	UPDATE TRAN NAME(<i>trannname</i>) SET(LCT(<i>new_limit_count</i>))
Changes the value for the limit priority of a transaction.	/ASSIGN LPRI <i>new_lpri_number</i> TO TRAN <i>trannname</i>	UPDATE TRAN NAME(<i>trannname</i>) SET(LPRI(<i>new_limit_priority</i>))
Changes the value for the normal priority of a transaction.	/ASSIGN NPRI <i>new_npri_number</i> TO TRAN <i>trannname</i>	UPDATE TRAN NAME(<i>trannname</i>) SET(NPRI(<i>new_normal_priority</i>))
Changes the value for the parallel processing limit count of a transaction.	/ASSIGN PARLIM <i>new_parlim_number</i> TO TRAN <i>trannname</i>	UPDATE TRAN NAME(<i>trannname</i>) SET(PARLIM(<i>new_parallel_limit</i>))
Changes the value for the processing limit count of a transaction.	/ASSIGN PLCT <i>new_plmct_number</i> TO TRAN <i>trannname</i>	UPDATE TRAN NAME(<i>trannname</i>) SET(PLCT(<i>new_processing_limit</i>))

Table 14. Type-2 equivalents for the /ASSIGN command (continued)

Task	/ASSIGN command	Similar IMS type-2 command
Changes the limit on the number of application program output segments allowed in message queues for each GU call.	/ASSIGN SEGNO <i>new_segno_number</i> TO TRAN <i>trannname</i>	UPDATE TRAN NAME(<i>trannname</i>) SET(SEGNO(<i>new_segment_number</i>))
Creates or changes the limit on the size of application program output segments allowed in message queues for each GU call.	/ASSIGN SEGSZ <i>new_segsz_number</i> TO TRAN <i>trannname</i>	UPDATE TRAN NAME(<i>trannname</i>) SET(SEGSZ(<i>new_segment_size</i>))
Changes the class number of a transaction.	/ASSIGN TRAN <i>trannname</i> TO CLS <i>new_class_number</i>	UPDATE TRAN NAME(<i>trannname</i>) SET(CLASS(<i>new_class_number</i>))

Table 15. Type-2 equivalents for the /DBDUMP command.

Task	/DBDUMP command	Similar IMS type-2 command
Stops updates to a database.	/DBDUMP DB <i>dbname</i>	UPDATE DB NAME(<i>dbname</i>) STOP(UPDATES) OPTION(FEOV) ¹

¹ This command does not automatically issue checkpoints unless OPTION(FEOV) is specified.

Table 16. Type-2 equivalents for the /DBRECOVERY command.

Task	/DBRECOVERY command	Similar IMS type-2 command
Stops the accessing and updating of an area.	/DBRECOVERY AREA <i>areaname</i>	UPDATE AREA NAME(<i>areaname</i>) STOP(ACCESS)
Stops the accessing and updating of all areas and databases of the data group.	/DBRECOVERY DATAGRP <i>datagrpname</i>	UPDATE DATAGRP NAME(<i>datagrpname</i>) STOP(ACCESS)
Stops access to the database and take it offline.	/DBRECOVERY DB <i>dbname</i>	UPDATE DB NAME(<i>dbname</i>) STOP(ACCESS) OPTION(FEOV) ¹

¹ This command does not automatically issue checkpoints unless OPTION(FEOV) is specified.

Table 17. Type-2 equivalents for the /DISPLAY AFFIN command

Task	/DISPLAY AFFIN command	Similar IMS type-2 command
Displays VTAM generic resource affinities.	/DISPLAY AFFIN NODE <i>node</i>	QUERY NODE SHOW(AFFIN)

Table 18. Type-2 equivalents for the /DISPLAY AREA command

Task	/DISPLAY AREA command	Similar IMS type-2 command
Displays information about an area.	/DISPLAY AREA	QUERY AREA

Table 19. Type-2 equivalents for the /DISPLAY ASMT command.

Task	/DISPLAY ASMT command	Similar IMS type-2 command
Displays input and output components.	/DISPLAY ASMT LTERM <i>ltermname</i>	QUERY LTERM SHOW(COMPONENT)
Displays the node associated with the lterm.	/DISPLAY ASMT LTERM <i>ltermname</i>	QUERY LTERM SHOW(NODE)
Displays the user associated with the lterm.	/DISPLAY ASMT LTERM <i>ltermname</i>	QUERY LTERM SHOW(USER)

Table 19. Type-2 equivalents for the /DISPLAY ASMT command (continued).

Task	/DISPLAY ASMT command	Similar IMS type-2 command
Displays the attributes of an MSC logical link	/DISPLAY ASMT MSPLINK <i>msplinkname</i>	QUERY MSLINK SHOW(ALL)
Displays the attributes of an MSC physical link	/DISPLAY ASMT MSPLINK <i>msplinkname</i>	QUERY MSPLINK SHOW(ALL)
Displays assigned lterms.	/DISPLAY ASMT NODE <i>node</i>	QUERY NODE SHOW(LTERM)
Displays the user associated with the node.	/DISPLAY ASMT NODE <i>node</i>	QUERY NODE SHOW(USER)
Displays the other half-session qualifier ID of the ISC node.	/DISPLAY ASMT USER <i>user</i>	QUERY USER SHOW(ID)
Displays assigned lterms.	/DISPLAY ASMT USER <i>user</i>	QUERY USER SHOW(LTERM)
Displays the node.	/DISPLAY ASMT USER <i>user</i>	QUERY USER SHOW(NODE) QUERY USERID SHOW(NODE)
Displays the user ID.	/DISPLAY ASMT USER <i>user</i>	QUERY USER SHOW(USERID)
Displays the user.	/DISPLAY ASMT USER <i>user</i>	QUERY USERID SHOW(USER)

Table 20. Type-2 equivalents for the /DISPLAY CONV command

Task	/DISPLAY CONV command	Similar IMS type-2 command
Displays nodes with active or held conversations.	/DISPLAY CONV	QUERY NODE STATUS(CONV)
Displays users with active or held conversations.	/DISPLAY CONV	QUERY USER STATUS(CONV)
Displays IMS conversation information for a particular node.	/DISPLAY CONV NODE <i>node</i>	QUERY NODE SHOW(CONV)
Displays IMS conversation information for a particular user.	/DISPLAY CONV USER <i>user</i>	QUERY USER SHOW(CONV)

Table 21. Type-2 equivalents for the /DISPLAY DB command

Task	/DISPLAY DB command	Similar IMS type-2 command
Displays the status of a database.	/DISPLAY DB <i>dbname1 ...dbnamen</i> ALL	QUERY DB

Table 22. Type-2 equivalents for the /DISPLAY DBD command

Task	/DISPLAY DBD command	Similar IMS type-2 command
Displays the programs being accessed by databases.	/DISPLAY DBD <i>dbdname</i>	QUERY DB NAME(<i>dbname</i>) SHOW(PGM)

Table 23. Type-2 equivalents for the /DISPLAY LTERM command.

Task	/DISPLAY LTERM command	Similar IMS type-2 command
Displays logical link path for remote lterms.	/DISPLAY LTERM <i>ltermname</i>	QUERY LTERM SHOW(MSNAME)
Displays the lterm message queue count.	/DISPLAY LTERM <i>ltermname</i> /DISPLAY LTERM <i>ltermname</i> QCNT	QUERY LTERM SHOW(QCNT)
Displays status of the lterm.	/DISPLAY LTERM <i>ltermname</i>	QUERY LTERM SHOW(STATUS)

Table 23. Type-2 equivalents for the /DISPLAY LTERM command (continued).

Task	/DISPLAY LTERM command	Similar IMS type-2 command
Displays queue count in the EMH queues.	/DISPLAY LTERM <i>ltermname</i> QCNT EMHQ	QUERY LTERM SHOW(EMHQ)

Table 24. Type-2 equivalents for the /DISPLAY MASTER command

Task	/DISPLAY MASTER command	Similar IMS type-2 command
Displays the primary and secondary master terminal.	/DISPLAY MASTER	QUERY LTERM STATUS(MTO,SMTO)

Table 25. Type-2 equivalents for the /DISPLAY MODIFY command.

Task	/DISPLAY MODIFY command	Similar IMS type-2 command
Displays work in progress for runtime resource definitions that would cause a DELETE, /MODIFY COMMIT, INITIATE OLC PHASE(COMMIT), or UPDATE command to change resource definitions to fail.	/DISPLAY MODIFY ALL	QUERY DB NAME(<i>dbname</i>) SHOW(WORK)
		QUERY PGM NAME(<i>pgmname</i>) SHOW(WORK)
		QUERY RTC NAME(<i>rtcode</i>) SHOW(WORK)
		QUERY TRAN NAME(<i>tranname</i>) SHOW(WORK)

Table 26. Type-2 equivalents for the /DISPLAY NODE command.

Task	/DISPLAY NODE command	Similar IMS type-2 command
Displays VTAM connection identifier (CID).	/DISPLAY NODE <i>node</i>	QUERY NODE SHOW(CID)
Displays send/receive message counts.	/DISPLAY NODE <i>node</i>	QUERY NODE SHOW(COUNT)
Displays preset destination.	/DISPLAY NODE <i>node</i>	QUERY NODE SHOW(PRESET)
Displays queue count.	/DISPLAY NODE <i>node</i>	QUERY NODE SHOW(QCNT)
	/DISPLAY NODE <i>node</i> QCNT	
Displays status for a particular node.	/DISPLAY NODE <i>node</i>	QUERY NODE SHOW(STATUS)
Displays terminal type.	/DISPLAY NODE <i>node</i>	QUERY NODE SHOW(TYPE)
Displays user ID.	/DISPLAY NODE <i>node</i>	QUERY NODE SHOW(USERID)
Displays user.	/DISPLAY NODE <i>node</i>	QUERY NODE SHOW(USER)
Displays VTAM mode table names.	/DISPLAY NODE <i>node</i> MODE	QUERY NODE SHOW(MODETBL)
Displays message queue count in the Expedited Message Handler (EMH) queues.	/DISPLAY NODE <i>node</i> QCNT EMHQ	QUERY NODE SHOW(EMHQ)
Displays owner IMSID in RM resource structure.	/DISPLAY NODE <i>node</i> RECOVERY	QUERY NODE SHOW(OWNER)
Displays status recovery information.	/DISPLAY NODE <i>node</i> RECOVERY	QUERY NODE SHOW(RECOVERY)

Table 27. Type-2 equivalents for the /DISPLAY PGM command.

Task	/DISPLAY PGM command	Similar IMS type-2 command
Displays information about a program.	/DISPLAY PGM <i>pgmname</i>	QRY PGM NAME(<i>pgmname</i>) SHOW(ALL)
		QUERY PGM NAME(<i>pgmname</i>) SHOW(TRAN)

Table 28. Type-2 equivalents for the /DISPLAY PSB command.

Task	/DISPLAY PSB command	Similar IMS type-2 command
Displays transactions, routing codes, and databases associated with a PSB.	/DISPLAY PSB <i>psbname</i>	QUERY PGM NAME(<i>pgmname</i>) SHOW(DB)
		QUERY PGM NAME(<i>pgmname</i>) SHOW(RTC)
		QUERY PGM NAME(<i>pgmname</i>) SHOW(TRAN)

Table 29. Type-2 equivalents for the /DISPLAY QCNT command

Task	/DISPLAY QCNT command	Similar IMS type-2 command
Displays lterms with messages that are older than the specified age (shared queues).	/DISPLAY QCNT LTERM MSGAGE <i>x</i>	QUERY LTERM MSGAGE(<i>x</i>)

Table 30. Type-2 equivalents for the /DISPLAY RTC command

Task	/DISPLAY RTC command	Similar IMS type-2 command
Displays information about one or more Fast Path routing codes.	/DISPLAY RTC <i>rtcname1...rtcnamen</i> ALL	QUERY RTC NAME(<i>rtcname1...rtcnamen</i> *) SHOW(ALL)

Table 31. Type-2 equivalents for the /DISPLAY STATUS command

Task	/DISPLAY STATUS command	Similar IMS type-2 command
Displays information about databases with the specified status.	/DISPLAY STATUS DB	QUERY DB STATUS(ALLOC, ALLOCS, BACKOUT, EEQE, LOCK, NOTINIT, NOTOPEN, OFR, OLR, OPEN, RECALL, RECOV, RNL, STOSCHD, STOUPLDS)
Displays status.	/DISPLAY STATUS LTERM	QUERY LTERM SHOW(STATUS)
Displays logical terminals with specified status.	/DISPLAY STATUS LTERM	QUERY LTERM STATUS(status) SHOW(STATUS)
Displays nodes with specified status.	/DISPLAY STATUS NODE	QUERY NODE STATUS(status)
Displays all programs that have status and what that status is.	/DISPLAY STATUS PGM	QUERY PGM STATUS(DB-NOTAVL, IOPREV, LOCK, NOTINIT, STOSCHD, TRACE)
Displays all Fast Path routing codes that have status and what that status is.	/DISPLAY STATUS RTC	QUERY RTC STATUS(ACTIVE, NOTINIT, NOTSCHD, STOQ)
Displays information about transactions with the specified status.	/DISPLAY STATUS TRANSACTION	QUERY TRAN NAME(<i>tranname</i>) STATUS (IOPREV, LCK, QERR, SUSPEND, STOQ, STOSCHD, USTO)

Table 31. Type-2 equivalents for the /DISPLAY STATUS command (continued)

Task	/DISPLAY STATUS command	Similar IMS type-2 command
Displays users with specified status.	/DISPLAY STATUS USER	QUERY USER STATUS(status)

Table 32. Type-2 equivalents for the /DISPLAY TRACE command

Task	/DISPLAY TRACE command	Similar IMS type-2 command
Displays nodes with trace status.	/DISPLAY TRACE NODE	QUERY NODE STATUS(TRACE)

Table 33. Type-2 equivalents for the /DISPLAY TRAN command

Task	/DISPLAY TRAN command	Similar IMS type-2 command
Displays information about a transaction.	/DISPLAY TRAN <i>tranname</i>	QUERY TRAN NAME(<i>tranname</i>) SHOW(ALL)
Displays all of the transactions.	/DISPLAY TRAN ALL	QUERY TRAN SHOW(ALL)
Displays all of the transactions on the shared queues with a global queue count.	/DISPLAY TRAN <i>tranname</i> QCNT	QUERY TRAN NAME(<i>tranname</i>) SHOW(QCNT)

Table 34. Type-2 equivalents for the /DISPLAY USER command.

Task	/DISPLAY USER command	Similar IMS type-2 command
Displays preset destination.	/DISPLAY USER <i>user</i>	QUERY USER SHOW(PRESET)
Displays node.	/DISPLAY USER <i>user</i>	QUERY USER SHOW(NODE) QUERY USERID SHOW(NODE)
Displays status for a particular user.	/DISPLAY USER <i>user</i>	QUERY USER SHOW(STATUS)
Displays user ID.	/DISPLAY USER <i>user</i>	QUERY USER SHOW(USERID)
Displays status of a particular user ID.	/DISPLAY USER <i>user</i>	QUERY USERID SHOW(STATUS)
Displays user.	/DISPLAY USER <i>user</i>	QUERY USERID SHOW(USER)
Displays autologon parameters.	/DISPLAY USER <i>user</i> AUTOLOGON	QUERY USER SHOW(AUTOLOGON)
Displays queue count.	/DISPLAY USER <i>user</i> /DISPLAY USER <i>user</i> QCNT	QUERY USER SHOW(QCNT)
Displays message queue count in the Expedited Message Handler (EMH) queues.	/DISPLAY USER <i>user</i> QCNT EMHQ	QUERY USER SHOW(EMHQ)
Displays status recovery information.	/DISPLAY USER <i>user</i> RECOVERY	QUERY USER SHOW(RECOVERY)
Displays owner IMSID in RM resource structure.	/DISPLAY USER <i>user</i> RECOVERY	QUERY USER SHOW(OWNER)

Table 35. Type-2 equivalents for the /LOCK command

Task	/LOCK command	Similar IMS type-2 command
Stops the use of a database.	/LOCK DB <i>dbname</i>	UPDATE DB NAME(<i>dbname</i>) SET(LOCK(ON))
Locks a program.	/LOCK PGM <i>pgmname</i>	UPDATE PGM NAME(<i>pgmname</i>) SET(LOCK(ON))
Locks a transaction.	/LOCK TRAN <i>tranname</i>	UPDATE TRAN NAME(<i>tranname</i>) SET(LOCK(ON))

Table 36. Type-2 equivalents for the /MSASSIGN command

Task	/MSASSIGN command	Similar IMS type-2 command
Changes the transaction so that it is local and runs on the local system.	/MSASSIGN TRAN <i>tranname</i> TO LOCAL	UPDATE TRAN NAME(<i>tranname</i>) SET(REMOTE(N))
Changes the transaction so that it is remote, and assign it to a specific logical link path.	/MSASSIGN TRAN <i>tranname</i> TO MSNAME <i>msname</i>	UPDATE TRAN NAME(<i>tranname</i>) SET(MSNAME(<i>name</i>))

Table 37. Type-2 equivalents for the /PSTOP command

Task	/PSTOP command	Similar IMS type-2 command
Stops the scheduling of transactions.	/PSTOP TRAN <i>tranname</i>	UPDATE TRAN(<i>tranname</i>) START(Q) STOP(SCHD)
Stops logons to the physical link (only for MSC VTAM links).	/PSTOP MSPLINK <i>msplinkname</i> ALL	UPDATE MSPLINK NAME(<i>msplinkname</i> *) STOP(LOGON)

Table 38. Type-2 equivalents for the /PURGE command

Task	/PURGE command	Similar IMS type-2 command
Stops input messages for a particular transaction code.	/PURGE TRAN <i>tranname</i>	UPDATE TRAN NAME(<i>tranname</i>) START(SCHD) STOP(Q)

Table 39. Type-2 equivalents for the /RDISPLAY command

Task	/RDISPLAY command	Similar IMS type-2 command
Displays the primary and secondary master terminal.	/RDISPLAY MASTER	QUERY LTERM STATUS(MTO,SMTO)

Table 40. Type-2 equivalents for the /RSTART command

Task	/RSTART command	Similar IMS type-2 command
Resets MSC VTAM links to enable logons.	/RSTART MSPLINK <i>msplinkname</i> ALL	UPDATE MSPLINK NAME(<i>msplinkname</i> *) START(LOGON)

Table 41. Type-2 equivalents for the /START AREA command

Task	/START AREA command	Similar IMS type-2 command
Starts the area.	/START AREA <i>areaname</i>	UPDATE AREA NAME(<i>areaname</i>) START(ACCESS)

Table 42. Type-2 equivalents for the /START DATAGRP command

Task	/START DATAGRP command	Similar IMS type-2 command
Starts the data group.	/START DATAGRP <i>datagrpname</i>	UPDATE DATAGRP NAME(<i>datagrpname</i>) START(ACCESS)

Table 43. Type-2 equivalents for the /START DB command

Task	/START DB command	Similar IMS type-2 command
Starts a database and change access intent of the database.	/START DB ACCESS	UPDATE DB START(ACCESS) SET(ACCTYPE())

Table 43. Type-2 equivalents for the /START DB command (continued)

Task	/START DB command	Similar IMS type-2 command
Starts a database.	/START DB <i>dbname</i>	UPDATE DB NAME(<i>dbname</i>) START(ACCESS)

Table 44. Type-2 equivalents for the /START PGM command

Task	/START PGM command	Similar IMS type-2 command
Starts program scheduling.	/START PGM <i>pgmname</i>	UPDATE PGM NAME(<i>pgmname</i>) START(SCHD)

Table 45. Type-2 equivalents for the /START RTC command

Task	/START RTC command	Similar IMS type-2 command
Starts queuing to a Fast Path routing code.	/START RTC <i>rtcname</i>	UPDATE RTC NAME(<i>rtcname</i>) START(Q)

Table 46. Type-2 equivalents for the /START TRAN command

Task	/START TRAN command	Similar IMS type-2 command
Starts a transaction.	/START TRAN	UPDATE TRAN NAME(<i>tranname</i>) START(Q,SCHD,SUSPEND)

Table 47. Type-2 equivalents for the /STOP AREA command

Task	/STOP AREA command	Similar IMS type-2 command
Stops an area.	/STOP AREA <i>areaname</i>	UPDATE AREA NAME(<i>areaname</i>) STOP(SCHD)

Table 48. Type-2 equivalents for the /STOP DATAGRP command

Task	/STOP DATAGRP command	Similar IMS type-2 command
Stops a data group.	/STOP DATAGRP <i>datagrpname</i>	UPDATE DATAGRP NAME(<i>datagrpname</i>) STOP(SCHD)

Table 49. Type-2 equivalents for the /STOP DB command

Task	/STOP DB command	Similar IMS type-2 command
Stops a database.	/STOP DB <i>dbname</i>	UPDATE DB NAME(<i>dbname</i>) STOP(SCHD)

Table 50. Type-2 equivalents for the /STOP PGM command

Task	/STOP PGM command	Similar IMS type-2 command
Stops program scheduling.	/STOP PGM <i>pgmname</i>	UPDATE PGM NAME(<i>pgmname</i>) STOP(SCHD)

Table 51. Type-2 equivalents for the /STOP RTC command

Task	/STOP RTC command	Similar IMS type-2 command
Stops queuing to a Fast Path routing code.	/STOP RTC <i>rtcname</i>	UPDATE RTC NAME(<i>rtcname</i>) STOP(Q)

Table 52. Type-2 equivalents for the /STOP TRAN command

Task	/STOP TRAN command	Similar IMS type-2 command
Stops the queuing and scheduling of messages destined for a transaction.	/STOP TRAN <i>tranname</i>	UPDATE TRAN NAME(<i>tranname</i>) STOP(Q,SCHD)

Table 53. Type-2 equivalents for the /TRACE PGM command

Task	/TRACE PGM command	Similar IMS type-2 command
Starts the tracing of a program.	/TRACE SET ON PGM <i>pgmname</i>	UPDATE PGM NAME(<i>pgmname</i>) START(TRACE)
Stops the tracing of a program.	/TRACE SET OFF PGM <i>pgmname</i>	UPDATE PGM NAME(<i>pgmname</i>) STOP(TRACE)

Table 54. Type-2 equivalents for the /TRACE TRAN command

Task	/TRACE TRAN command	Similar IMS type-2 command
Starts the tracing of a transaction.	/TRACE SET ON TRAN <i>tranname</i>	UPDATE TRAN NAME(<i>tranname</i>) START(TRA)
Stops the tracing of a transaction.	/TRACE SET OFF TRAN <i>tranname</i>	UPDATE TRAN NAME(<i>tranname</i>) STOP(TRA)

Table 55. Type-2 equivalents for the /UNLOCK DB command

Task	/UNLOCK DB command	Similar IMS type-2 command
Unlocks a database.	/UNLOCK DB <i>dbname</i>	UPDATE DB NAME(<i>dbname</i>) SET(LOCK(OFF))

Table 56. Type-2 equivalents for the /UNLOCK PGM command

Task	/UNLOCK PGM command	Similar IMS type-2 command
Unlocks a program.	/UNLOCK PGM <i>pgmname</i>	UPDATE PGM NAME(<i>pgmname</i>) SET(LOCK(OFF))

Table 57. Type-2 equivalents for the /UNLOCK TRAN command

Task	/UNLOCK TRAN command	Similar IMS type-2 command
Unlocks a transaction.	/UNLOCK TRAN <i>tranname</i>	UPDATE TRAN NAME(<i>tranname</i>) SET(LOCK(OFF))

Related concepts:

 Commands for IMS operations tasks (Operations and Automation)

Chapter 2. Command keywords and their synonyms

All IMS keywords and their synonyms, as well as keywords supported by the OM API, are listed. The list covers both type-1 and type-2 command keywords.

IMS ignores misspelled keywords, and issues an error message when it encounters an invalid keyword. In an IMSplex, invalid or misspelled keywords will result in an UNKNOWN POSITIONAL PARAMETER message.

You can modify type-1 command keywords by using the IMS Command Language Modification Facility (DFSCKWD0) with the KEYWD macro.

You can specify ALL=NO or ALL=DIS on the KEYWD macro to prevent the use of the ALL parameter.

- You can specify ALL=NO for all the type-1 command keywords that support the ALL parameter. ALL=NO indicates that the ALL parameter is invalid on all the IMS commands that apply to the keyword being changed.
- You can specify ALL=DIS for all the type-1 /DISPLAY command keywords that support the ALL parameter. ALL=DIS indicates that the ALL parameter is invalid on all the /DISPLAY commands that apply to the keyword being changed.

You can prevent the use of the NAME(*) parameter on type-2 commands by using the CSL OM input user exit routine.

In the following table, the IMS keyword column is for the OM command processing clients such as IMS, ODBM, IMSCON, and RM. A keyword listed in the OM keyword column indicates that it is the only accepted form supported by the OM API. If no keyword is listed in the OM keyword column, then the IMS keyword or its synonym is acceptable. If no synonyms are listed, none are permitted.

Table 58. Command keywords and their synonyms

IMS keyword	Synonym	OM keyword	Commands that support this keyword
ABDUMP			/CHECKPOINT /STOP /SWITCH
ABORT			/MODIFY
ACBLIB			INITIATE OLC
ACCESS			/START
ACTIVE	A, ACT	ACT	/BROADCAST /DISPLAY /SWITCH
ADAPTER			QUERY OTMADESC
ADD			/RECOVER
ADDRESS			/DIAGNOSE
ADS			/STOP
AFFINITY	AFFIN, AFF	AFFIN	/DISPLAY /START

Table 58. Command keywords and their synonyms (continued)

IMS keyword	Synonym	OM keyword	Commands that support this keyword
ALIAS			QUERY ODBM UPDATE ODBM
ALLENTRIES	ALLENT		/RECOVER
AOITOKEN	AOITKN	AOITKN	/DEQUEUE /DISPLAY /PSTOP
APDB			/TRACE MONITOR
APMQ			/TRACE MONITOR
APPC			/DISPLAY /PURGE /SECURE /START /STOP
AREA			/DBRECOVERY /DISPLAY /RECOVER /START /STOP /VUNLOAD
ASR			QUERY MSLINK
ASSIGNMENT	ASMT	ASMT	/DISPLAY
ATTRIB			QUERY MEMBER
AUTO			/TRACE
AUTOARCH	ARCHIVE, AUTOARC	AUTOARCH	/START /STOP
AUTOLOGON	AUTLGN		/DISPLAY
BACKUP	BU	BACKUP	/ERESTART /STOP /SWITCH
BALGRP	BALG		/DISPLAY
BANDWIDTH			QUERY MSLINK
BKERR			/DISPLAY
BLDL			INITIATE OLC
BLOCK			/DIAGNOSE
BUILDQ	BLDQ, BLDQS, BUILDQS		/ERESTART /NRESTART
CAGROUP	CAGRP		/RECOVER
CANCEL			/STOP
CCTL	CC	CCTL	/DISPLAY
CHECKPOINT	CHECKPT, CHKPOINT, CHKPT	CHKPT	/ERESTART /NRESTART /SWITCH

Table 58. Command keywords and their synonyms (continued)

IMS keyword	Synonym	OM keyword	Commands that support this keyword
CLASS	CLS	CLASS	/ASSIGN CREATE TRAN CREATE TRANDESC /DISPLAY /PSTOP /PURGE QUERY TRAN /START /STOP UPDATE TRAN
CMDAUTH			/ERESTART /NRESTART
CMDAUTHE			/ERESTART /NRESTART
CMTMODE			CREATE TRAN CREATE TRANDESC QUERY OTMATI
CNS			/COMPT /RCOMPT
COLDBASE	COLDB	COLDBASE	/ERESTART
COLDCOMM	COLDC	COLDCOMM	/ERESTART
COLDSESS			/CHANGE NODE UPDATE MSLINK
COLDSYS	COLDS	COLDSYS	/ERESTART
COMMIT			/MODIFY
COMP			/TRACE
COMPONENT	COMPT		/ASSIGN
CONTINUOUS	CONT		/RSTART
CONVERSATION	CONV	CONV	CREATE TRAN CREATE TRANDESC /DISPLAY /EXIT /RELEASE /SET
CONVRTR			QUERY OTMADESC
CPLOG			/CHANGE /DISPLAY
CPRI			/ASSIGN
CQS			/DISPLAY
CRD			/COMPT
DATA			QUEUE LTERM QUEUE TRAN

Table 58. Command keywords and their synonyms (continued)

IMS keyword	Synonym	OM keyword	Commands that support this keyword
DATABASE	DATABASES, DB, DBS	DB	/DBDUMP /DBRECOVERY /DISPLAY /LOCK /RECOVER /START /STOP /UNLOCK
DATAGROUP	DATAGRP	DATAGRP	/DBRECOVERY /START /STOP UPDATE
DATASTORE			QUERY ODBM UPDATE ODBM
DBALLOC			/START
DBD			/DISPLAY
DBDS			/RECOVER
DBDSGRP			/RECOVER
DBS			/DISPLAY MODIFY
DC			/DISPLAY /START /STOP
DCLWA			CREATE TRAN CREATE TRANDESC
DEFAULT			CREATE DBDESC CREATE PGMDESC CREATE TRANDESC QUERY DBDESC QUERY PGMDESC QUERY RTCDESC QUERY TRANDESC UPDATE DBDESC
DEFN			EXPORT IMPORT
DESCRIPTOR	DESC, L62DESC	DESC	/CHANGE /DELETE /DISPLAY /START /STOP
DIRECTORY	DIR	DIR	/CHANGE
DIRROUTE			CREATE TRAN CREATE TRANDESC
DONE			/IAM
DOPT			CREATE PGM CREATE PGMDESC
DUMPQ	DUMPQS	DUMPQ	/CHECKPOINT /RTAKEOVER
EDITRTN			CREATE TRAN CREATE TRANDESC

Table 58. Command keywords and their synonyms (continued)

IMS keyword	Synonym	OM keyword	Commands that support this keyword
EDITUC			CREATE TRAN CREATE TRANDESC
EMHBSZ			CREATE TRAN CREATE TRANDESC
EMHQ			/DISPLAY
ERRORABORT			/RECOVER
ERRORCONT			/RECOVER
EXIT			/DISPLAY /TRACE
FDR			/CHANGE /DISPLAY
FMTLIB			INITIATE OLC
FORCE			/CLSDST /PSTOP /SWITCH
FORCSESS	FORC		/CHANGE
FORMAT	FMT		/ERESTART /NRESTART
FP			CREATE PGM CREATE PGMDESC CREATE TRAN CREATE TRANDESC
FPPROG			/PURGE
FPREGION	FPRGN	FPRGN	/PURGE
FPVIRTUAL	FPV	FPV	/DISPLAY
FRCABND			INITIATE OLC
FRCNRML			INITIATE OLC
FREEZE			/CHECKPOINT /RTAKEOVER
GLOBAL			/DBDUMP /DBRECOVERY QUERY TRAN /START /STOP
GPSB			CREATE PGM CREATE PGMDESC
GRPNAME			QUERY OTMATI
GRSNAME	GRSN, GRS		/START
HSB	HOTSTANDBY	HSB	/DISPLAY
HSSP			/DISPLAY
ICOMPONENT	ICOMPT		/ASSIGN
ID			/CHANGE /OPNDST
INDOUBT	IND		/DISPLAY

Table 58. Command keywords and their synonyms (continued)

IMS keyword	Synonym	OM keyword	Commands that support this keyword
INPUT			/ASSIGN /DISPLAY /START /STOP /TRACE
INQ			CREATE RTC CREATE RTCDESC CREATE TRAN CREATE TRANDESC
INTERVAL	INT, INTV		/CHANGE /TRACE MONITOR
ISOLOG			/START
JOBNAME	JBN, JOBN		/PSTOP /START /STOP
LA			/TRACE MONITOR
LANG			CREATE PGM CREATE PGMDESC
LCT			CREATE TRAN CREATE TRANDESC
LE			DELETE UPDATE QUERY
LEAVEGR			/CHECKPOINT
LEAVEPLEX			/CHECKPOINT
LEVEL			/TRACE
LIBRARY			QUERY OLC
LIKE			CREATE DB CREATE DBDESC CREATE PGM CREATE PGMDESC CREATE TRAN CREATE TRANDESC
LINE	LINES	LINE	/ASSIGN /BROADCAST /DEQUEUE /DISPLAY /END /EXCLUSIVE /EXIT /IDLE /LOOPTEST /MONITOR /PSTOP /PURGE /RSTART /START /STOP /TEST /TRACE

Table 58. Command keywords and their synonyms (continued)

IMS keyword	Synonym	OM keyword	Commands that support this keyword
LINK			/ACTIVATE /CHANGE /DISPLAY /IDLE /MSASSIGN /PSTOP /RSTART /TRACE
LMCT	LCT	LCT	/ASSIGN
LOCAL			/DBDUMP /DBRECOVERY /MSASSIGN /START /STOP
LOGOND	LGND		/CHANGE /OPNDST
LOPEN			/RSTART
LPRI			/ASSIGN CREATE TRAN CREATE TRANDESC
LTERM	LTERMS	LTERM	/ASSIGN /BROADCAST DELETE LE /DEQUEUE /DIAGNOSE /DISPLAY /FORMAT /IAM /LOCK /MODIFY /PSTOP /PURGE QUERY LE QUERY OTMATI /RMxxxxxx /SET /START /STOP /UNLOCK UPDATE LE
LUNAME	LU, LUN	LU	/ALLOCATE /CHANGE /DEQUEUE /DISPLAY /EXIT /START /STOP /TRACE
MADSIOT			/START /STOP

Table 58. Command keywords and their synonyms (continued)

IMS keyword	Synonym	OM keyword	Commands that support this keyword
MASTER			/BROADCAST /DISPLAY /RDISPLAY /SMCOPY
MAXRGN			/CHANGE CREATE TRAN CREATE TRANDESC
MEMBER			UPDATE ODBM
MODBLKS			INITIATE OLC
MODE	MODETABLE, MODETBL		/ALLOCATE /CHANGE /DISPLAY /OPNDST
MODIFY			/DISPLAY
MODNAME			QUERY OTMATI
MODULE			/DIAGNOSE /TRACE
MONITOR	MON		/DISPLAY /TRACE
MSDBLOAD			/NRESTART
MSG	MESSAGE		/SMCOPY /TRACE
MSGAGE			/DISPLAY QUERY LTERM QUERY OTMATI
MSGTYPE			CREATE
MSLINK			QUERY UPDATE
MSNAME			/BROADCAST CREATE TRAN CREATE TRANDESC /DEQUEUE /DISPLAY /MSASSIGN /MSVERIFY /PURGE /START /STOP
MSPLINK			/DISPLAY /MSASSIGN /PSTOP
MULTSIGN			/ERESTART /NRESTART

Table 58. Command keywords and their synonyms (continued)

IMS keyword	Synonym	OM keyword	Commands that support this keyword
NAME			CREATE DB, CREATE DBDESC, CREATE OTMADESC, CREATE PGM, CREATE PGMDESC, CREATE RTC, CREATE RTCDESC, DELETE DB, DELETE DBDESC, DELETE OTMADESC, DELETE PGM, DELETE PGMDESC, DELETE RTC, DELETE RTCDESC, DELETE TRAN, DELETE TRANDESC, EXPORT, IMPORT INITIATE OLREORG, QUERY AREA, QUERY DB, QUERY DBDESC, QUERY IMSPLEX, QUERY LTERM, QUERY MSLINK, QUERY MSNAME, QUERY MSPLINK, QUERY NODE, QUERY ODBM, QUERY OTMADESC, QUERY PGM, QUERY PGMDESC, QUERY OLREORG, QUERY RTC, QUERY RTCDESC, QUERY STRUCTURE, QUERY TRAN, QUERY TRANDESC, QUERY USER, QUERY USERID, QUEUE LTERM, QUEUE TRAN, TERMINATE OLREORG, UPDATE AREA, UPDATE DATAGRP, UPDATE DB, UPDATE DBDESC, UPDATE MSLINK, UPDATE MSNAME, UPDATE MSPLINK, UPDATE OLREORG, UPDATE OTMADESC, UPDATE PGM, UPDATE PGMDESC, UPDATE RTC, UPDATE RTCDESC, UPDATE TRAN, UPDATE TRANDESC
NOBACKOUT	NOBKO		/START
NOBMP			/ERESTART
NOBUILDQ	NBLDQ, NOBLDQ		/NRESTART
NOCHECK			/RECOVER
NOCMDAUTH			/ERESTART /NRESTART
NOCMDAUTHE			/ERESTART /NRESTART
NOCOMP			/TRACE
NOCQSSHUT			/CHECKPOINT
NODBALLOC			/START

Table 58. Command keywords and their synonyms (continued)

IMS keyword	Synonym	OM keyword	Commands that support this keyword
NODE			/ACTIVATE /ASSIGN /BROADCAST /CHANGE /CLSDST /COMPT /DEQUEUE /DIAGNOSE /DISPLAY /END /EXCLUSIVE /EXIT /IDLE /LOCK /OPNDST /QUIESCE /START /STOP /TEST /TRACE /UNLOCK
NOFEOV			/DBDUMP /DBRECOVERY
NOOPEN			/START
NOPFA			/DBDUMP /DBRECOVERY /STOP
NOREVERSE			/RTAKEOVER
NOSAVE			/ASSIGN /CHANGE
NOSHUT	NOS		/IDLE
NOTRANAUTH			/ERESTART /NRESTART
NOTRDY			/COMPT /RCOMPT
NOUSER			/ERESTART /NRESTART
NPRI			/ASSIGN CREATE TRAN CREATE TRANDESC
OASN			/CHANGE /DISPLAY
ODBM			QUERY UPDATE
OFFLINE			/RECOVER
OLC			INITIATE QUERY TERMINATE

Table 58. Command keywords and their synonyms (continued)

IMS keyword	Synonym	OM keyword	Commands that support this keyword
OLDS			/DISPLAY /START /STOP /SWITCH
OLREORG		OLREORG	INITIATE /INITIATE QUERY /QUERY TERMINATE /TERMINATE UPDATE /UPDATE
OPEN			/START
OPTION		OPTION	DELETE DB DELETE DBDESC DELETE OTMADESC DELETE PGM DELETE PGMDESC DELETE RTC DELETE RTCDESC DELETE TRAN DELETE TRANDESC /DIAGNOSE EXPORT IMPORT INITIATE OLC INITIATE OLREORG QUERY AREA QUERY LTERM QUERY OTMADESC QUEUE LTERM QUEUE TRAN TERMINATE OLREORG /TRACE UPDATE AREA UPDATE DATAGRP UPDATE DB UPDATE DBDESC UPDATE IMS UPDATE MSLINK UPDATE ODBM UPDATE OLREORG UPDATE PGM UPDATE PGMDESC UPDATE RTC UPDATE RTCDESC UPDATE TRAN UPDATE TRANDESC
OSAMGTF			/DISPLAY /TRACE
OTMA			/DISPLAY /SECURE /START /STOP

Table 58. Command keywords and their synonyms (continued)

IMS keyword	Synonym	OM keyword	Commands that support this keyword
OTMADESC			CREATE DELETE QUERY UPDATE
OUTBND	OUTBOUND		/CHANGE
OUTPUT			/ASSIGN /DISPLAY /START /STOP /TRACE
OVERFLOWQ	OFLWQ	OVERFLOWQ	/DISPLAY
OVERRIDE	OVER		/ERESTART
PARLIM			/ASSIGN CREATE TRAN CREATE TRANDESC
PASSWORD	PASSWORDS, PSWD, PSWDS	PSWD	/CHANGE /DELETE /MODIFY PREPARE /NRESTART
PCH			/COMPT /RCOMPT
PDS			/COMPT /RCOMPT
PGMTYPE			CREATE PGM CREATE PGMDESC
PHASE			INITIATE OLC
PI			/DISPLAY /TRACE
PITR			/RECOVER
PLCT			CREATE TRAN CREATE TRANDESC
PLCTTIME			CREATE TRAN CREATE TRANDESC
PLEXPARM			UPDATE IMS
PLMCT	PLCT	PLCT	/ASSIGN
POOL			/DISPLAY
PREPARE			/MODIFY
PRIORITY	PRTY		/DISPLAY

Table 58. Command keywords and their synonyms (continued)

IMS keyword	Synonym	OM keyword	Commands that support this keyword
PROGRAM	PGM, PGMS, PROG, PROGRAMS, PROGS	PGM	CREATE PGM CREATE PGMDESC CREATE TRAN CREATE TRANDESC DELETE LE DELETE PGM DELETE PGMDESC DISPLAY /LOCK QUERY LE QUERY PGM QUERY PGMDESC /START /STOP /TRACE /UNLOCK UPDATE LE UPDATE PGM UPDATE PGMDESC
PRT			/COMPT /RCOMPT
PRTKN	PRK		/CHANGE CCTL
PSB			/DISPLAY QUERY ODBM /TRACE
PSWD			INITIATE OLC
PTERM	PTERMS	PTERM	/ASSIGN /BROADCAST /DEQUEUE /DISPLAY /END /EXCLUSIVE /EXIT /IAM /LOCK /LOOPTEST /MONITOR /PSTOP /PURGE /START /STOP /TEST /UNLOCK
PURGE			/CHECKPOINT /DEQUEUE /PSTOP
PURGE1	FIRST, SINGLE, SNGL		/DEQUEUE
Q	QS, QUEUE, QUEUES	Q	/DISPLAY /OPNDST

Table 58. Command keywords and their synonyms (continued)

IMS keyword	Synonym	OM keyword	Commands that support this keyword
QCNT			/DISPLAY QUERY LTERM QUERY MSNAME QUERY TRAN
QMGR			/TRACE TABLE
QUIESCE			/CHECKPOINT
RCVTIME			/RECOVER
RCVTOKEN			/RECOVER
RDDSDSN			EXPORT
RDR			/COMPT /RCOMPT
READNUM			/RECOVER
READY			/COMPT /RCOMPT
RECOVER			CREATE TRAN CREATE TRANDESC
RECOVERY	REC	RECOVERY	/DISPLAY
RECOVGRP	RCVGRP		/RECOVER
REGION	REGIONS, REG, REGS, MSGREG, MSGREGS, MSGREGION, MSREGIONS, THREAD	REGION	/ASSIGN /DISPLAY /PSTOP /START /STOP /TRACE MONITOR
REMOTE			CREATE TRAN CREATE TRANDESC /DISPLAY UPDATE DBDESC
REMOVE	REM	REMOVE	/RECOVER
RESET			/CHANGE
RESIDENT			CREATE DB CREATE DBDESC CREATE PGM CREATE PGMDESC
RESP			CREATE TRAN CREATE TRANDESC
RTCODE	RTC	RTC	/DISPLAY /START /STOP
SAVE			/ASSIGN
SB			/START /STOP
SCOPE			UPDATE AREA UPDATE DATAGRP UPDATE DB UPDATE TRAN
SCHD			/TRACE MONITOR

Table 58. Command keywords and their synonyms (continued)

IMS keyword	Synonym	OM keyword	Commands that support this keyword
SCHDTYPE			CREATE PGM CREATE PGMDESC
SCIMEMBER			QUERY ODBM
SEGNO			/ASSIGN CREATE TRAN CREATE TRANDESC
SEGSIZE	SEGSZ	SEGSZ	/ASSIGN CREATE TRAN CREATE TRANDESC
SERIAL			CREATE TRAN CREATE TRANDESC
SERVGRP	SG	SERVGRP	/START /STOP
SET			CREATE DB CREATE DBDESC CREATE OTMADESC CREATE PGM CREATE PGMDESC CREATE RTC CREATE RTCDESC CREATE TRAN CREATE TRANDESC INITIATE OLREORG /TRACE UPDATE DB UPDATE DBDESC UPDATE LE UPDATE MSLINK UPDATE MSNAME UPDATE MSPLINK UPDATE OLREORG UPDATE OTMADESC UPDATE PGM UPDATE PGMDESC UPDATE RTC UPDATE RTCDESC UPDATE TRAN UPDATE TRANDESC
SHAREDQ	SHRQ	SHAREDQ	/CQCHKPT /CQSET

Table 58. Command keywords and their synonyms (continued)

IMS keyword	Synonym	OM keyword	Commands that support this keyword
SHOW			QUERY AREA QUERY DB QUERY DBDESC QUERY IMS QUERY IMSPLEX QUERY LE QUERY LTERM QUERY MEMBER QUERY MSLINK QUERY MSNAME QUERY MSPLINK QUERY NODE QUERY ODBM QUERY OTMADESC QUERY OTMATI QUERY PGM QUERY PGMDESC QUERY POOL QUERY OLC QUERY OLREORG QUERY RTC QUERY RTCDESC QUERY STRUCTURE QUERY TRAN QUERY TRANDESC QUERY USER QUERY USERID
SHUTDOWN			/CQSET /DISPLAY
SIDE			/CHANGE
SIDL			CREATE TRAN CREATE TRANDESC
SIDR			CREATE TRAN CREATE TRANDESC
SLDSREAD			/START /STOP
SMEM			QUERY OTMADESC
SMSOPTS			/RECOVER
SNAP			/DIAGNOSE
SNAPQ			/CHECKPOINT
SNGLSIGN			/ERESTART /NRESTART
SOURCE			IMPORT
SPASZ			CREATE TRAN CREATE TRANDESC
SPATRUNC			CREATE TRAN CREATE TRANDESC
SQTT			/TRACE TABLE
SSM			/START
STAGLOBAL			/RECOVER

Table 58. Command keywords and their synonyms (continued)

IMS keyword	Synonym	OM keyword	Commands that support this keyword
STALOCAL			/RECOVER
START	STA	START	/RECOVER UPDATE AREA UPDATE DATAGRP UPDATE DB UPDATE MSLINK UPDATE MSNAME UPDATE MSPLINK UPDATE ODBM UPDATE PGM UPDATE RTC UPDATE TRAN
STATISTICS			/CHECKPOINT /CQQUERY QUERY STRUCTURE
STATUS			/DISPLAY QUERY AREA QUERY DB QUERY IMSPLEX QUERY LTERM QUERY MEMBER QUERY MSLINK QUERY MSNAME QUERY MSPLINK QUERY NODE QUERY ODBM QUERY PGM QUERY OLREORG QUERY RTC QUERY TRAN QUERY USER
STOP	STO	STOP	/RECOVER UPDATE AREA UPDATE DATAGRP UPDATE DB UPDATE MSLINK UPDATE MSNAME UPDATE MSPLINK UPDATE ODBM UPDATE PGM UPDATE RTC UPDATE TRAN
STRUCTURE	STRUC	STRUCTURE	/CQCHKPT /CQQUERY /CQSET /DIAGNOSE /DISPLAY
SUBSYS	SUBSYSTEM, SUBSYSTEMS	SUBSYS	/CHANGE /DISPLAY /START /STOP
SURVEILLANCE	SUR, SURV, SURVEIL	SURV	/CHANGE /START /STOP

Table 58. Command keywords and their synonyms (continued)

IMS keyword	Synonym	OM keyword	Commands that support this keyword
SUSPEND			/DEQUEUE
SYNCLV	SYNCLV		/CHANGE QUERY OTMATI
SYNCESS	SYNC		/CHANGE
SYSID			/BROADCAST /DISPLAY /MSASSIGN /MSVERIFY
SYSTEM			/CQCHKPT /SWITCH /UNLOCK
TABLE			/DISPLAY /TRACE
TAKEOVER	TKO, TKOVR		/TRACE
TARGET			EXPORT
TCO			/DISPLAY /TRACE
TDS			/COMPT /RCOMPT
TERMINAL	TER, TERM, TERMINALS, TERMS, TERS	TERMINAL	INITIATE OLC /SMCOPY
THREAD			/START /STOP
TIMEOUT	TIMO		/CHANGE /DISPLAY /TRACE
TIMEOVER			/DISPLAY
TMEMBER	TMEM	TMEM	/DEQUEUE /DISPLAY /EXIT QUERY OTMADESC QUERY OTMATI /START /STOP /TRACE
TPIPE	TPI		/DEQUEUE /DISPLAY QUERY OTMADESC QUERY OTMATI /START /STOP /TRACE
TPNAME	TP, TPN		/ALLOCATE /CHANGE /DEQUEUE /DISPLAY /START /STOP /TRACE

Table 58. Command keywords and their synonyms (continued)

IMS keyword	Synonym	OM keyword	Commands that support this keyword
TRACE			/DISPLAY
TRACKING			/DISPLAY
TRACKING STATUS			/DISPLAY
TRANAUTH			/ERESTART /NRESTART
TRANCMDs			INITIATE OLC
TRANSACTION	TRANS, TRAN, TRANSACTIONS, TRANCODE, TRANCODICES, TRS	TRAN	/ASSIGN /CHANGE CREATE TRAN CREATE TRANDESC DELETE LE DELETE TRAN DELETE TRANDESC /DEQUEUE /DIAGNOSE /DISPLAY /LOCK /MSASSIGN /PSTOP /PURGE QUERY LE QUERY OTMATI QUERY TRAN QUERY TRANDESC /SET /START /STOP /TRACE /UNLOCK UPDATE LE UPDATE TRAN UPDATE TRANDESC
TRANSTAT			CREATE PGM CREATE PGMDESC CREATE TRAN CREATE TRANDESC
TRAP			/DISPLAY /TRACE
TRKAUTOARCH	TRKARCH	TRKARCH	/START
TRS			/DISPLAY MODIFY

Table 58. Command keywords and their synonyms (continued)

IMS keyword	Synonym	OM keyword	Commands that support this keyword
TYPE			/CHANGE EXPORT IMPORT INITIATE OLC QUERY DB QUERY IMS QUERY IMSPLEX QUERY MEMBER QUERY MSPLINK QUERY ODBM QUERY OTMADESC QUERY POOL QUERY STRUCTURE UPDATE ODBM
UDATA			/OPNDST
UDS			/COMPT /RCOMPT
UNITYPE			/TRACE
UNPLAN			/RTAKEOVER
UOR			/CHANGE /DISPLAY
USEDDBDS	USEAREA		/RECOVER
USER	SUBPOOL	USER	/ASSIGN /BROADCAST /CHANGE /CLSDST /COMPT /DEQUEUE /DIAGNOSE /DISPLAY /END /ERESTART /EXCLUSIVE /EXIT /NRESTART /OPNDST /QUIESCE /START /STOP /TEST /TRACE
USERD	USRD		/OPNDST
USERID			DELETE LE QUERY LE QUERY OTMATI UPDATE LE
VERIFY			/RECOVER
VGRS	VGR	VGR	/STOP
VID			/COMPT /RCOMPT
VOLUME			/TRACE

Table 58. Command keywords and their synonyms (continued)

IMS keyword	Synonym	OM keyword	Commands that support this keyword
VTAMPOOL	VPL		/ASSIGN
WADS			/STOP /SWITCH
WFI			CREATE TRAN CREATE TRANDESC
WPM1			/COMPT
WPM2			/COMPT
WPM3			/COMPT
XRCTrack			/START /STOP
XTRC	XTRACE, EXTRACE		/DISPLAY TRACE

Notes:

¹ ISOLOG and TRKAUTOARCH are valid only for an RSR tracking subsystem.

Related reference:

 IMS Command Language Modification facility (DFSCKWD0) (Exit Routines)

Chapter 3. Commands and keywords valid in DBCTL

Commands and keywords that are valid in the Database Control (DBCTL) environment are listed.

The following table lists commands and keywords valid in the Database Control (DBCTL) environment. All commands and keywords are valid in a DB/DC environment.

Table 59. Commands and keywords valid in DBCTL

Commands	Keywords	Topic
/CHANGE	ABORT, AUTOLOGON, CCTL, COMMIT, FDR, OASN, PASSWORD, PRTKN, RESET, SUBSYS, TIMEOUT	Chapter 12, “/CHANGE commands,” on page 123
/CHECKPOINT	ABDUMP, FREEZE, PURGE, STATISTICS	Chapter 13, “/CHECKPOINT command,” on page 147
CREATE	PGMDESC, PGM	Chapter 19, “CREATE commands,” on page 169
/DBDUMP	DB, GLOBAL, LOCAL, NOFEOV, NOPFA	Chapter 20, “/DBDUMP command,” on page 267
/DBRECOVERY	AREA, DB, DATAGRP, GLOBAL, LOCAL, NOFEOV, NOPFA	Chapter 21, “/DBRECOVERY command,” on page 273
/DELETE	DB, PASSWORD, PGM	Chapter 22, “/DELETE command,” on page 283
DELETE	DB, DBDESC, LE, PGM, PGMDESC	Chapter 23, “DELETE commands,” on page 285
/DEQUEUE	AOITOKEN	Chapter 24, “/DEQUEUE command,” on page 341
/DIAGNOSE	ADDRESS, BLOCK, MODULE, OPTION, SNAP	Chapter 25, “/DIAGNOSE command,” on page 349
/DISPLAY	ACTIVE, AOITOKEN, AREA, BKERR, CCTL, CPLOG, DB, DBD, FDR, FPVIRTUAL, HSSP, INDOUBT, MADSIOT, MODIFY, MONITOR, OASN, OLDS, OSAMGTF, PI, POOL, PGM, PSB, RECOVERY, REGION, SHUTDOWN, STATUS, SUBSYS, TABLE, TCO, TRACE, TRACKING STATUS, XTRC	Chapter 26, “/DISPLAY commands,” on page 355
/ERESTART	CHECKPOINT, COLDBASE, COLDSYS, FORMAT, NOBMP, OVERRIDE	Chapter 28, “/ERESTART command,” on page 587
EXPORT	DEFN, NAME, OPTION, RDDSDSN, TARGET, TYPE	Chapter 31, “EXPORT command,” on page 605
IMPORT	DEFN, NAME, OPTION, RDDSDSN, SOURCE, TYPE	Chapter 36, “IMPORT command,” on page 631
INITIATE	OLC, OLREORG	Chapter 37, “INITIATE commands,” on page 651
/LOCK	DB, PGM	Chapter 38, “/LOCK command,” on page 701
/LOG		Chapter 39, “/LOG command,” on page 707
/MODIFY	ABORT, COMMIT, PASSWORD, PREPARE	Chapter 41, “/MODIFY command,” on page 711

Table 59. Commands and keywords valid in DBCTL (continued)

Commands	Keywords	Topic
/NRESTART	CHECKPOINT, FORMAT	/NRESTART command (Commands)
/PSTOP	AOITOKEN, JOBNAME, REGION	/PSTOP command (Commands)
QUERY	AREA, DB, DBDESC, IMS, LE, MEMBER, ODBM, OLC, OLREORG, PGM, PGMDESC, POOL, USEREXIT	QUERY commands (Commands)
/RECOVER	ALLENTRIES, AREA, CAGROUP, DB, DBDS, DBDSGRP, ERRORABORT, ERRORCONT, NOCHECK, OFFLINE, PITR, RCVTIME, RCVTOKEN, READNUM, RECOVGRP, REMOVE, SMSOPTS, STAGLOBAL, STALOCAL, START, STOP, USEAREA, USEDDBDS, VERIFY	/RECOVER commands (Commands)
/RMxxxxxx		/RMxxxxxx commands (Commands)
/RTAKEOVER	DUMPQ, FREEZE, NOREVERSE, UNPLAN	/RTAKEOVER command (Commands)
/SSR		/SSR command (Commands)
/START	ACCESS, AREA, AUTOARCH, DB, DATAGRP, DBALLOC, GLOBAL, ISOLOG, JOBNAME, LOCAL, MADSIOT, NOBACKOUT, NODBALLOC, NOOPEN, OLDS, OPEN, PGM, REGION, SB, SERVGRP, SLDSREAD, SSM, SUBSYS, THREAD, TRKAUTOARCH, WADS, XRCTRACK	/START commands (Commands)
/STOP	ABDUMP, ADS, AREA, AUTOARCH, CANCEL, DB, DATAGRP, GLOBAL, JOBNAME, LOCAL, MADSIOT, NOPFA, OLDS, PGM, REGION, SB, SERVGRP, SLDSREAD, SUBSYS, WADS, XRCTRACK	/STOP commands (Commands)
/SWITCH	CHECKPOINT, OLDS, WADS	/SWITCH command (Commands)
TERMINATE	OLC, OLREORG	TERMINATE OLC command (Commands)
/TRACE	COMP, MONITOR, NOCOMP, OPTION, OSAMGTF, PI, PGM, PSB, SET, TABLE, TCO, VOLUME	/TRACE commands (Commands)
/UNLOCK	DB, PGM	/UNLOCK commands (Commands)
UPDATE	AREA, DB, DBDESC, DATAGRP, IMS, LE, ODBM, OLREORG, PGM, PGMDESC, POOL	UPDATE commands (Commands)
/VUNLOAD	AREA	/VUNLOAD command (Commands)

Chapter 4. Commands and keywords valid in DCCTL

Commands and keywords that are valid in a Data Communications Control (DCCTL) environment are listed.

The following table lists commands and keywords valid in a Data Communications Control (DCCTL) environment. All commands and keywords are valid in a DB/DC environment.

Table 60. Commands and keywords valid in DCCTL

Commands	Keywords	Topic
/ACTIVATE	LINK, NODE	Chapter 7, “/ACTIVATE command,” on page 91
/ALLOCATE	LUNAME, MODE, TPNAME	Chapter 8, “/ALLOCATE command,” on page 93
/ASSIGN	CLASS, COMPONENT, CPRI, COMPONENT, INPUT, LINE, LCT, LPRI, LTERM, NODE, NOSAVE, NPRI, OUTPUT, PARLIM, PLCT, PTERM, REGION, SAVE, SEGNO, SEGSIZE, TRANSACTION, USER, VTAMPOOL	Chapter 9, “/ASSIGN command,” on page 95
/BROADCAST	ACTIVE, LINE, LTERM, MASTER, MSNAME, NODE, PTERM, SYSID, USER	Chapter 10, “/BROADCAST command,” on page 115
/CANCEL		Chapter 11, “/CANCEL command,” on page 121
/CHANGE	APPC, ASR, AUTOLOGON, COLDSESS, CPLOG, DESCRIPTOR, DIRECTORY, FORCSESS, ID, INTERVAL, LINK, LOGOND, LUNAME, MAXRGN, MODE, NODE, NOSAVE, OASN, OUTBND, PASSWORD, RESET, SAVE, SIDE, SUBSYS, SURVEILLANCE, SYNCLEVEL, SYNCSESS, TIMEOUT, TPNAME, TRANSACTION, TYPE, UOR, USER	Chapter 12, “/CHANGE commands,” on page 123
/CHECKPOINT	ABDUMP, DUMPQ, FREEZE, LEAVEPLEX, NOCQSSHUT, PURGE, QUIESCE, SNAPQ, STATISTICS	Chapter 13, “/CHECKPOINT command,” on page 147
/CLSDST	FORCE, NODE, USER	Chapter 14, “/CLSDST command,” on page 153
/COMPT	CNS, CRD, NODE, NOTRDY, PCH, PDS, PRT, RDR, READY, TDS, UDS, USER, VID, WPM1, WPM2, WPM3	Chapter 15, “/COMPT command,” on page 157
/CQCHKPT	SHAREDQ, STRUCTURE, SYSTEM	Chapter 16, “/CQCHKPT command,” on page 161
/CQQUERY	STATISTICS, STRUCTURE	Chapter 17, “/CQQUERY command,” on page 163
/CQSET	SHAREDQ, SHUTDOWN, STRUCTURE	Chapter 18, “/CQSET command,” on page 167
CREATE	OTMADESC, PGM, PGMDESC, RTC, RTCDESC, TRAN, TRANDESC	Chapter 19, “CREATE commands,” on page 169
/DELETE	LINE, LTERM, NODE, PASSWORD, PGM, PTERM, TERMINAL, TRANSACTION	Chapter 22, “/DELETE command,” on page 283
DELETE	LE, OTMADESC, PGM, PGMDESC, RTC, RTCDESC, TRAN, TRANDESC	Chapter 23, “DELETE commands,” on page 285

Table 60. Commands and keywords valid in DCCTL (continued)

Commands	Keywords	Topic
/DEQUEUE	AOITOKEN, LINE, LTERM, LUNAME, MSNAME, NODE, PTERM, PURGE, PURGE1, SUSPEND, TMEMBER, TPIPE, TPNAME, TRANSACTION, USER	Chapter 24, “/DEQUEUE command,” on page 341
/DIAGNOSE	ADDRESS, BLOCK, LTERM, MODULE, NODE, OPTION, SNAP, STRUCTURE, TRAN, USER	Chapter 25, “/DIAGNOSE command,” on page 349
/DISPLAY	ACT, AFFIN, AOITKN, APPC, ASMT, AUTOLOGON, BALGRP, CLASS, CONVERSATION, CPLOG, CQS, DC, DESCRIPTOR, EMHQ, EXIT, HSB, INPUT, LINE, LINK, LTERM, LUNAME, MASTER, MODE, MODIFY, MONITOR, MSGAGE, MSNAME, MSPLINK, NODE, OASN, OLDS, OTMA, OUTPUT, OVERFLOWQ, PGM, POOL, PRIORITY, PGM, PSB, PTERM, Q, QCNT, REGION, REMOTE, RTCODE, SHUTDOWN, STATUS, STRUCTURE, SUBSYS, SYSID, TABLE, TCO, TIMEOUT, TIMEOVER, TMEMBER, TPIPE, TPNAME, TRACE, TRACKING STATUS, TRANSACTION, TRAP, UOR, USER, XTRC	Chapter 26, “/DISPLAY commands,” on page 355
/END	LINE, NODE, PTERM, USER	Chapter 27, “/END command,” on page 585
/ERESTART	BACKUP, BUILDQ, CHECKPOINT, CMDAUTH, CMDAUTHHE, COLDCOMM, COLDSYS, FORMAT, MULTSIGN, NOBMP, NOCMDAUTH, NOCMDAUTHHE, NOPASSWORD, NOTERMINAL, NOTRANAUTH, NOTRANCMDs, NOUSER, OVERRIDE, PASSWORD, SNGLSIGN, TERMINAL, TRANAUTH, TRANCMDs, USER	Chapter 28, “/ERESTART command,” on page 587
/EXCLUSIVE	LINE, NODE, PTERM, USER	Chapter 29, “/EXCLUSIVE command,” on page 599
/EXIT	CONVERSATION, LINE, NODE, PTERM, USER	Chapter 30, “/EXIT command,” on page 601
/FORMAT	LTERM	Chapter 32, “/FORMAT command,” on page 621
/HOLD		Chapter 33, “/HOLD command,” on page 623
/IAM	DONE, LTERM, PTERM	Chapter 34, “/IAM command,” on page 625
/IDLE	LINE, LINK, NODE, NOSHUT	Chapter 35, “/IDLE command,” on page 627
IMPORT	DEFN, NAME, OPTION, RDDSDSN, SOURCE, TYPE	Chapter 36, “IMPORT command,” on page 631
INITIATE	OLC, OLREORG	Chapter 37, “INITIATE commands,” on page 651
/LOCK	LTERM, NODE, PGM, PTERM, TRANSACTION	Chapter 38, “/LOCK command,” on page 701
/LOG		Chapter 39, “/LOG command,” on page 707
/LOOPTEST	LINE, PTERM	Chapter 40, “/LOOPTEST command,” on page 709
/MODIFY	ABORT, COMMIT, LTERM, PASSWORD, PREPARE, TERMINAL, TRANCMDs	Chapter 41, “/MODIFY command,” on page 711

Table 60. Commands and keywords valid in DCCTL (continued)

Commands	Keywords	Topic
/MONITOR	LINE, PTERM	Chapter 42, “/MONITOR command,” on page 717
/MSASSIGN	LINK, LOCAL, MSNAME, MSPLINK, SYSID, TRANSACTION	Chapter 43, “/MSASSIGN command,” on page 719
/MSVERIFY	MSNAME, SYSID	Chapter 44, “/MSVERIFY command,” on page 723
/NRESTART	BUILDQ, CHECKPOINT, CMDAUTH, CMDAUTHE, FORMAT, MULTSIGN, NOBUILDQ, NOCMDAUTH, NOCMDAUTHE, NOPASSWORD, NOTERMINAL, NOTRANAUTH, NOTRANCMD, NOUSER, PASSWORD, SNGLSIGN, TERMINAL, TRANAUTH, TRANCMD, USER	/NRESTART command (Commands)
/OPNDST	ID, LOGOND, MODE, NODE, Q, UDATA, USER, USERD	/OPNDST command (Commands)
/PSTOP	AOITOKEN, CLASS, FORCE, JOBNAME, LINE, LINK, LTERM, MSPLINK, PTERM, PURGE, REGION, TRANSACTION	/PSTOP command (Commands)
/PURGE	APPC, CLASS, FPPROG, FPREGION, LINE, LTERM, MSNAME, PTERM, TRANSACTION	/PURGE command (Commands)
QUERY	IMS, LE, LTERM, MEMBER, MSLINK, MSNAME, MSPLINK, NODE, OLC, OTMADESC, OTMATI, PGM, PGMDISC, RTC, RTCDESC, TRAN, TRANDESC, USER, USEREXIT, USERID	QUERY commands (Commands)
QUEUE	LTERM, TRAN	QUEUE commands (Commands)
/QUIESCE	NODE, USER	/QUIESCE command (Commands)
/RCLSDST		/RCLSDST command (Commands)
/RCOMPT	CNS, NOTRDY, PCH, PDS, PRT, RDR, READY, TDS, UDS, VID	/RCOMPT command (Commands)
/RDISPLAY	MASTER	/RDISPLAY command (Commands)
/RELEASE	CONVERSATION	/RELEASE command (Commands)
/RESET		/RESET command (Commands)
/RMxxxxxx	LTERM	/RMxxxxxx commands (Commands)
/RSTART	CONTINUOUS, LINE, LINK, LOPEN, MODE, MSPLINK, NODE, PTERM, USER	/RSTART command (Commands)
/RTAKEOVER	DUMPQ, FREEZE, NOREVERSE, UNPLAN	/RTAKEOVER command (Commands)
/SECURE	APPC, OTMA	/SECURE command (Commands)
/SET	CONVERSATION, LTERM, TRANSACTION	/SET command (Commands)
/SIGN		/SIGN command (Commands)
/SMCOPY	MASTER, TERMINAL	/SMCOPY command (Commands)
/SSR		/SSR command (Commands)

Table 60. Commands and keywords valid in DCCTL (continued)

Commands	Keywords	Topic
/START	AFFINITY, APPC, AUTOARCH, CLASS, DC, DESC, GRSNAME, INPUT, ISOLOG, JOBNAME, LINE, LTERM, LUNAME, MSNAME, NODE, OLDS, OTMA, OUTPUT, PGM, PTERM, REGION, RTCODE, SERVGRP, SLDSREAD, SSM, SUBSYS, SURVEILLANCE, TMEMBER, TPIPE, TPNAME, TRANSACTION, TRKAUTOARCH, USER, VGR, WADS, XRCTRAK	/START commands (Commands)
/STOP	ABDUMP, APPC, AUTOARCH, BACKUP, CANCEL, CLASS, DESC, DC, INPUT, JOBNAME, LINE, LTERM, LUNAME, MSNAME, NODE, OLDS, OTMA, OUTPUT, PGM, PTERM, REGION, RTCODE, SERVGRP, SLDSREAD, SUBSYS, SURVEILLANCE, THREAD, TMEMBER, TPIPE, TPNAME, TRANSACTION, USER, VGR, WADS, XRCTRAK	/STOP commands (Commands)
/SWITCH	ABDUMP, ACTIVE, BACKUP, CHECKPOINT, FORCE, OLDS, SYSTEM, WADS	/SWITCH command (Commands)
TERMINATE	OLC	TERMINATE OLC command (Commands)
/TEST	LINE, NODE, PTERM, USER	/TEST command (Commands)
/TRACE	AUTO, EXIT, INPUT, LEVEL, LINE, LINK, LUNAME, MODULE, MONITOR, MSG, NODE, OPTION, OUTPUT, PGM, SET, TABLE, TAKEOVER, TCO, TIMEOUT, TMEMBER, TPIPE, TPNAME, TRANSACTION, TRAP, UNITYPE, USER, VOLUME	/TRACE commands (Commands)
/UNLOCK	LTERM, NODE, PGM, PTERM, SYSTEM, TRANSACTION	/UNLOCK commands (Commands)
UPDATE	IMS, LE, MSLINK, MSNAME, MSPLINK, OTMADESC, PGM, PGMDISC, POOL, RTC, RTCDESC, TRAN, TRANDESC	UPDATE commands (Commands)

Chapter 5. List of reserved words

Some words are used and reserved only for IMS commands.

The following table is a list of words that cannot be used to name resources such as transactions or databases. The words listed in this table are used and reserved only for IMS commands.

Table 61. Words used and reserved only for IMS commands

A	ABDUMP	ABORT	ACCESS
ACT	ACTIV	ACTIVATE	ACTIVE
ADDS	ADS	AFF	AFFIN
AFFINITY	AFTER	AOITKN	APDB
APMQ	AOITOKEN	ALL	ALLENTRIES
ALLENT	ALLOC	ALLOCATE	ALLOCF
ALLOCS	APPC	ARCHIVE	AREA
ASMT	ASR	ASSIGN	ASSIGNMENT
AUTO	AUTOARC	AUTOARCH	AUTOLOGON
AUTOLGN	AUTOSR	BACKOUT	BACKUP
BALG	BALGRP	BKERR	BLDQ
BLDQS	BROADCAST	BU	BUILDQ
BUILDQS	C1INOP	C2INOP	C3INOP
C4INOP	CAGROUP	CAGRP	CANCEL
CC	CCTL	CHANGE	CHECKPOINT
CHECKPT	CHKPOINT	CHKPT	CHNGS
CLASS	CLS	CLSDST	CMDAUTH
CMDAUTHE	CNS	COLDB	COLDBASE
COLDC	COLDCOMM	COLDS	COLDSESS
COLDSYS	COMMIT	COMP	COMPINOP
COMPONENT	COMPT	CON	CONT
CONTINUOUS	CONV	CONVACT	CONVERSATION
CONVHLD	CPRI	CQCHKPT	CQQUERY
CPLOG	CQC	CQQ	CQS
CQSET	CRD	DATABASE	DATABASES
DATAGROUP	DATAGRP	DB	DBALLOC
DBD	DBDS	DBDSGRP	DBDUMP
DBR	DBRECOVERY	DBS	DC
DEACT	DEADQ	DELETE	DELS
DEQUEUE	DESC	DESCRIPTOR	DL/I
DLOG	DIS	DISP	DISPLAY
DIR	DIRECTORY	DMS	DONE
DUMPQ	DUMPQS	EEQE	EMHQ
END	ERESTART	ERRORCONT	EXCL
EXCLUSIVE	EXIT	EXTRACE	FAST
FDR	FIRST	FMS	FMT
FOR	FORC	FORCE	FORCES
FORCSESS	FORMAT	FPPROG	FPREGION
FPRGN	FPV	FPVIRTUAL	FREEZE
GLOBAL	GRS	GRSN	GRSNAME
HOLD	HOTSTANDBY	HSB	HSSP
IAM	IC	ICOMPONENT	ICOMPT
ID	IDCO	IDLE	IND
INDOUBT	INOP	INPUT	INQONLY

Table 61. Words used and reserved only for IMS commands (continued)

INT	INTERVAL	INTV	IOVF
ISOLOG	JBN	JOB	JOBNAME
KEY	LA	LATC	LCT
LEAVEGR	LEVEL	LGND	LINE
LINES	LINK	LMCT	LOC
LOCAL	LOCK	LOG	LOGOND
LOOPTEST	LOPEN	LOST	LPRI
LRTT	LTERM	LTERMS	LU
LUMI	LUN	LUNAME	MADSIOT
MASTER	MAXRGN	MESSAGE	MFST
MFSTEST	MODE	MODETABLE	MODETBL
MODIFY	MODS	MODULE	MON
MONITOR	MSASSIGN	MSDB	MSDBLOAD
MSG	MSGAGE	MSGREG	MSGREGION
MSGREGIONS	MSGREGS	MSNAME	MSPLINK
MSVERIFY	MULTSIGN	NBLDQ	NOBACKOUT
NOBKO	NOBLDQ	NOBMP	NOBUILDQ
NOCHECK	NOCMDAUTH	NOCMDAUTH	NOCOMP
NODBALLOC	NODE	NOFEV	NOIN
NONE	NOOUT	NOPASSWORD	NOPFA
NOPSWD	NOQUEUE	NOREVERSE	NOS
NOSAVE	NOSHUT	NOTER	NOTERM
NOTERMINAL	NOTINIT	NOTOPEN	NOTRANAUT
NOTRANCMD	NOTRDY	NOUSER	NPRI
NRESTART	OASN	OFF	OFFLINE
OFR	OLDS	OLREORG	ON
OPNDST	OPTION	OSAMGTF	OTMA
OTMT	OUTPUT	OVER	OVERFLOWQ
OVERRIDE	OVFLWQ	PAGE	PARLIM
PASSWORD	PASSWORDS	PCH	PDS
PGM	PGMS	PI	PITR
PLCT	PLMCT	POOL	PREL
PREO	PREPARE	PRI	PRIMARY
PRIORITY	PRK	PROG	PROGRAM
PROGRAMS	PROGS	PRST	PRT
PRTKN	PRTY	PSB	PSS
PSTOP	PSTOPPED	PSWD	PSWDS
PTERM	PTERMS	PUR	PURGE
PURGE1	Q	QCNT	QMGR
QRTT	QS	QUEUE	QUEUES
QUI	QUIESCE	RCLSDST	RCOMPT
RCS	RCVTIME	RCVTOKEN	RDISPLAY
RDR	READNUM	READY	RECOVERY
RECOVGRP	REG	REGION	REGIONS
REGS	RELEASE	RELREQ	REMOTE
REMOVE	RESET	RESP	RESPINP
RESYNC	RETR	RMCHANGE	RMDELETE
RMGENJCL	RMINIT	RMLIST	RMNOTIFY
RSTART	RTAKEOVER	RTC	RTCODE
SAVE	SB	SCHD	SEC
SECURE	SECURITY	SEGNO	SEGSIZE
SEGSZ	SERVGRP	SET	SG
SHAREDQ	SHRQ	SHUT	SHUTDOWN
SIDE	SIGN	SIMLOGON	SINGLE
SMCOPY	SNAPQ	SNGL	SNGLSIGN

Table 61. Words used and reserved only for IMS commands (continued)

SQTT	SSM	SSR	STAGLOBAL
STALOCAL	STA	START	STATIC
STATISTICS	STATUS	STO	STOP
STOPPED	STRG	STRUC	STRUCTURE
SUB	SUBS	SUBPOOL	SUBSYS
SUBSYSTEMEMBER	SUBSYSTEM	SUBSYSTEMS	SUR
SURV	SURVEIL	SURVEILLANCE	SUSPEND
SWITCH	SYNC	SYNLEVEL	SYNCLV
SYNCESS	SYSID	SYSTEM	TABLE
TAKEOVER	TCO	TDS	TER
TERM	TERMINAL	TERMINALS	TERMINATE
TERMS	TERS	TEST	THREAD
TIMEOUT	TIMEOVER	TIMO	TKO
TKOTRA	TKOVR	TMEM	TMEMBER
TO	TP	TPI	TPIPE
TPN	TPNAME	TRA	TRACE
TRACKING	TRACKING STATUS	TRAN	TRANAUTH
TRANCMDs	TRANCODE	TRANCODS	TRANS
TRANSACTION	TRANSACTIONS	TRAP	TRKARCH
TRKAUTOARCH	TRS	TYPE	UDATA
UDS	UNTYPE	UNL	UNLOCK
UNPLAN	UOR	USEDDBDS	USER
USERD	USRD	VERIFY	VGR
VGRS	VID	VIR	VOLUME
VPL	VTAMPOOL	VUNLOAD	WADS
WPM1	WPM2	WPM3	XKEY
XTRC	XTRACE		

Chapter 6. IMS type-1 commands that are valid in ETO

The commands that are valid for lterms, nodes, and users in ETO are listed.

The following table lists the type-1 commands that are valid for lterms, nodes, and users in ETO.

Table 62. IMS type-1 commands valid in ETO

Commands	Dynamic lterms that are valid	Dynamic nodes that are valid	Dynamic users that are valid
/ACTIVATE		X	
/ASSIGN	X ¹		X ²
/BROADCAST	X	X	X
/CHANGE		X	X
/CLSDST		X	X
/COMPT		X	X
/DEQUEUE	X	X	X
/DISPLAY	X	X	X
/END			X
/EXCLUSIVE			X
/EXIT		X	X
/FORMAT	X		
/IDLE		X	
/LOCK	X	X	
/MODIFY	X		
/OPNDST		X	
/PSTOP	X		
/PURGE	X		
/QUIESCE		X	X
/RMxxxxxx	X		
/RSTART		X	X
/SET	X		
/SIGN			X
/START	X	X	X
/STOP	X	X	X
/TEST			X
/TRACE		X	
/UNLOCK	X	X	

Notes:

1. Only valid for /ASSIGN LTERM USER.
2. Only valid for /ASSIGN USER.

Chapter 7. /ACTIVATE command

The /ACTIVATE command is used to activate VTAM nodes or MSC links with a VTAM "VARY NET, ACTIVE" command.

The /ACTIVATE command can also be used to undo the conditions set by the /IDLE command.

Subsections:

- "Environment"
- "Syntax"
- "Keywords"
- "Usage notes"
- "Examples" on page 92

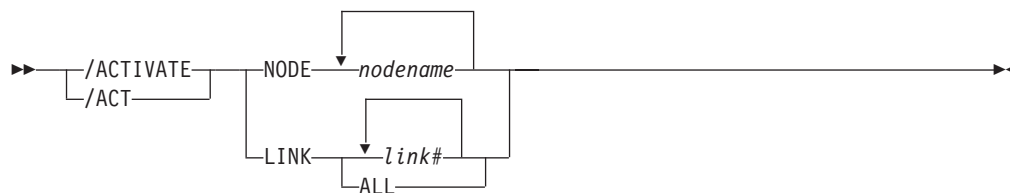
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 63. Valid environments for the /ACTIVATE command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/ACTIVATE	X		X
LINK	X		X
NODE	X		X

Syntax



Keywords

The following keywords apply to the /ACTIVATE command:

LINK

Specifies the MSC links to be activated.

NODE

Specifies the VTAM nodes to be activated.

Usage notes

The /ACTIVATE command is used with the IMS VTAM I/O Timeout Detection Facility.

This command can be issued to an IMSplex using the Batch SPOC utility.

Examples

The following are examples of the /ACTIVATE command:

Example 1 for /ACTIVATE command

Entry ET:

```
/ACTIVATE LINK 1
```

Response ET:

```
DFS058I  ACTIVATE COMMAND COMPLETED
```

Explanation: Link 1 has been activated.

Example 2 for /ACTIVATE command

Entry ET:

```
/ACTIVATE NODE ABC
```

Response ET:

```
DFS058I  ACTIVATE COMMAND COMPLETED
```

Explanation: Node ABC has been activated.

Chapter 8. /ALLOCATE command

Use the /ALLOCATE command for delivering asynchronous output when the LU 6.2 device is available. The command can be originated by the remote LU 6.2 device for this purpose.

/ALLOCATE is a multisegment command similar to the /OPNDST command for VTAM terminals. It causes IMS to allocate a conversation to the specified LUNAME and TPNAME if any output is queued in IMS for that destination. If no such output exists, the command has no effect and (in a non-shared-queues environment) an error message is issued.

Subsections:

- “Environment”
- “Syntax”
- “Keywords”
- “Usage notes” on page 94

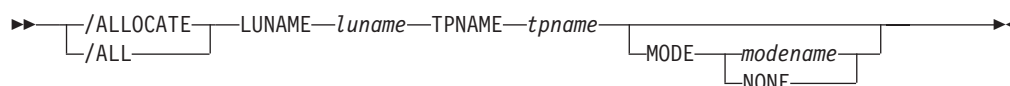
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 64. Valid environments for the /ALLOCATE command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/ALLOCATE	X		X
LUNAME	X		X
MODE	X		X
TPNAME	X		X

Syntax



Keywords

The following keywords apply to the ALLOCATE command:

LUNAME

Specifies the LU name of the LU 6.2 application program that is to be allocated. A network-qualified LU name is optional for the LUNAME keyword

MODE

Identifies the LOGON MODE table entry that VTAM uses to determine the session operating characteristics. NONE, which can be used as a MODE keyword parameter, resets the MODE field to its null state.

TPNAME

Specifies the TP name of the LU 6.2 application program that is to be allocated.

Usage notes

/ALLOCATE requires an end-of-message (EOM) indicator. An end-of-segment (EOS) indicator must be included for all segments preceding the last segment.

After the syntax checking of the /ALLOCATE command is successfully completed, the DFS058 ALLOCATE COMMAND COMPLETED message is issued and processing of the command continues asynchronously.

This command can be issued to an IMSplex using the Batch SPOC utility.

Related reference:

Chapter 2, "Command keywords and their synonyms," on page 57

Chapter 9. /ASSIGN command

The /ASSIGN command alters the relationships between various IMS resources and resets certain values specified during IMS system definition.

Subsections:

- “Environment”
- “Syntax” on page 96
- “Keywords” on page 97
- “Usage notes” on page 105
- “/ASSIGN in an IMSplex” on page 106
- “Equivalent IMS type-2 commands” on page 108
- “Examples” on page 108

Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

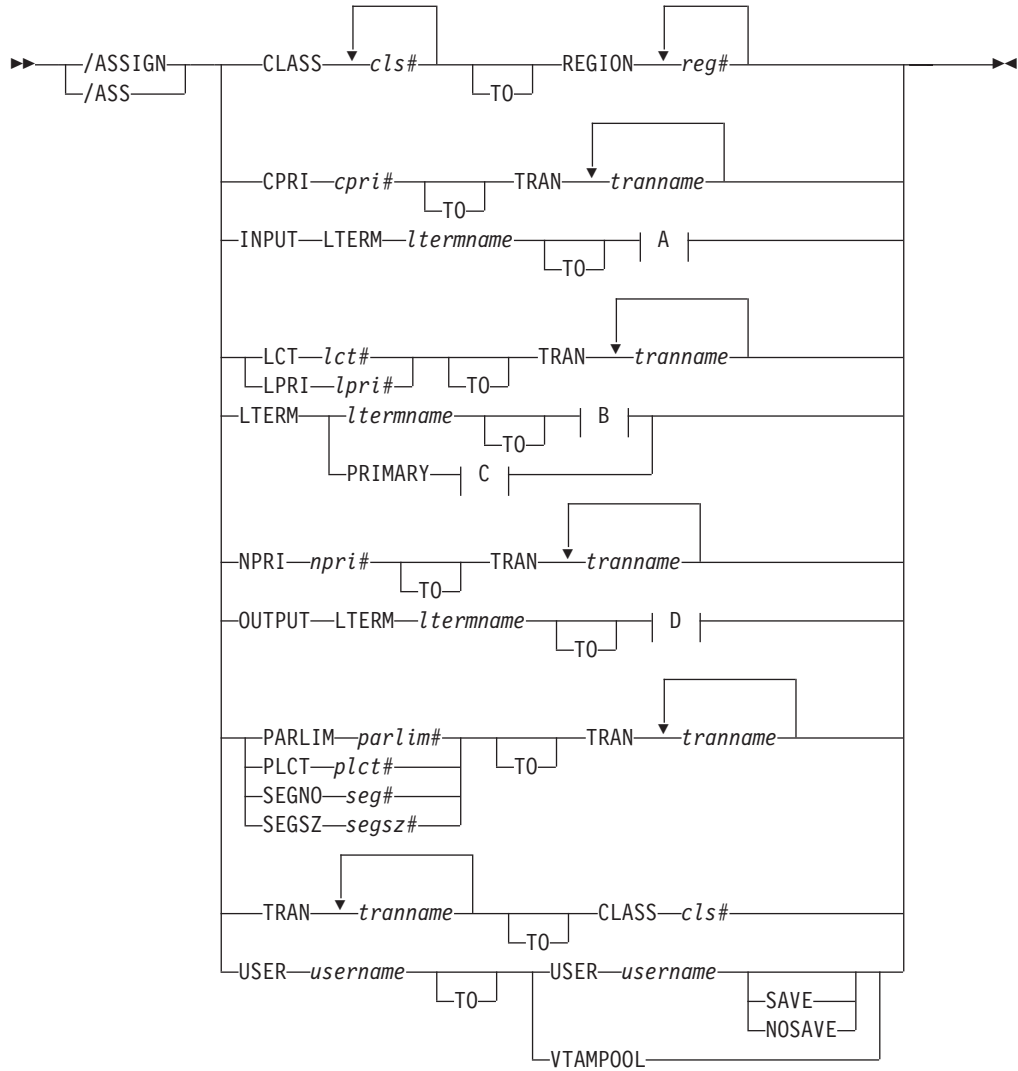
Table 65. Valid environments for the /ASSIGN command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/ASSIGN	X		X
CLASS	X		X
COMPONENT	X		X
CPRI	X		X
ICOMPONENT	X		X
INPUT	X		X
LINE	X		X
LCT	X		X
LPRI	X		X
LTERM	X		X
NODE	X		X
NOSAVE	X		X
NPRI	X		X
OUTPUT	X		X
PARLIM	X		X
PLCT	X		X
PTERM	X		X
REGION	X		X
SAVE	X		X
SEGNO	X		X
SEGSZ	X		X
TRAN	X		X

Table 65. Valid environments for the /ASSIGN command and keywords (continued)

Command / Keywords	DB/DC	DBCTL	DCCTL
USER	X		X
VTAMPOOL	X		X

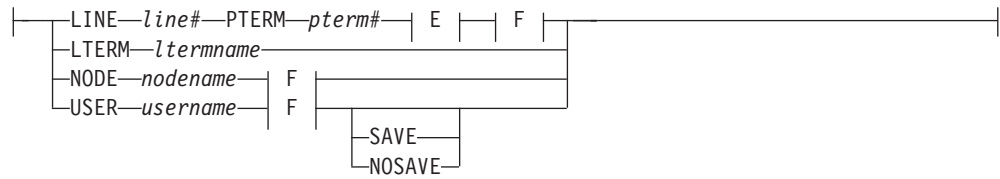
Syntax



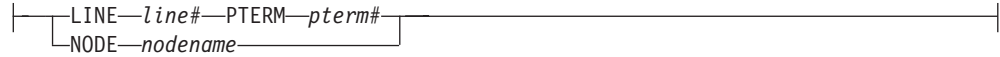
A:



B:



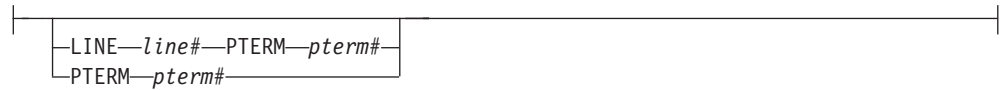
C:



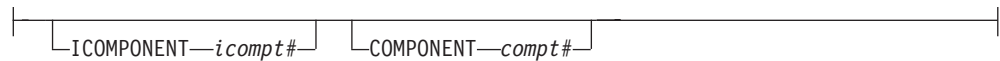
D:



E:



F:



Keywords

The following keywords can be specified for the /ASSIGN command:

CLASS

Specifies either the classes of transactions that a message processing region can schedule or the message processing class of a transaction.

The /ASSIGN CLASS cls# (TO) REGION reg# command can include up to four class parameters and replaces the class values that existed previously. Valid class parameters are numeric values from 1 to 999.

For static transactions, the CLASS parameter (cls#) is initially set by system definition using the TRANSACT macro statement. For CPI communications driven transactions, the initial value is obtained from the TP profile.

COMPONENT

Allows output for a logical terminal to be directed to a specific component of a physical terminal. The COMPONENT parameter, which can have values 1, 2, 3 or 4, indicates the terminal component that should receive the output.

Parameter values other than 1 are valid for the 3275 and SLU 1 terminals, as well as type 1 and type P secondary logical units. When assigning a COMPONENT value from a terminal with components to a terminal without components, give the compt# a value of 1.

The following table shows the relationships between COMPONENT values and terminals. The first column lists the terminal, the second and third columns list the COMPONENT parameters that can have values of 1, 2, 3, or 4.

Table 66. Relationships between COMPONENT/ICOMPONENT values and terminals

Terminal	1	2/3/4
3275	Video	Printer
3770	Console/Printer	Defined in TERMINAL macro on logon descriptor during system definition.
SLU 1	Defined in TERMINAL macro on logon descriptor during system definition.	
SLU P terminal	Defined in TERMINAL macro on logon descriptor during system definition.	
SLU 4	Defined in TERMINAL macro during system definition.	

CPRI

Specifies a new value for the current priority of a transaction. The CPRI keyword is not allowed for BMP transactions, since BMP transactions should always have a priority of 0. The new CPRI value takes effect the next time the transaction is scheduled. Valid CPRI parameters are numeric values from 0 to 14.

ICOMPONENT

Specifies the input component of a logical terminal to be directed to a specific component of a physical terminal. The ICOMPONENT parameter, which can have values 1, 2, 3, or 4, indicates the terminal component that should receive the input. Parameter values other than 1 are valid for the 3275 and SLU 1 terminals, as well as type 1 and type P secondary logical units. When assigning from a terminal with components to a terminal without components, give icompt# a value of 1. See Table 66 for relationships between ICOMPONENT values and terminal components.

INPUT

Specifies that the input capability of a logical terminal is to be assigned to a given nonswitched physical terminal without affecting the output assignment. More than one physical terminal can be assigned as input for a logical terminal, but the logical terminal used must be the first logical terminal in a "chain."

LINE

Specifies the non-VTAM devices to which the input or output capabilities (or both) of a logical terminal are to be assigned. The physical terminal must not be on a switched line, in conversational, response, or preset destination modes.

LCT

Specifies a new value for the limit count of a transaction. The new LCT value takes effect during execution of the transaction. Valid LCT parameters are numeric values from 1 to 65535.

LPRI

Specifies a new value for the limit priority of a transaction. The LPRI keyword is not allowed for BMP transactions, since BMP transactions should always have a priority of 0. The new LPRI value takes effect the next time the transaction is scheduled. Valid LPRI parameters are numeric values from 0 to 14.

LTERM

LTERM assigns the input and output capabilities of a local logical terminal to the given nonswitched physical terminal or terminals. The /ASSIGN LTERM command does not apply to Multiple Systems Coupling (MSC) remote logical terminals.

- If you specify /ASSIGN LTERM with LINE/PTERM selected, the first physical terminal (LINE/PTERM specification) is the input assignment. The second physical terminal (LINE/PTERM specification) is the output assignment. If there is no second physical terminal specification, then the first physical terminal specification is also the output assignment.
- If you specify /ASSIGN LTERM [TO] NODE, the node specification is the input and output assignment.

No response is sent to a terminal referenced in an /ASSIGN command. The logical terminal must not be an inquiry logical terminal and must not have queuing or dequeuing of messages in progress.

LTERMs created dynamically can be assigned to dynamically created users. Static logical terminals can be assigned to other static terminals. Dynamic logical terminals cannot be assigned to lines, static nodes, dynamic nodes, or static users. Static logical terminals cannot be assigned to dynamic nodes or users. /ASSIGN commands that split the logical terminal so that the input LTERM is associated with one node and the output is associated with another node are not allowed for any ACF/VTAM terminals.

Physical terminal considerations: The physical terminal named in the command or indirectly referred to by being associated with a logical terminal in the command must not be on a switched line, in conversational, response, or preset destination modes. If a user logical terminal is specified, no logical terminal in the subpool can be currently signed on, and the line and physical terminal for input and output must be the same. If message processing programs are dependent upon a particular LTERM-to-component assignment, this relationship must be maintained by the operator.

MSGDEL processing for an LTERM is based on how the MSGDEL option was defined:

- For static LTERMs defined during system definition as part of the VTAMPOOL for ISC support and for dynamic LTERMs, the MSGDEL options of the users must match when moving LTERMs between the users.
- For all other static LTERMs, the MSGDEL option is defined in the TERMINAL macro for the associated physical terminal.
- If a terminal's MSGDEL capabilities are defined in the TERMINAL macro as MSGDEL=NONIOPCB, assignment of an LTERM can take place only if the LTERM's message queues are empty, except when the LTERM is assigned to a terminal also defined as MSGDEL=NONIOPCB.
- If a terminal's MSGDEL capabilities are defined as MSGDEL=SYSINFO or NOTERM, assignment of an LTERM can take place only if the LTERM's system message queue is empty, except when the LTERM is assigned to a terminal defined as MSGDEL=SYSINFO or NOTERM, or MSGDEL=NONIOPCB.

Master terminal considerations: The primary and secondary master terminals cannot be assigned to a user, an input-only or output-only device, a terminal in response mode, an unattended type 1 secondary logical unit terminal, an ISC node, or NTO terminal, or dynamic node. The LINE/PTERM or NODE to

which the master terminal is to be assigned must be started and in an operable state. The line and physical terminal for input and output must be the same.

When a 3270 is designated as the master terminal during IMS system definition, two master logical terminals are generated. One, referred to as the primary master terminal, must be assigned to a 3270 display (3275/3276/3278/3279) for all input and output messages. The other, referred to as the secondary master terminal, must be assigned to a 3270 printer (3284/3286/3287/3288/3289) for certain IMS-selected output messages.

To move a single master logical terminal from one physical terminal to another physical terminal (for example, the secondary master from one 3284 to another 3284, or the primary master from one 3277 to another 3277) without moving the other, use the formats of /ASSIGN LTERM command with one LINE/PTERM or NODE, and specify the LTERM name of the master terminal.

You can use either of the following commands:

- /ASSIGN LTERM ltermname (T0) NODE nodename
- /ASSIGN LTERM ltermname (T0). LINE line# PTERM pterm#

PRIMARY parameter: The reserved parameter PRIMARY can be used with the LTERM keyword to change both the primary and secondary master terminals assignments to other physical terminals concurrently. The command formats used with the PRIMARY parameter are:

- /ASSIGN LTERM PRIMARY (T0) LINE line#1 PTERM pterm#1/NODE nodename#1

This command format assigns both the input and output of the primary master terminal to LINE line#1 PTERM pterm#1, and both the input and output of the secondary master terminal to NODE nodename.

- /ASSIGN LTERM PRIMARY (T0) (LINE line#1 PTERM pterm#1/NODE nodename1)(LINE line#2 PTERM pterm#2/NODE nodename2)

This command format assigns the input and output of the primary master terminal to the LINE line#1 PTERM pterm#1/NODE nodename #1 and assigns the input and output of the secondary terminal to LINE line#2 PTERM#2/NODE nodename#2.

These two formats can reassign:

- The 3270 primary and 3270 secondary master terminals to different 3270 physical terminals, where pterm#1 or nodename1 is a 3270 display and pterm#2 or nodename2 is a 3270 printer.
- A non-3270 master terminal to a 3270 display and 3270 printer, where pterm#1 or nodename1 is a 3270 display and pterm#2 or nodename2 is a 3270 printer.

The first LINE/PTERM or NODE specifies the display device to which the primary master logical terminal is to be assigned. The second LINE/PTERM or NODE specifies the printer device to which both the input and output capabilities of the secondary are to be assigned. If only one LINE/PTERM or NODE is specified, then the input and output capabilities of the primary master logical terminal and the secondary master logical terminal are assigned to the same LINE/PTERM or NODE.

Data considerations: IMS does not edit data destined for a logical terminal when an /ASSIGN LTERM or /ASSIGN USER command is executed that affects physical terminal to logical terminal relationships. Ensure that data that is to be sent to a given physical terminal is suitable for transmission to a different physical terminal. If the Message Format Service (MFS) is used and the FMT definition included the second device, the change of physical terminal from one MFS-supported device to another MFS-supported device will produce correct output.

The command format used with the /ASSIGN LTERM *ltermname* command is:

- /ASSIGN LTERM *ltermname* [TO] LINE *line#1* PTERM *pterm#1*

This command format assigns the input and output capabilities of the logical terminal to LINE *line#1* PTERM *pterm#1*. This command is not valid if the LTERM is dynamic.

```
/ASSIGN LTERM ltermname [TO] LINE line#1  
PTERM pterm#1 LINE line#2  
PTERM pterm#2
```

This command format assigns the input capability of the logical terminal to the first LINE/PTERM pair and assigns the output capability of the logical terminal to the second LINE/PTERM pair. This command is not valid if the LTERM is dynamic.

- /ASSIGN LTERM *ltermname* [TO] LINE *line#1* PTERM *pterm#1* PTERM *pterm#2*

This command format assigns the input capability of the logical terminal to LINE *line#1* PTERM *pterm#1* and assigns the output capability of the logical terminal to the same LINE, *line#1*, but to a different PTERM, *pterm#2*. This command is not valid if the LTERM is dynamic.

- /ASSIGN LTERM *ltermname* [TO] NODE *nodenamez*

This command format assigns the input and output capabilities of the logical terminal to NODE *nodename*. This command is not valid if the LTERM or NODE is dynamic.

- /ASSIGN LTERM *ltermname1* [TO] LTERM *ltermname2*

This command format allows an input chain to be moved to a symbolic location, rather than to a specific line and physical terminal. The [TO] line and terminal are determined by the current assignment of the specified [TO] logical terminal. With this format, the output assignment is not affected. This form of the /ASSIGN command is invalid for ISC nodes defined for parallel sessions, and it is not supported for LTERMs associated with VTAM terminals.

- /ASSIGN LTERM *ltermname* [TO] USER *username*

This command format assigns the logical terminal to the given user. When moving logical terminals between users, the MSGDEL options of the users as defined during system definition or on user descriptor must match. The user related to LTERM *ltermname* must not be signed on in conversation, in response mode, or in preset mode. For 3600/FINANCE, SLU P, and ISC, the user (*username*) can remain allocated because of terminal message resynchronization requirements. However, the user cannot be signed on because the associated terminal session must be stopped and idle. The user can be allocated, but, if allocated, must be associated with a session that is stopped and idle. This command will turn off the DEADQ status for the user associated with LTERM *ltermname*.

NODE

Specifies the VTAM terminal to which the input and output capabilities of a logical terminal are to be assigned. The node must not be dynamic, or in conversational, response, or preset destination modes. If a session with a VTAM terminal is terminated after a message is sent but before the response has been received, message resynchronization is necessary for this terminal. The output message for which no response was received must remain associated with this terminal until message resynchronization determines when the terminal received the message. If you use the /ASSIGN command to move the message to a different terminal, message resynchronization is no longer possible.

NOSAVE

Indicates that the assignment changes specified by the /ASSIGN command are lost when control blocks are deleted by the system when they are no longer needed. Omitting SAVE and NOSAVE causes the system-wide default to be used, as specified by the ASSNCHANGE parameter in the DFSDCxxx PROCLIB member.

NPRI

Specifies a new value for the normal priority of a transaction. The NPRI keyword is not allowed for BMP transactions, because BMP transactions should always have a priority of 0. The new NPRI value takes effect the next time the transaction is scheduled. Valid NPRI parameters are numeric values from 0 to 14.

OUTPUT

Specifies that the output capability of a logical terminal is to be assigned to a given nonswitched physical terminal, without affecting the input assignment. OUTPUT is invalid for ISC nodes defined for parallel sessions.

PARLIM

Specifies a new value for the parallel processing limit count of a transaction. parl# is the maximum number of messages that can currently be queued, but not yet processed, by each active message region currently scheduled for this transaction. An additional region will be scheduled whenever the transaction queue count (for shared-queues environments, the successful consecutive GU count is used instead of the queue count) exceeds the PARLIM value multiplied by the number of regions currently scheduled for this transaction. Valid PARLIM parameters are numeric values from 0 to 32767 and 65535, where 65535 disables transaction load balancing.

A PARLIM of 65535 is the only valid value allowed for a transaction that is shown as eligible for load balancing but has an application program defined as SCHDTYPE=SERIAL. For example, if you dynamically change a parallel transaction to a serial transaction through online change, the only valid value for PARLIM is 65535.

/ASSIGN PARLIM is not valid for CPI Communications driven transactions.

Note: In a shared-queues environment, the PARLIM value behaves differently than it does in a non-shared-queues environment. In a non-shared-queues environment, the queue depth (the number of messages that are currently enqueued) for the transaction is used as the value that is compared with the PARLIM value to determine when to schedule another region. IMS responds to a growing queue of input transactions by scheduling more regions as the queue grows.

In a shared-queues environment, each individual IMS does not know the depth of the queue, because the queue is in the shared-queues coupling facility structure that is managed by Common Queue Server (CQS). The transaction queue might be added to by many different IMS systems. IMS is notified only when the first message is put in a queue (that is, when the queue becomes *not empty*). IMS is not notified for every subsequent message that is placed on the queue after that first message. In a shared-queues environment, the PARLIM comparison is done against a counter that each IMS keeps of the number of successful consecutive GU calls for the transaction by that IMS, rather than queue depth. IMS schedules more regions when it consistently gets messages from CQS when it asks for them. Thus, in a shared-queues environment, IMS infers the depth of the queue of messages based on processing activity, but it does not know the actual depth of the queue.

A PARLIM value of 0 in a shared-queues environment is the most responsive setting. PARLIM(0) ensures that message regions are scheduled until all messages are processed from the transaction queue, or until the maximum region value (MAXRGN) limit is reached. PARLIM(0) might, however, result in many unnecessary schedules (or *false schedules*). A false schedule occurs when a message region is scheduled and finds no more messages on the queue. This is a consequence of IMS not knowing how many messages are queued on the transaction queue, and having to try to read the queue to see if there are more messages.

Setting the PARLIM to a value greater than 0 can reduce the number of false schedules, because IMS then schedules a new message region only after a number of messages have been obtained consecutively without the queue becoming empty. Setting the PARLIM to a value of 2 or greater is useful for reducing false schedules for transactions that are low-volume and that run relatively quickly (such that the queue depth is typically 1), because it avoids scheduling a second region until the first region has obtained at least two messages in a row. However, be aware that while a PARLIM value greater than 0 can reduce unnecessary schedules, it is also less responsive. If a transaction is long running, or if its processing is delayed (for example, because of locking contention), the consecutive GU count does not change while the transaction is executing, and no additional message regions are scheduled. This can result in delayed processing of other messages for this same transaction until a currently-scheduled message completes. This delay can occur even if message regions are available to process the transaction.

PLCT

Specifies a new value for the processing limit count of a transaction. The PLCT is the number of messages of this transaction code that a program can process in a single scheduling. The new PLCT values take effect the next time the transaction is scheduled. Valid PLCT parameters are numeric values from 0 to 65535.

/ASSIGN PLCT is not valid for CPI Communications driven transaction programs.

PTERM

Specifies the non-VTAM device to which the input or output capabilities (or both) of a logical terminal are to be assigned.

REGION

Specifies the message processing region being assigned new classes of transactions that the region can schedule.

SAVE

Prevents deletion of user and LTERM control blocks across session and IMS restarts. Control blocks will be retained until the NOSAVE keyword is used with the /ASSIGN command. Omitting SAVE and NOSAVE causes the system-wide default to be used, as specified by the ASSNCHANGE parameter in the DFSDCxxx PROCLIB member.

SEGNO

Creates or changes the limit on the number of application program output segments allowed in message queues for each GU call. Segment limits will be established by transaction code, thereby allowing specification of more than one value for each application program. The new SEGNO value takes effect during execution of the transaction. Valid SEGNO parameters are numeric values from 0 to 65535.

The /ASSIGN SEGNO command is not valid for CPI Communications driven transaction programs.

SEGSZ

Creates or changes the limit on the size of application program output segments allowed in message queues for each GU call. The new SEGSZ value takes effect during execution of the transaction. Valid SEGSZ parameters are numeric values from 0 to 65535.

The /ASSIGN SEGSZ command is not valid for CPI Communications driven transaction programs.

TRAN

Specifies the transaction being assigned to a message processing class or being assigned a value. The new class takes effect the next time the transaction is scheduled.

USER

Assigns logical terminals to ISC half-sessions or to dynamic users. When moving logical terminals between users, the MSGDEL options of the users must match. The MSGDEL option for the static ISC users is defined in the SUBPOOL macro during system definition. The MSGDEL option for dynamic terminals is defined in the OPTIONS keyword of the ETO USER descriptor. /ASSIGN USER to VTAMP00L is not valid if USER is not ISC.

/ASSIGN LTERM ltermname (TO) USER username assigns the logical terminal to another USER. The user associated with LTERM ltermname must not be allocated. The USER username can be allocated, but it must be associated with a session that is stopped and idle, if allocated.

Note: Assigning an LTERM is not a permanent action. When the destination structure is deleted (for example, with /SIGN OFF) IMS discards information about the assignment. When the original dynamic user who owned that dynamic LTERM signs on again or gets a message switch, the dynamic LTERM is recreated for the original dynamic user.

If SAVE is specified, the dynamic user is not deleted unless another /ASSIGN command with the NOSAVE keyword is issued.

/ASSIGN USER username1 (TO) USER username2 assigns a string of logical terminals to another USER. The first user (username1) in the command

must contain at least one logical terminal and must not be signed on, in conversation, in response mode, or in preset mode. For 3600/FINANCE, SLU P, and ISC, the second user (username2) can remain allocated due to terminal message resynchronization requirements. However, the user cannot be signed on and associated terminal sessions must be stopped and idle. This command turns off the DEADQ status for USER username1.

In addition to the ISC rules and restrictions, following dynamic terminal restrictions also apply. The /ASSIGN USER to USER and /ASSIGN LTERM to USER commands are rejected if the source or destination dynamic user is in conversation mode, response mode, or preset mode. The second USER can be allocated, but it must be associated with a session that is stopped and idle, if allocated.

When existing dynamic LTERMs or dynamic users are assigned to a destination user that does not exist, the destination user is created unless it is rejected by the DFSINSX0 user exit.

VTAMPOOL

Is valid only for VTAM ISC sessions. It is used to force a cold start of an ISC session that cannot perform a successful restart.

/ASSIGN VTAMPOOL deallocates an entire string of logical terminals allocated to a given USER. The user must not be signed on, in conversation mode, response mode, or preset mode, and the terminal must be stopped and idle. This command is valid for static and dynamic ISC users.

Usage notes

Most changes made by the /ASSIGN command remain in effect until changed with another /ASSIGN command, or an IMS cold start (/NRESTART CHECKPOINT 0) is performed.

This command can be issued to an IMSplex using the Batch SPOC utility.

When dynamic LTERMs are assigned to dynamic users with the /ASSIGN LTERM TO USER command, or dynamic users are assigned to dynamic users with the /ASSIGN USER TO USER command, changes remain in effect only if the following conditions are true:

- The SAVE keyword is used.
- SAVE and NOSAVE keywords are omitted, but ASSNCHANGE=SAVE is specified in the DFSDCxxx PROCLIB member.

Otherwise, changes are lost when the destination user is deleted during user sign-off or IMS checkpoint.

Changes that affect regions, such as CLASS, are only in effect until the region terminates.

Recommendation: Use the /ASSIGN command consistently on all IMS subsystems that are members of a VTAM generic resources group or share IMS queues. For example, assign an LTERM to a specific node for all IMS subsystems; assigning one LTERM to different nodes on different IMS subsystems could cause unpredictable results.

The /ASSIGN command is mirrored on an XRF alternate environment unless the assignment involves the primary or secondary master terminal, or the assignment of a CLASS to a REGION.

/ASSIGN commands attempting to assign LTERMs or users between static and dynamic terminals receive a unique error message. An error message is issued if /ASSIGN attempts any of the following

- To assign a dynamic LTERM to a static USER.
- To assign a static USER to a dynamic USER.
- To assign a dynamic USER to a static USER.
- To assign a dynamic LTERM to a LINE or NODE.
- To assign a static LTERM to a dynamic USER.

Restriction: You cannot use the /ASSIGN command to assign a user structure to a node that does not exist. Use the /OPN NODE nodename USER username command instead.

/ASSIGN in an IMSplex

In an IMSplex, the /ASSIGN LTERM and /ASSIGN USER commands alter the relationships between one or more logical terminals and a physical terminal or user.

Static terminals

For static terminals in an IMSplex, the control blocks should exist in all the IMS systems where a user could possibly log on to that terminal. If /ASSIGN LTERM TO NODE is specified in an IMSplex, it should be issued from the Single Point Of Control (SPOC) application. If ROUTE is specified, it should be specified as ROUTE(*). Otherwise, the /ASSIGN command may not be processed consistently across the IMSplex and could cause unpredictable results. If one of the /ASSIGN commands fails, that IMS will send back a completion code to the Operations Manager (OM) indicating failure. It will be up to the IMS installation to correct that problem.

/ASSIGN LTERM TO NODE assigns the input and output capabilities of a logical terminal to a static VTAM node. The logical terminal may not be in conversational, response, or preset destination mode. The source and destination terminals do not need to be stopped or logged off.

If global resource information is not kept in the Resource Manager (RM) and the node exists locally, this command applies locally. If global resource information is kept in RM, this command applies globally, if the control blocks exist in RM. However, the assignment changes are not considered significant, and if the resource is deleted, the assignment changes are deleted as well. An LTERM that exists in the RM could be deleted if the static node to which it is assigned does not exist in the RM. If NODEA and LTERMA exist in the RM because the node is in exclusive mode, but static NODEB is not in RM, an /ASSIGN LTERM LTERMA NODE NODEB command would result in LTERMA being deleted in RM.

The IMS where the LTERM and node are active, or the command master if the resources are not active, will make the changes in the RM. In this case, "active" includes the case where the terminal is logged off, but has an RM affinity to a particular IMS. For /ASSIGN LTERM TO NODE, the LTERM and node might not be active in different IMS systems.

When the log on of a static node attempts to write its LTERM names to the RM, but one or more of the LTERM names are already in use, IMS will reject the log on. This error should occur only if there are inconsistent definitions, or there have been inconsistent /ASSIGN commands issued in the IMSplex.

Dynamic terminals

/ASSIGN LTERM TO USER assigns the input and output capabilities of an ETO logical terminal to an ETO user or a static ISC logical terminal to a static ISC subpool. The logical terminal may not be in conversational, response, or preset destination mode. The source user associated with the ETO LTERM might not be signed on. The destination ETO user does not have to be stopped. If global resource information is not kept in RM and the user exists locally, this command applies locally. If global resource information is kept in RM, this command applies globally (if the control blocks exist in RM). However, the assignment changes are not considered significant, and if the resource is deleted, the assignment changes are deleted as well. The IMS where the LTERM and node are active, or the command master if the resources are not active, will make the changes in the RM.

Use /ASSIGN LTERM TO USER with the SAVE keyword in an RM environment, to cause the assignment to persist and to apply the change to future IMS systems that join the IMSplex. The SAVE keyword is valid only for dynamic terminals, so this persistence function is not available for static terminals. Use /ASSIGN LTERM TO USER with the NOSAVE keyword in an RM environment, to stop applying the change to future IMS systems that join the IMSplex.

/ASSIGN USER TO USER assigns all the logical terminals associated with the source user to the destination user. The destination user, if dynamic, does not have to be stopped. If global resource information is not kept in RM and the user exists locally, this command applies locally. If global resource information is kept in RM, this command applies globally. Use /ASSIGN USER TO USER with the SAVE keyword in an RM environment to cause the assignment to persist and to apply the change to future IMS systems that join the IMSplex. The SAVE keyword is valid only for dynamic terminals, so this persistence function is not available for static terminals. Use /ASSIGN USER TO USER with the NOSAVE keyword in an RM environment to stop applying the change to future IMS systems that join the IMSplex.

The /ASSIGN command is allowed when the destination user does not exist. However, when resource information is being kept in RM, unless the SAVE keyword is used, this command will not be allowed. Assignments are not considered significant without the SAVE keyword, and if the user does not already exist because of some other significant status, there is no reason to create the user.

IMS will dynamically create the source LTERM or user (if it does not exist) to enable the /ASSIGN command. If the destination also does not exist, the SAVE keyword must be specified on the /ASSIGN command. Otherwise, the SAVE keyword is optional.

Non-VTAM devices and VTAM

IMS supports the assignment of an LTERM between non-VTAM devices and VTAM terminals. However, IMS will not save any non-VTAM status. For example, if an LTERM is assigned from VTAM to a non-VTAM device, the LTERM will be deleted from the RM, and any status that might have been associated with that LTERM will no longer be recoverable.

Equivalent IMS type-2 commands

The following table shows variations of the /ASSIGN command and the IMS type-2 commands that perform similar functions.

Table 67. Type-2 equivalents for the /ASSIGN command

Task	/ASSIGN command	Similar IMS type-2 command
Changes the value for the limit count of a transaction.	/ASSIGN LCT <i>new_lmct_number</i> TO TRAN <i>trannname</i>	UPDATE TRAN NAME (<i>trannname</i>) SET(LCT(<i>new_limit_count</i>))
Changes the value for the limit priority of a transaction.	/ASSIGN LPRI <i>new_lpri_number</i> TO TRAN <i>trannname</i>	UPDATE TRAN NAME(<i>trannname</i>) SET(LPRI(<i>new_limit_priority</i>))
Changes the value for the normal priority of a transaction.	/ASSIGN NPRI <i>new_npri_number</i> TO TRAN <i>trannname</i>	UPDATE TRAN NAME(<i>trannname</i>) SET(NPRI(<i>new_normal_priority</i>))
Changes the value for the parallel processing limit count of a transaction.	/ASSIGN PARLIM <i>new_parlim_number</i> TO TRAN <i>trannname</i>	UPDATE TRAN NAME(<i>trannname</i>) SET(PARLIM(<i>new_parallel_limit</i>))
Changes the value for the processing limit count of a transaction.	/ASSIGN PLCT <i>new_plmct_number</i> TO TRAN <i>trannname</i>	UPDATE TRAN NAME(<i>trannname</i>) SET(PLCT(<i>new_processing_limit</i>))
Changes the limit on the number of application program output segments allowed in message queues for each GU call.	/ASSIGN SEGNO <i>new_segno_number</i> TO TRAN <i>trannname</i>	UPDATE TRAN NAME(<i>trannname</i>) SET(SEGNO(<i>new_segment_number</i>))
Creates or changes the limit on the size of application program output segments allowed in message queues for each GU call.	/ASSIGN SEGSZ <i>new_segsize_number</i> TO TRAN <i>trannname</i>	UPDATE TRAN NAME(<i>trannname</i>) SET(SEGSZ(<i>new_segment_size</i>))
Changes the class number of a transaction.	/ASSIGN TRAN <i>trannname</i> TO CLS <i>new_class_number</i>	UPDATE TRAN NAME(<i>trannname</i>) SET(CLASS(<i>new_class_number</i>))

Examples

The following are examples of the /ASSIGN command:

Example 1 for /ASSIGN command

Entry ET:

```
/ASSIGN CLASS 5 TO REGION 3
```

Response ET:

```
DFS058I  ASSIGN COMMAND COMPLETED
```

Explanation: Class 5 is assigned to region 3. Class 5 transactions are scheduled into region 3. This command resets any previous class assignments to this region.

Example 2 for /ASSIGN command

Entry ET:

```
/ASSIGN CLASS 4 6 2A TO REGION 5
```

Response ET:

```
DFS058I  ASSIGN COMMAND COMPLETED EXCEPT CLASS 2A
```

Explanation: The requested assignment is complete except for 2A, which is an invalid class number.

Example 3 for /ASSIGN command

Entry ET:

```
/ASSIGN CPRI 8 TO TRAN PIT, SEED
```

Response ET:

```
DFS058I  ASSIGN COMMAND COMPLETED
```

Explanation: A current priority of 8 is set for the transactions named PIT and SEED.

Example 4 for /ASSIGN command

Entry ET:

```
/ASSIGN INPUT LTERM JONES TO LINE 4 PTERM 3
```

Response ET:

```
DFS058I  ASSIGN COMMAND COMPLETED
```

Explanation: Logical terminal JONES is assigned to LINE 4 PTERM 3 for input identification and security. It associates the chain of logical terminals, of which LTERM JONES will be chained in first, with LINE 4 PTERM 3 for input. LTERM JONES must not be in the interior of an input chain (no other logical terminal can point to it). A physical terminal can point (for input only) to the first logical terminal of any chain. The output physical terminal for LTERM JONES is not changed.

Example 5 for /ASSIGN command

Entry ET:

```
/ASSIGN LTERM APPLE TO LINE 5 PTERM 1
```

Response ET:

```
DFS058I  ASSIGN COMMAND COMPLETED
```

Explanation: Logical terminal APPLE has both its input and output capabilities assigned to LINE 5 PTERM 1. The components present on LINE 5 PTERM 1 must be compatible with the physical terminal previously related to logical terminal APPLE.

Example 6 for /ASSIGN command

Entry ET:

```
/ASSIGN LTERM APPLE TO NODE JONES
```

Response ET:

```
DFS058I  ASSIGN COMMAND COMPLETED
```

Explanation: Logical terminal APPLE has both its input and output capabilities assigned to node JONES. The components present on node JONES must be compatible with the physical terminal previously related to logical terminal APPLE.

Example 7 for /ASSIGN command

Entry ET:

```
/ASSIGN LTERM SMITH TO LINE 4 PTERM 6 PTERM 7 COMPONENT 2
```

Response ET:

```
DFS058I  ASSIGN COMMAND COMPLETED
```

Explanation: Logical terminal SMITH is assigned to LINE 4 PTERM 6 for input and LINE 4 PTERM 7 for output. Output for LINE 4 PTERM 7 is directed to COMPONENT 2.

Example 8 for /ASSIGN command

Entry ET:

```
/ASSIGN LTERM X TO LINE 5 PTERM 7 PTERM 6 COMPONENT 4  
ICOMPONENT 3
```

Response ET:

```
DFS058I  ASSIGN COMMAND COMPLETED
```

Explanation: Logical terminal X is assigned to LINE 5 PTERM 7 for input and to LINE 5 PTERM 6 for output. Input is only received from input component 3, while output is directed to component 4.

Example 9 for /ASSIGN command

Entry ET:

```
/ASSIGN LTERM JONES TO LINE 4 PTERM 6 LINE 9 PTERM 1
```

Response ET:

```
DFS058I  ASSIGN COMMAND COMPLETED
```

Explanation: Logical terminal JONES is assigned to LINE 4 PTERM 6 for input capability and LINE 9 PTERM 1 for output capability. The component assignment is unaffected.

Example 10 for /ASSIGN command

Entry ET:

```
/ASSIGN LTERM SMITH NODE JONES
```

Response ET:

```
DFS058I  ASSIGN COMMAND COMPLETED
```

Explanation: Logical terminal SMITH is assigned to node JONES for both input and output.

Example 11 for /ASSIGN command

Entry ET:

```
/ASSIGN LTERM BROWN TO LTERM WHITE
```

Response ET:

DFS058I ASSIGN COMMAND COMPLETED

Explanation: Logical terminal BROWN is removed from its present input chain (if one exists) of logical terminals and added to the end of the input chain (if one exists) of logical terminal WHITE. The output physical terminal for LTERM BROWN is not changed.

Example 12 for /ASSIGN command

Entry ET:

/ASSIGN LTERM LAX USER ILL ICOMPONENT 1 COMPONENT 2

Response ET:

DFS058I ASSIGN COMMAND COMPLETED

Explanation: Logical terminal LAX is reassigned from its existing user to the user ILL. The user associated with LAX cannot be allocated to an active session.

Example 13 for /ASSIGN command

Entry ET:

/ASSIGN LTERM PRIMARY TO LINE 4 PTERM 3

Response ET:

DFS058I ASSIGN COMMAND COMPLETED

Explanation: PTERM 3 on LINE 4 becomes the master terminal. PTERM 3 must be a 3270 display.

Example 14 for /ASSIGN command

Entry ET:

/ASSIGN LTERM PRIMARY TO NODE BOSS

Response ET:

DFS058I ASSIGN COMMAND COMPLETED

Explanation: The node, BOSS, becomes the primary master terminal and the secondary master terminal.

Example 15 for /ASSIGN command

Entry ET:

/ASSIGN LTERM PRIMARY TO LINE 1 PTERM 2 LINE 2 PTERM 4

Response ET:

DFS058I ASSIGN COMMAND COMPLETED

Explanation: PTERM 2 on LINE 1 becomes the primary master terminal and PTERM 4 on LINE 2 becomes the secondary master terminal. PTERM 2 is a 3270 display station and PTERM 4 is a 3270 printer.

Example 16 for /ASSIGN command

Entry ET:

```
/ASSIGN SEGNO 50 TO TRAN APPLE
```

Response ET:

```
DFS058I  ASSIGN COMMAND COMPLETED
```

Explanation: A limit of 50 output segments is set for the transaction APPLE.

Example 17 for /ASSIGN command

Entry ET:

```
/ASSIGN SEGSZ 1000 TO TRAN APPLE
```

Response ET:

```
DFS058I  ASSIGN COMMAND COMPLETED
```

Explanation: A maximum size of 1000 bytes is set for any one output segment of transaction APPLE.

Example 18 for /ASSIGN command

Entry ET:

```
/ASSIGN USER ILL TO USER CAL
```

Response ET:

```
DFS058I  ASSIGN COMMAND COMPLETED
```

Explanation: All the logical terminals of user ILL are appended to the existing LTERM string of user CAL. Use of this form of the /ASSIGN command leaves ILL with no LTERMs and therefore unavailable for allocation to a session. Both user ILL and CAL cannot be allocated to a session.

Example 19 for /ASSIGN command

Entry ET:

```
/ASSIGN USER CAL TO VTAMPOOL
```

Response ET:

```
DFS058I  ASSIGN COMMAND COMPLETED
```

Explanation: The entire allocated LTERM string defined for user CAL is reassigned to the VTAM pool. The node to which user CAL is allocated must not be in session and must be stopped and idle. User CAL is then available for allocation to any ISC session.

Example 20 for /ASSIGN command

Entry ET:

```
/ASSIGN TRAN APPLE TO CLASS 5
```

Response ET:

```
DFS058I  ASSIGN COMMAND COMPLETED
```

Explanation: The transaction named APPLE is assigned to class 5.

Related concepts:

 CPI Communications driven application programs (Communications and Connections)

Related reference:

 UPDATE TRAN command (Commands)

Chapter 10. /BROADCAST command

The /BROADCAST command is a multisegment command used to send a message to terminals in one or more IMS systems.

Subsections:

- “Environment”
- “Syntax”
- “Keywords” on page 116
- “Usage notes” on page 117
- “Examples” on page 118

Environment

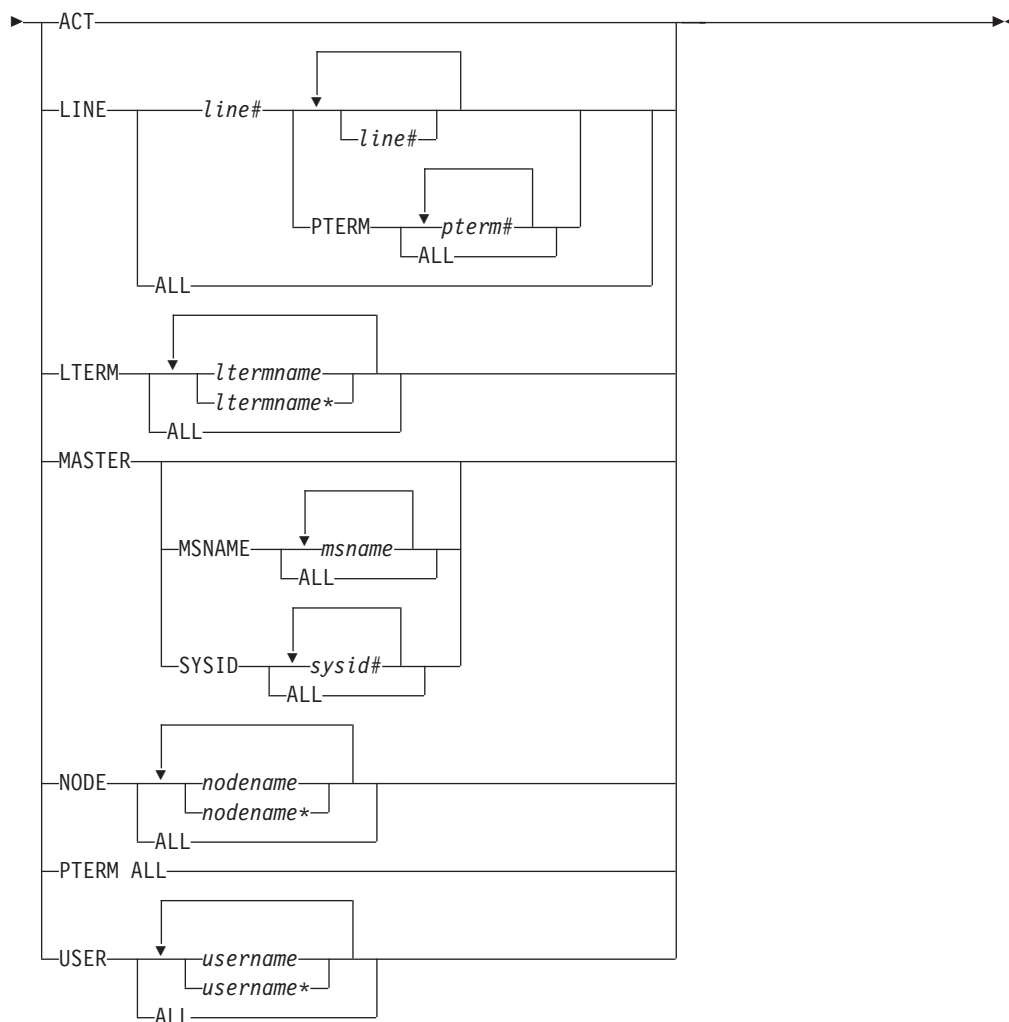
The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 68. Valid environments for the /BROADCAST command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/BROADCAST	X		X
ACT	X		X
LINE	X		X
LTERM	X		X
MASTER	X		X
MSNAME	X		X
NODE	X		X
PTERM	X		X
SYSID	X		X
USER	X		X

Syntax





Keywords

The following keywords can be specified for the `/BROADCAST` command:

ACT

Specifies that the supplied message is queued to the first LTERM allocated to each active node.

When operating on a dynamic terminal, the `/BROADCAST ACT` command only succeeds if a signed on user exists. A signed on user must exist, otherwise there is no destination to which to send the message.

LINE

Specifies that a message is to be sent to all terminals associated with the specified line. PTERM specifies that the message is to be sent to specific terminals on the associated line.

LTERM

Specifies that a message is queued to each named LTERM in the local system or any remote system. The remote logical terminal must be defined in the input system.

Where a LTERM does not exist, IMS attempts to create the LTERM and associated user structure if ETO is active. LTERM parameters can be generic, where the generic parameter specifies logical terminals that already exist.

When /BROADCAST LTERM ALL is specified, one copy of the message is queued for each logical terminal in the local system. In a multiple systems configuration, the message is not sent to remote systems when the ALL parameter is used. When more than one logical terminal is assigned to a physical terminal for output purposes, multiple copies of the message will result.

When the LTERM keyword specifies a logical terminal assigned to the VTAM pool, broadcast messages are queued for the first logical terminal in a subpool.

MASTER

Specifies that a message is to be sent to the IMS master terminal and to any specified secondary master terminal. Keywords SYSID and MSNAME can be used to further qualify the reserved parameter MASTER.

MSNAME

Specifies the logical link path in a multiple systems configuration.

NODE

Specifies that the supplied message is queued to the first output LTERM allocated to a terminal. If a terminal has no signed on user, no message can be queued. NODE parameters can be generic, where the generic parameter specifies nodes that already exist.

When operating on a dynamic terminal, the /BROADCAST NODE command only succeeds if a signed on user exists. A signed on user must exist, otherwise there is no destination to which to send the message.

PTERM

Specifies the physical terminal to which a message is to be sent.

SYSID

Specifies the system identification of a system in a multiple system configuration.

USER

Specifies that the supplied message is queued to the first LTERM associated with the dynamic user. The USER parameter can be generic. The /BROADCAST USER command applies only to existing dynamic users.

In an IMSplex, /BROADCAST USER queues the supplied message to the first LTERM associated with a dynamic user, if the user is signed on locally. /BROADCAST USER cannot be used to queue a message to an LTERM associated with a user signed on to another IMS in the IMSplex, or not signed on at all.

Usage notes

For /BROADCAST commands entered by the master terminal operator, the multisegment input from this command is combined into 79-character segments for output transmission. The first input segment contains only the broadcast destination. The second and subsequent input segments must contain the data to be broadcast. Messages that are broadcast are sent even if the line, terminal, or both, are stopped at the time the broadcast is issued.

This command can be issued to an IMSplex using the Batch SPOC utility.

All /BROADCAST formats require an EOM indication to denote end-of-message; an EOS indication must be included for all segments that precede the last segment.

Requirement: When the /BROADCAST command is issued from an MCS/E-MCS console, OM API, or an AOI application, a period must appear as a delimiter between the command and the message text.

Unlike message switches, broadcast messages are sent to a terminal even when the terminal, associated line, or both, are not available (stopped, process stopped, or locked). However, broadcast messages are never sent to terminals if the MSGDEL parameter of the TERMINAL macro is specified MSGDEL=NONIOPCB.

Broadcast messages are always queued for logical terminals. When the ACTIVE, LINE, NODE, PTERM, or USER keywords are used, IMS queues the message for the first logical terminal found that is associated for output purposes with the specified line or physical terminal.

Examples

The following are examples of the /BROADCAST command:

Example 1 for /BROADCAST command

Entry ET:

```
/BROADCAST ACTIVE (EOS)
SYSTEM WILL BE SHUTDOWN FOR PM (EOS)
IN 5 MINUTES (EOM)
```

Response ET:

```
DFS058I BROADCAST COMMAND COMPLETED
```

Response RT:

```
SYSTEM WILL BE SHUTDOWN FOR PM IN 5 MINUTES
```

Explanation: The entered message is transmitted to all active terminals.

Example 2 for /BROADCAST command

Entry ET:

```
/BROADCAST TO LTERM APPLE, TREE (EOS)
DON'T USE TRANSACTION GREENTRE UNTIL FURTHER (EOS)
NOTICE. (EOM)
```

Response ET:

```
DFS058I BROADCAST COMMAND COMPLETED
```

Response RT:

```
DON'T USE TRANSACTION GREENTRE UNTIL FURTHER
NOTICE.
```

Explanation: The entered message is transmitted to the logical terminals named APPLE and TREE.

Example 3 for /BROADCAST command

Entry ET:

```
/BROADCAST TO LINE ALL (EOS)
SYSTEM WILL SHUTDOWN AT 5PM (EOM)
```

Response ET:

```
DFS058I  BROADCAST COMMAND COMPLETED
```

Response RT:

```
SYSTEM WILL SHUTDOWN AT 5PM
```

Explanation: The entered message is transmitted to all physical terminals.

Example 4 for /BROADCAST command

Entry ET:

```
/BROADCAST TO LINE 13 PTERM ALL (EOS)
EXPECT DEMO YOUR LINE AT 9PM (EOM)
```

Response ET:

```
DFS058I  BROADCAST COMMAND COMPLETED
```

Response RT:

```
EXPECT DEMO YOUR LINE AT 9PM
```

Explanation: The entered message is transmitted to all physical terminals on line 13.

Example 5 for /BROADCAST command

Entry ET:

```
/BROADCAST MASTER SYSID 2 (EOS)
SYSTEM WILL SHUTDOWN AT 5:00 PM (EOM)
```

Response ET:

```
DFS058I  BROADCAST COMMAND COMPLETED
```

Response RT:

```
SYSTEM WILL SHUTDOWN AT 5:00 PM
```

Explanation: The message is transmitted to the master terminal of the system specified by the SYSID 2.

Example 6 for /BROADCAST command

Entry ET:

```
/BROADCAST MASTER MSNAME BOSTON, CHICAGO (EOS)
SYSTEM WILL SHUTDOWN AT 5:00 PM (EOM)
```

Response ET:

```
DFS058I  BROADCAST COMMAND COMPLETED
```

Response RT:

```
SYSTEM WILL SHUTDOWN AT 5:00 PM
```

Explanation: The message is transmitted to the master terminals. of the remote systems specified by the MSNAMEs BOSTON and CHICAGO.

Example 7 for /BROADCAST command

Remote Terminal entry:

```
/FORMAT DFSMO4  
/BRO LTERM WTOR (eos)  
this is segment 1 (eos)  
this is segment 2 (eos)  
this is segment 3 (eom)
```

Response ET:

```
DFS058I  BROADCAST COMMAND COMPLETED
```

Response RT:

```
THIS IS SEGMENT 1  
THIS IS SEGMENT 2  
THIS IS SEGMENT 3
```

Explanation: The remote terminal is first formatted by the /FORMAT command, where default format DFSMO4 supports the input of four segments. This is followed by /BROADCAST with four segments.

Related reference:

“Multisegment command input” on page 6

Chapter 11. /CANCEL command

The /CANCEL command cancels all segments of a multisegment input message.

It must be entered prior to the end-of-message (EOM) indicator from the terminal that was entering the message.

Subsections:

- "Environment"
- "Syntax"
- "Usage notes"
- "Example"

Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) from which the command can be issued.

Table 69. Valid environments for the /CANCEL command

Command	DB/DC	DBCTL	DCCTL
/CANCEL	X		X

Syntax

➡ `/CANCEL` ➡
 `/CAN`

Usage notes

Because a /CANCEL command must comprise a segment, it cannot be used to cancel a single-segment message.

On a non-3270 device, you can cancel a single-segment message by entering two asterisks (**), followed immediately by an end-of-segment (EOS) indicator. When Message Format Service (MFS) is used, you can define delete characters other than (**) to cancel other segments besides the first.

/CANCEL command has no meaning on display terminals where it is not possible to have some segments of a message already received by IMS while receiving subsequent segments.

Example

Entry ET:

```
/BROADCAST TO ACTIVE (EOS)  
SYSTEM WILL BE AVAILABLE (EOS)
```

Entry ET:

```
/CANCEL
```

Response ET:

DFS058I CANCEL COMMAND COMPLETED

Explanation: All previously entered segments of the current message are discarded.

Chapter 12. /CHANGE commands

The /CHANGE commands are multisegment commands used to change or delete internal resources within IMS.

All /CHANGE formats require an EOM indication to denote end-of-message; an EOS indication must be included for all segments that precede the last segment.

These commands can be issued to an IMSplex using the Batch SPOC utility.

Subsections:

- “/CHANGE APPC command”
- “/CHANGE CCTL command” on page 124
- “/CHANGE CPLOG command” on page 126
- “/CHANGE DESC command” on page 126
- “/CHANGE DIR MFS command” on page 128
- “/CHANGE FDR command” on page 129
- “/CHANGE LINK command” on page 130
- “/CHANGE NODE command” on page 133
- “/CHANGE SUBSYS command” on page 136
- “/CHANGE SURV command” on page 138
- “/CHANGE TRAN command” on page 141
- “/CHANGE UOR command” on page 142
- “/CHANGE USER command” on page 144

Related reference:

“Multisegment command input” on page 6

/CHANGE APPC command

Use the /CHANGE APPC command to specify a change to the timeout value for APPC/IMS.

This value is set in the DFSDCxxx member of IMS.PROCLIB. IMS passes this value to APPC/z/OS for every implicit APPC/IMS conversation.

Subsections:

- “Environment”
- “Syntax” on page 124
- “Keywords” on page 124
- “Usage notes” on page 124

Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 70. Valid environments for the /CHANGE APPC command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/CHANGE	X	X	X
APPC	X		X
OUTBND	X	X	X
TIMEOUT	X	X	X

Syntax



Keywords

The following keywords are valid for the /CHANGE APPC command:

OUTBND

Specifies a different outbound LU. The specified LU must be one of the APPC LUs defined in the APPCPMxx member of the SYS1.PARMLIB library. The default outbound LU is BASE LU. Message DFS182 is issued if the specified *luname* is not defined as a SCHEDULER in APPC/MVS for this IMS (in the APPCPMxx SYS1.PARMLIB member or through the SETAPPC command).

TIMEOUT

Specifies the timeout value in minutes and seconds (*mmmm:ss*). *mmmm* can be a number between 0 and 1440. *ss* can be a number between 0 and 59. If the timeout value is 0, APPC/IMS timeout will be deactivated.

Usage notes

A DFS34091 or DFS3491I message is issued after the /CHANGE APPC TIMEOUT command is issued to inform the operator of the new timeout value.

/CHANGE CCTL command

Use the /CHANGE CCTL command to specify the coordinator control subsystem. The recovery elements are resolved by IMS.

Subsections:

- “Environment”
- “Syntax” on page 125
- “Keywords” on page 125
- “Examples” on page 125

Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

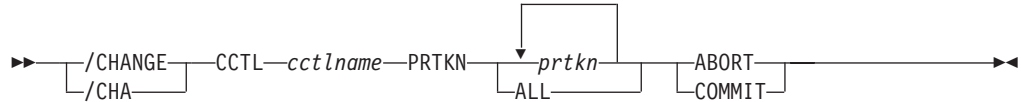
Table 71. Valid environments for the /CHANGE CCTL command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/CHANGE	X	X	X

Table 71. Valid environments for the /CHANGE CCTL command and keywords (continued)

Command / Keywords	DB/DC	DBCTL	DCCTL
ABORT	X	X	
CCTL	X	X	
COMMIT	X	X	
PRTKN	X	X	

Syntax



Keywords

The following keywords are valid for the /CHANGE CCTL command:

cctlname

Specifies CCTL subsystem ID.

prtkn

Specifies the pseudorecovery token, which designates the unit of recovery to be aborted or committed. Use the /DISPLAY CCTL command to determine the name of the pseudorecovery token.

ABORT

Backs out changes for a unit of recovery. After completion of backout, the recoverable indoubt structure (RIS) is removed.

COMMIT

Commits changes for a unit of recovery. After the process is complete, the RIS is removed.

Examples

This set of examples shows that an INDOUBT unit of recovery can be aborted if the INDOUBT status cannot be resolved. The /CHANGE ... PRTKN command backs out changes made to the database.

Entry ET:

```
/DISPLAY CCTL CICS1 IND
```

Response ET:

CCTL	PSEUDO-RTKN	RECOVERY-TOKEN	REGID	PSBNAME	STATUS
CICS1					ATTACHED
	000100C0	9FFA956B7AE24E00		BMP255	INDOUBT
	00010040	9FFA9568FF594301		BMP255	INDOUBT
90067/113446					

Entry ET:

```
/CHANGE CCTL CICS1 PRTKN 000100C0 ABORT (EOM)
```

Response ET:

DFS058I CHANGE COMMAND COMPLETED
DBS0699I REYNC ABORT COMPLETE FOR PSB BMP255...

Explanation: The INDOUBT unit of recovery whose pseudorecovery token (PRTKN) is 000100C0 has been aborted.

/CHANGE CPLOG command

Use the /CHANGE CPLOG command to change the value of the IMS execution parameter, CPLOG.

The IMS CPLOG execution parameter specifies the number of system log records between system-generated checkpoints.

Subsections:

- "Environment"
- "Syntax"
- "Keywords"

Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 72. Valid environments for the /CHANGE CPLOG command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/CHANGE	X	X	X
CPLOG	X	X	X

Syntax

►► `/CHANGE CPLOG cp_log` ◄◄
 `[/CHA`

Keywords

The following keyword is valid for the /CHANGE CPLOG command:

cp_log

This value must be specified as one or more numeric characters followed by either K or M. Values can range from 1K (1 KB) to 16M (16 MB).

/CHANGE DESC command

Use the /CHANGE DESC command to specify the name of an LU 6.2 descriptor that will be updated with new values.

An error message is issued if the specified descriptor is not found.

Subsections:

- "Environment" on page 127
- "Syntax" on page 127
- "Keywords" on page 127

- “Usage notes” on page 128

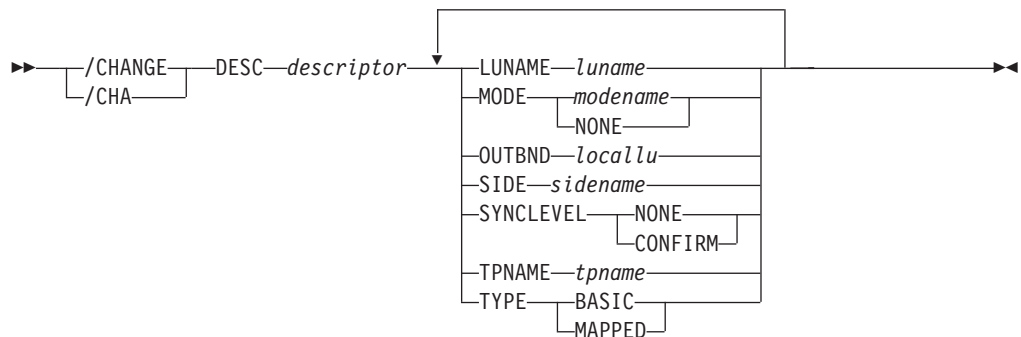
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 73. Valid environments for the /CHANGE DESC command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/CHANGE	X	X	X
DESC	X		X
LUNAME	X		X
MODE	X		X
OUTBND	X		X
SIDE	X		X
SYNCLEVEL	X		X
TPNAME	X		X
TYPE	X		X

Syntax



Keywords

The following keywords are valid for the /CHANGE DESC command:

LUNAME

Specifies the LU name that is updated in the LU 6.2 descriptor.

The luname value in the descriptor is set to blanks unless the LUNAME keyword is also specified. A network-qualified LU name is optional for the LUNAME keyword.

MODE

Specifies the VTAM mode table entry name that is updated in the LU 6.2 descriptor. The NONE parameter resets the mode field to its null state.

The MODE value in the descriptor is set to blanks unless the MODE keyword is also specified.

OUTBND

Identifies a local LU to be used for outbound message processing. If you do

not specify a local LU, no LU name is displayed in the OUTBNDLU column of the /DISPLAY DESC command, and IMS uses the default LU.

SIDE

Specifies the APPC/z/OS side information that is set in the LU 6.2 descriptor. The side information contains default values for APPC conversation attributes such as LUNAME, TPNAME, and MODE.

SYNCLEVEL

Specifies the APPC sync level that is updated in the LU 6.2 descriptor. One of the following must be specified:

CONFIRM

IMS sync point processing continues.

NONE

IMS sync processing continues despite a session failure.

TPNAME

Specifies the tpname that is updated in the LU 6.2 descriptor. Message DFS182 is issued if the TPNAME parameter specified is DFSSIDE.

The TPNAME value in the descriptor is set to blanks unless the TPNAME keyword is also specified.

TYPE

Specifies the APPC conversation type that is updated in the LU 6.2 descriptor.

The conversation types are:

BASIC

Specifies that the data is to be formatted by the transaction programs, using the pattern "LL,data,LL,data".

MAPPED

Specifies that the data is to be formatted by APPC.

Usage notes

The /CHANGE DESC command changes the destination for future messages only. It does not change the destination for existing messages. The existing output messages are delivered only to the luname and tpname that had been previously specified for that message. This restriction is required by security requirements so message delivery to the intended destination only occurs at the time the messages are created.

/CHANGE DIR MFS command

Use the /CHANGE DIR MFS command to specify that the entries in the MFS dynamic directory are to be deleted.

This restores the dynamic directory to the original state that it was in just after IMS was initialized.

Subsections:

- "Environment" on page 129
- "Syntax" on page 129
- "Usage notes" on page 129

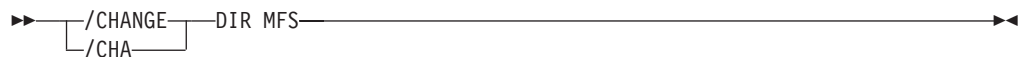
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 74. Valid environments for the /CHANGE DIR MFS command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/CHANGE	X	X	X
DIR	X		X

Syntax



Usage notes

When IMS is initialized, IMS creates an MFS block primary directory based on the contents of all the \$IMSDIR members found. At the same time, IMS issues GETMAINS to acquire additional storage that is large enough to hold approximately 10% of the members in the active format library. While IMS is running, entries are only added to the dynamic directory, they are not deleted. Therefore, the dynamic directory continues to get larger until it runs out of space. When this happens, IMS can extend the amount of space in the dynamic directory to hold another 10%. IMS can extend the size of the dynamic directory a maximum of 9 times.

If you want to delete the in-storage (or index) entries from the dynamic directory without restarting IMS or performing an online change for the format library, use the /CHANGE DIR MFS command.

/CHANGE FDR command

Use the /CHANGE FDR command to specify a change to the timeout value for IMS Fast Database Recovery surveillance.

This value is set in the DFSFDRxx member of IMS.PROCLIB. IMS uses this value to determine how long to wait before initiating a Fast Database Recovery takeover.

Subsections:

- “Environment”
- “Syntax” on page 130
- “Usage notes” on page 130

Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 75. Valid environments for the /CHANGE FDR command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/CHANGE	X	X	X

Table 75. Valid environments for the /CHANGE FDR command and keywords (continued)

Command / Keywords	DB/DC	DBCTL	DCCTL
FDR	X	X	
TIMEOUT	X	X	X

Syntax

```

▶▶ /CHANGE FDR TIMEOUT #seconds
  /CHA
  
```

Usage notes

The timeout value (*#seconds*) must be at least 3 but no greater than 999.

IMS rejects this command if the active IMS subsystem is not connected to a Fast Database Recovery region.

/CHANGE LINK command

Use the /CHANGE LINK command with FORCSESS, SYNCSESS, COLDSESS to override the system definition option defined for forcing resynchronization until the next /CHANGE LINK command or IMS cold start.

The /CHANGE LINK command applies only to IMS systems that are linked by Multiple Systems Coupling (MSC) when VTAM is used.

Subsections:

- “Environment”
- “Syntax” on page 131
- “Keywords” on page 131
- Examples

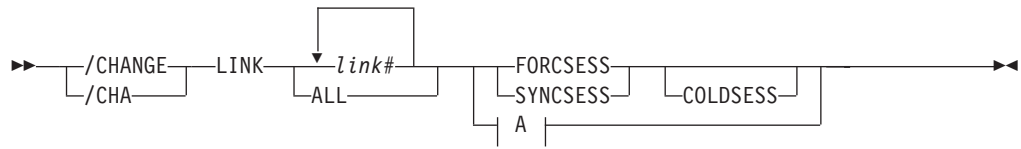
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 76. Valid environments for the /CHANGE LINK keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/CHANGE LINK	X		X
ASR	X		X
COLDSESS	X		X
FORCSESS	X		X
MODE	X		X
SYNCSESS	X		X

Syntax



A:



Keywords

The following keywords are valid for the /CHANGE LINK command:

FORCESESS

Defines the link as capable of being warm started from an ERE state, even if the message sequence numbers on each side of the link are not synchronized.

Attention: The use of FORCESESS can cause messages to be lost. Specify FORCESESS for a link only if the loss of messages during a restart can be tolerated.

SYNCSESS

Defines the link as incapable of being warm started from an ERE state, unless the message sequence numbers on each side of the link are synchronized.

COLDESS

Resets a link that is in either ERE or NRE state to COLD state, the state of a link when IMS comes up with a cold start.

The FORCESESS or the SYNCSESS keyword must be specified with the COLDESS keyword. The specification of FORCESESS or SYNCSESS keyword with COLDESS overrides the previous specification of FORCESESS or SYNCSESS for the link.

Attention: Use of the COLDESS keyword can cause messages to be lost. Use the COLDESS keyword only if one of the systems associated with an MSC link goes down, and the only way to bring up the session is to cold start it.

The COLDESS keyword can be specified to terminate control blocks associated with the specified link or links and reset the link to COLD. COLDESS should be used only after the /PSTOP command is issued and completes against the link or links and the links appear to be hung. If COLDESS is specified, it should be used on both sides of the link or links. Gather documentation to determine why the link or links did not come down normally.

ASR

Changes the automatic keyword session restart designation of a VTAM link. The default parameter for ASR is ON.

Automatic session restart is not necessarily activated for a link just because a status of ASR is displayed for that link. You must also have coded SONSCIP=YES on the APPL definition statement for VTAM when defining the network for the VTAM.

ASR applies only to VTAM MSC links. Attempting to turn ASR ON for any other type of MSC link is invalid. If non-VTAM MSC links are specified on the /CHANGE LINK ASR command, the command response indicates that the command processing completed with exceptions.

MODE

Changes the default mode table name of a VTAM link. This default is usually established by system definition. Parameter NONE resets this field to its null state (as if no mode table name was specified at system definition).

MODE applies only to VTAM MSC links. Changing the mode table name for any other type of MSC link is invalid. If non-VTAM MSC links are specified on the /CHANGE LINK MODE command, the command response indicates that the command processing completed with exceptions.

Examples: ASR

This set of commands illustrates how the ASR setting of a link can be modified by the /CHANGE command:

Entry ET:

```
/DISPLAY LINK 6
```

Response ET:

LINK	PARTNER	RECD	ENQCT	DEQCT	QCT	SENT					
6	AL	0	0	0	0	0	ASR	PSTOPPED	IDLE	COLD	
90179/102004 IMSA											

Explanation: Automatic Session Restart was defined for link 6 by system definition.

Entry ET:

```
/CHANGE LINK 6 ASR OFF (EOM)
```

Response ET:

```
DFS058I CHANGE COMMAND COMPLETED
```

Entry ET:

```
/DISPLAY LINK 6
```

Response ET:

LINK	PARTNER	RECD	ENQCT	DEQCT	QCT	SENT					
6	AL	0	0	0	0	0	PSTOPPED	IDLE	COLD		
90179/102126											

Explanation: Automatic Session Restart is not available for link 6

Entry ET:

```
/CHANGE LINK 6 ASR (EOM)
```

Response ET:

```
DFS058I CHANGE COMMAND COMPLETED
```

Explanation: The ASR parameter will default to ON.

Entry ET:

/DISPLAY LINK 6

Response ET:

```
LINK PARTNER  RECD  ENQCT  DEQCT  QCT  SENT
  6 AL          0      0      0      0      0 ASR PSTOPPED IDLE COLD
*90179/102300*
```

Explanation: Automatic Session Restart is in effect again as a result of the second /CHANGE command.

/CHANGE NODE command

Use the /CHANGE NODE command to specify a VTAM node to be changed. The NODE parameter can be generic if the USER keyword is not present. The generic parameter specifies nodes that already exist.

Subsections:

- “Environment”
- “Syntax” on page 134
- “Keywords” on page 134
- “Examples” on page 135

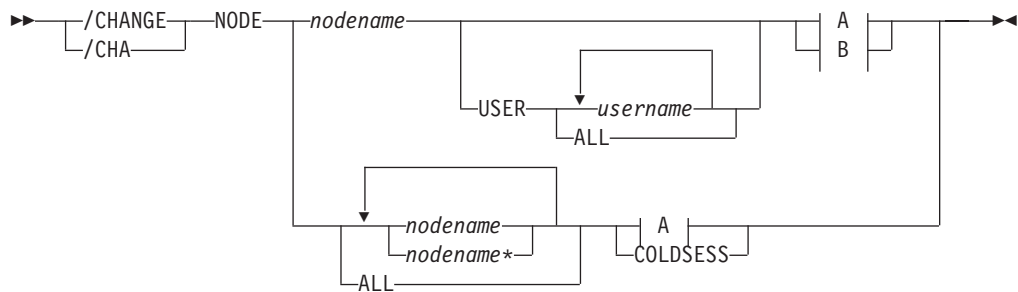
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 77. Valid environments for the /CHANGE NODE command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/CHANGE	X	X	X
ASR	X		X
COLDSESS	X		X
FORCSESS	X		X
MODE	X		X
NODE	X		X
SYNCSESS	X		X
USER	X		X

Syntax



A:



B:



Keywords

The following keywords are valid for the /CHANGE NODE command:

ASR

The ASR keyword allows you to change the automatic session restart designation of a node. The default parameter for ASR is ON.

Automatic session restart is not necessarily activated for a node just because a status of ASR is displayed for that node. You must also have coded SONCSIP=YES on the APPL definition statement for VTAM when defining your network.

COLDSESS

When COLDSESS is used with the NODE keyword, it sets up the SLU P or FINANCE session so that the session can be cold started. The COLDSESS keyword should be used if the SLU P or FINANCE session has experienced problems and attempts to warm start the session fail. The COLDSESS keyword terminates terminal and user control blocks associated with the specified node or nodes, and resets the node status to COLD.

In an IMSplex, if global resource information is not kept in Resource Manager (RM), the change is applied locally. If global resource information is kept in RM, the change is applied globally.

A DFS0581 COMMAND COMPLETE EXCEPT message may be received if the node is temporarily in use by another task even if the criteria (node is terminated and idle) for successful completion of the command is met.

FORCSESS, SYNCSESS

The FORCSESS and SYNCSESS keywords are valid only for ISC nodes. Specify

FORCESS and SYNCSESS to override the system definition or logon descriptor option defined to force or not force synchronization of sessions. This override is effective until the next /CHANGE command is issued or an IMS cold start is effected.

MODE

Changes the default mode table name of a node. This default is usually established by system definition or logon descriptor. MODE resets this field to its null state (as if no mode table name had been specified at system definition).

Changing ASR or the mode table name for VTAM 3270 nodes is invalid. If nodes of this type are referred to specifically in the /CHANGE ASR or /CHANGE MODE commands, they are marked in error.

USER

Indicates the ISC user that is allocated to the node or the dynamic user that is signed on to the node.

/CHANGE USER AUTOLOGON SAVE changes the autologon information previously specified by a user descriptor, Destination Creation exit routine (DFSINSX0), or signon exit routine (DFSSGNX0). The autologon change is saved. The autologon information includes the node name, the mode table, the logon descriptor, and the ID. If the Resource Manager is active, the user will be dynamically created if it does not already exist. The SAVE keyword must be specified. If SAVE is not specified, the command is rejected with message DFS1199.

Restrictions for using NODE and USER parameters together:

- Commands with the NODE USER keyword pair are valid only if:
 - The USER is signed on to the NODE
 - In an ISC environment, the USER is allocated to the NODE
 - The nodes and users already exist
- /CHANGE NODE USER commands with ASR or MODETABLE keyword are valid for ISC and non-ISC nodes and users.
- /CHANGE NODE USER commands with FORCESS or SYNCSESS keyword are valid for ISC nodes only.

Examples

The following are examples of the /CHANGE NODE command:

Example 1

Entry ET:

```
/DISPLAY NODE LUTYPEP1 MODE
```

Response ET:

```
NODE-USR  TYPE  DEF MODETBL  ACT MODETBL
LUTYPEP1  SLUP  DEFRESP
*90179/100630*
```

Explanation: DEFRESP is the mode table name defined for node LUTYPEP1 at system definition or logon descriptor or resource creation. The session is not active so the active mode table field (ACT MODETBL) is blank.

Entry ET:

```
/CHANGE NODE LUTYPEP1 MODE XXXXXXXX (EOM)
```

Response ET:

```
DFS058I CHANGE COMMAND COMPLETED
```

Entry ET:

```
/DISPLAY NODE LUTYPEP1 MODE
```

Response ET:

```
NODE-USR TYPE  DEF MODETBL  ACT  MODETBL
LUTYPEP1 SLUP  XXXXXXXX
*84179/100733*
```

Explanation: The default mode table name has been changed to XXXXXXXX by the previous /CHANGE command. The session is still not active so the active mode table field (ACT MODETBL) is blank.

Example 2

Entry ET:

```
/DISPLAY NODE LUTYPEP
```

Response ET:

```
NODE-USR  TYPE   CID      RECD  ENQCT  DEQCT  QCT  SENT
LUTYPEP   SLUP   00000000    37    37    37    0    37  IDLE
*98276/153630*
```

Explanation: Node LUTYPEP is terminated warm after session received and processed 37 messages.

Entry ET:

```
/CHANGE NODE LUTYPEP COLDSESS (EOM)
```

Response ET:

```
DFS058I CHANGE COMMAND COMPLETED
```

Entry ET:

```
/DISPLAY NODE LUTYPEP
```

Response ET:

```
NODE-USR  TYPE   CID      RECD  ENQCT  DEQCT  QCT  SENT
LUTYPEP   SLUP   00000000     0     0     0     0     0  IDLE COLD
*98279/153630*
```

Explanation: Terminal and user blocks associated with node LUTYPEP have been cleared and the status has been reset to COLD.

/CHANGE SUBSYS command

Use the /CHANGE SUBSYS command to specify the subsystem name from which IMS recovery elements are to be deleted.

Subsections:

- “Environment” on page 137
- “Syntax” on page 137

- “Keywords”
- “Examples”

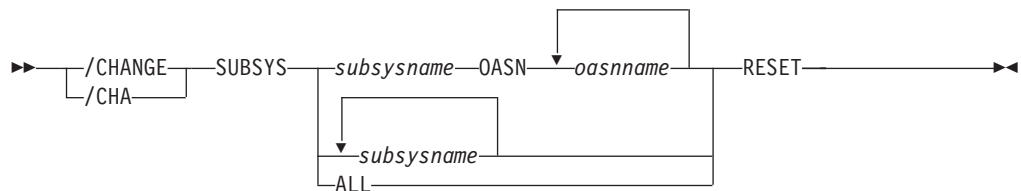
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 78. Valid environments for the /CHANGE SUBSYS command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/CHANGE	X	X	X
OASN	X	X	X
RESET	X	X	X
SUBSYS	X	X	X

Syntax



Keywords

The following keywords are valid for the /CHANGE SUBSYS command:

OASN

Specifies the outstanding recovery element to be deleted.

RESET

Causes an incomplete unit of work assigned to an external subsystem (not a CCTL subsystem) to be deleted.

Examples

The following are examples of the /CHANGE SUBSYS command:

Example 1

Entry ET:

```
/CHANGE SUBSYS DSN RESET (EOM)
```

Response ET:

```
DFS058I  CHANGE COMMAND COMPLETED
```

Explanation: Reset all IN-DOUBT recovery units for subsystem DSN.

Example 2

Entry ET:

```
/CHANGE SUBSYS ALL RESET (EOM)
```

Response ET:

```
DFS058I  CHANGE COMMAND COMPLETED
```

Explanation: Reset all IN-DOUBT recovery units for all subsystems.

Example 3

Entry ET:

```
/CHANGE SUBSYS ABCD OASN 99 685 2920 RESET (EOM)
```

Response ET:

```
DFS058I  CHANGE COMMAND COMPLETED
```

Explanation: Reset IN-DOUBT recovery units identified by OASN numbers 99, 685, 2920 for subsystem ABCD.

/CHANGE SURV command

Use the /CHANGE SURV command to specify that the interval or timeout value on the active or alternate system in an XRF environment is changed.

Subsections:

- “Environment”
- “Syntax”
- “Keywords” on page 139
- “Usage notes” on page 139
- “Examples” on page 140

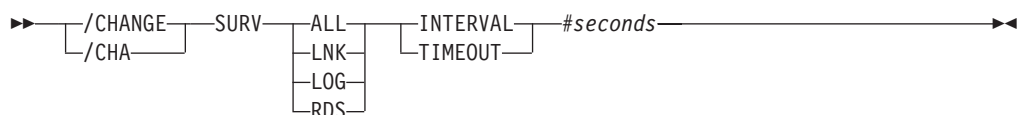
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 79. Valid environments for the /CHANGE SURV command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/CHANGE	X	X	X
INTERVAL	X		X
SURV	X		X
TIMEOUT	X	X	X

Syntax



Keywords

The following keywords are valid for the /CHANGE SURV command:

ALL

Same as specifying LNK, LOG, and RDS.

INTERVAL

Specifies the new interval on the active or alternate system in an XRF environment. The INTERVAL keyword identifies the new value in seconds and must be in the range 1 through 99.

LNK

IMS ISC link.

LOG

IMS system log.

RDS

IMS restart data set.

TIMEOUT

Specifies the new timeout value on the active or alternate system in an XRF environment. The TIMEOUT keyword identifies the new value in seconds and must be in the range 1 through 99.

Usage notes

When /CHANGE SURV is entered on the active system, it becomes effective on both the active and alternate systems if the alternate system is up. If entered on the alternate system, only the alternate system is changed.

Recommendation: Change surveillance on the active system and allow the alternate system to take affect.

Additional considerations when changing the TIMEOUT values are shown in the following table. Listed in the table are the TIMEOUT value requirements for certain systems where the command is entered on and the action taken for exceptions.

Table 80. Changing the TIMEOUT value

System the command is entered on	Requirement	Action taken for exceptions
Active	New timeout value must be greater than or equal to twice the active interval value.	DFS3832 issued. Active timeout value forced to twice the active interval value.
Alternate	Alternate interval value must be greater than or equal to the active interval value.	DFS3812 issued. Alternate interval value forced to active interval value.
Alternate	New timeout value must be greater than or equal to twice the alternate interval value.	DFS3832 issued. Alternate timeout value forced to twice the alternate interval value.

Additional considerations when changing the INTERVAL values are shown in the following table. Listed in the table are the INTERVAL value requirements for certain systems where the command is entered and the action taken for exceptions.

Table 81. Changing the INTERVAL value

System the command is entered on	Requirement	Action taken for exceptions
Active	Twice the new interval value must be less than or equal to the active timeout value.	DFS3832 issued. Active timeout value forced to twice the new interval value.
Alternate	Alternate interval value must be greater than or equal to the active interval value.	DFS3812 issued. Alternate interval value forced to active interval value.
Alternate	New alternate interval value must be greater than or equal to the alternate LOG interval value (LNK and RDS).	DFS3833 issued. Alternate interval value forced to alternate log interval value.
Alternate	New alternate interval value must be less than or equal to the alternate RDS and LNK interval value (LOG only).	DFS3833 issued. Alternate interval value forced to alternate RDS then LNK interval value.
Alternate	Twice the new interval value must be less than or equal to the alternate timeout value.	DFS3832 issued. Alternate timeout value forced to twice the new interval value.

Examples

This set of commands illustrates how surveillance can be modified by the /CHANGE command.

Entry ET (Alternate system):

/DISPLAY HSB

Response ET (Alternate system):

```

RSENAME      STATUS  PHASE  IMS-ID  VTAM UVAR  ACT-ID  LOG-TIME
DFSRSNM      BACKUP  TRK    IMSB    USERVAR  IMSA    10:35:17
              BACKUP SYSTEM
SURVEILLANCE  INTERVAL TIMEOUT STATUS  INTERVAL TIMEOUT STATUS
LOG           2        99  INACTIVE      2        99  INACTIVE
LNK           4        99  INACTIVE      4        99  INACTIVE
RDS           3        99  INACTIVE      3        99  INACTIVE
TAKEOVER CONDITIONS - ALARM AUTO
RDS LINK LOG          *RDS LINK
VTAM                  *IRLM
*91226/103517*

```

Entry ET (Alternate system):

/CHANGE SURV LNK INTERVAL 3 (EOM)

Response ET (Alternate system):

```

DFS058I CHANGE COMMAND COMPLETED
DFS3812I BACKUP LNK INTERVAL VALUE OF 3 HAS BEEN FORCED TO ACTIVE VALUE OF 4
DFS3811I LNK SURVEILLANCE INACTIVE: INTERVAL VALUE CHANGED FROM 4 TO 4

```

Explanation: An attempt to change the interval value was made by entering /CHANGE on the alternate system. The new alternate interval value was not greater than or equal to the active interval value, so IMS forced the interval to the active value and issued asynchronous message DFS3812. Asynchronous message

DFS3811 indicates the status of the change that follows the above action by IMS.

/CHANGE TRAN command

Use the /CHANGE TRAN command with the MAXRGN keyword to change the maximum number of regions that can be simultaneously scheduled for a given transaction.

Subsections:

- “Environment”
- “Syntax”
- “Keywords”
- “Examples”

Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 82. Valid environments for the /CHANGE TRAN command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/CHANGE	X	X	X
MAXRGN	X		X
TRAN	X		X

Syntax

►► `/CHANGE` `TRAN` `trannname` `MAXRGN` `#regions` ►►
 `/CHA`

Keywords

The following keywords are valid for the /CHANGE TRAN command:

MAXRGN

Specifies the maximum number of regions that can be simultaneously scheduled for a given transaction.

The transaction must be eligible for parallel scheduling (load balancing). For static transactions, the MAXRGN parameter (*#regions*) is initially set by system definition using the TRANSACT macro statement. For CPI Communications driven transactions, the initial value is obtained from the TP profile. The value of *#regions* must be between 0 and the number specified on the *MAXPST=region* parameter.

Examples

The following commands illustrate how to change the maximum number of regions that can be simultaneously scheduled for a given transaction.

Entry ET:

`/DISPLAY TRAN SKS7`

Response ET:

```
TRAN  CLS  ENQCT  QCT  LCT  PLCT  CP  NP  LP  SEGSZ  SEGNO  PARLM  RC
SKS7      7      0      0 65535 65535  8  8  8      0      0      1  0
PSBNAME: DFSDDL7
STATUS: BAL( 2)
*90226/134816*
```

Explanation: The status of transaction SKS7 indicates it is eligible for load balancing (BAL) and that two regions can be simultaneously scheduled.

Entry ET:

```
/CHANGE TRANSACTION SKS7 MAXRGN 4 (EOM)
```

Response ET:

```
DFS058I CHANGE COMMAND COMPLETED
```

Entry ET:

```
/DISPLAY TRAN SKS7
```

Response ET:

```
TRAN  CLS  ENQCT  QCT  LCT  PLCT  CP  NP  LP  SEGSZ  SEGNO  PARLM  RC
SKS7      7      0      0 65535 65535  8  8  8      0      0      1  0
PSBNAME: DFSDDL7
STATUS: BAL( 4)
*90226/134845*
```

Explanation: The maximum number of regions that can be simultaneously scheduled for transaction SKS7 has been changed from 2 to 4.

/CHANGE UOR command

Use the /CHANGE UOR command to specify that IMS should resolve units of recovery (UORs) for protected resources on the z/OS Resource Recovery Services (RRS) platform.

Recommendation: Use the /CHANGE UOR command only when you are certain that no other resource managers would be adversely affected after IMS resolves the UOR.

Subsections:

- “Environment”
- “Syntax” on page 143
- “Keywords” on page 143
- “Examples” on page 143

Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 83. Valid environments for the /CHANGE UOR command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/CHANGE	X	X	X
ABORT	X	X	

Table 83. Valid environments for the /CHANGE UOR command and keywords (continued)

Command / Keywords	DB/DC	DBCTL	DCCTL
COMMIT	X	X	
UOR	X	X	

Syntax



Keywords

The following keywords are valid for the /CHANGE UOR command:

prtkn

- | Specifies the pseudorecovery token that designates the UOW to be committed.
- | Use the /DISPLAY UOR command to obtain the pseudorecovery token (*prtkn*).
- | If you specify ALL, the /CHANGE UOR command affects all units of recovery.

ABORT

Specifies that IMS back out changes for the protected resources.

COMMIT

Specifies that IMS make changes permanent for the protected resources.

Examples

The following commands illustrate the changing of a unit of recovery.

Entry ET:

```
/CHANGE UOR 010040 ABORT
```

Response ET:

```
DFS058I CHANGE COMMAND COMPLETED
DFS0699I RESYNC ABORT COMPLETE FOR PSB STLDLTL1, PRTKN=00010040,
        TOKEN IMS2 0000000100000000 IMS2
*97226/134816*
```

Explanation: IMS backs out changes for pseudorecovery token 010040.

Entry ET:

```
/CHANGE UOR 010040 COMMIT
```

Response ET:

```
DFS058I CHANGE COMMAND COMPLETED
DFS0699I RESYNC COMMIT COMPLETE FOR PSB STLDLTL1, PRTKN=00010040,
        TOKEN IMS2 0000000100000000 IMS2
*97226/134816*
```

Explanation: IMS makes changes for pseudorecovery token 010040 permanent.

/CHANGE USER command

Use the /CHANGE USER command to specify that an ETO user will change. The user parameter cannot be generic.

Subsections:

- “Environment”
- “Syntax”
- “Keywords”

Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 84. Valid environments for the /CHANGE USER command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/CHANGE	X	X	X
AUTOLOGON	X		X
ID	X		X
LOGOND	X		X
MODE	X		X
NOSAVE	X		X
SAVE	X		X
USER	X		X

Syntax



C:



Keywords

The following keywords are valid for the /CHANGE USER command:

AUTOLOGON

Specifies that the autologon information previously specified by a user descriptor, the Destination Creation exit routine (DFSINSX0), or the signon exit routine (DFSSGNX0) is being updated dynamically.

nodename

Specifies the autologon terminal session for the specified user. Omitting the nodename clears all autologon information.

MODE

Specifies the VTAM mode table entry name.

LOGOND

Specifies the logon descriptor used to build the terminal control blocks.

ID Specifies the ISC partner's half-session qualifier (if the terminal is ISC).

NOSAVE

Indicates that the changed autologon information should not be retained. Deletion of the user occurs when an IMS checkpoint is taken, at session termination, IMS restart, or XRF takeover. If SAVE and NOSAVE are omitted, IMS uses the system-wide default as specified in the DFSDCxxx PROCLIB member.

SAVE

Indicates that the changed autologon information should be retained. This keyword prevents deletion of the user and remains in effect across a restart or XRF takeover until another /CHANGE command with the NOSAVE option is issued. If SAVE and NOSAVE are omitted, IMS uses the system-wide default as specified in the DFSDCxxx PROCLIB member.

If global resource information is kept in Resource Manager, the change is applied globally when the SAVE keyword is specified. If SAVE is not specified in this environment, the command is rejected.

Chapter 13. /CHECKPOINT command

The /CHECKPOINT command records control and status information about the system log.

Subsections:

- “Environment”
- “Syntax”
- “Keywords” on page 148
- “Usage notes” on page 150
- “Examples” on page 151

Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 85. Valid environments for the /CHECKPOINT command and keywords

Command / Keyword	DB/DC	DBCTL	DCCTL
/CHECKPOINT	X	X	X
ABDUMP	X	X	X
DUMPQ	X		X
FREEZE	X	X	X
LEAVEGR	X		X
LEAVEPLEX	X	X	X
NOCQSSHUT	X		X
PURGE	X	X	X
QUIESCE	X		X
SNAPQ	X		X
STATISTICS	X	X	X

Syntax

Shutdown checkpoint

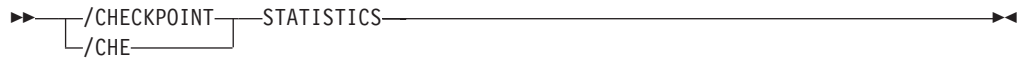


Attention: This command shuts down your IMS system. Be sure that you understand the consequences of shutting down the system before you issue this command.

Simple checkpoint



Statistics checkpoint



Keywords

The following keywords are valid for the `/CHECKPOINT` command:

(blank)

Requests a simple checkpoint. Simple checkpoints are also invoked by IMS based on the number of entries to the system log. The number of log entries between simple checkpoints is specified during system definition. In an ETO environment, any dynamic nodes, LTERMs or users with no messages queued or status are deleted.

ABDUMP

Requests an abnormal termination dump of the IMS control region in addition to the shutdown option selected.

In a DBCTL environment, when `/CHECKPOINT FREEZE ABDUMP` is entered, all of the DBCTL address spaces are dumped.

FREEZE | DUMPQ | PURGE

Requests a shutdown of IMS. These variations of shutdown are provided for control over the method of stopping programs and lines, and to control the method of disposing of queues. The effects of these variations are shown in Table 86 on page 149. The request for a checkpoint shutdown might not be responded to immediately if any dependent regions are active. IMS will wait until these regions complete their current processing before continuing with the checkpoint shutdown. Message resynchronization for a specified transaction pipe does not affect IMS shutdown.

Restriction: A shutdown checkpoint is not allowed in a shared-queues environment if the CQS is not available.

Connections to external subsystems (not CCTL subsystems) will be quiesced. Connection attempts originating from dependent regions will be prohibited. After all dependent region connections have terminated, the control region will terminate its connection.

The `FREEZE` keyword shuts down IMS pending actions shown in Table 86 on page 149. For DBCTL, active CCTL threads are allowed to complete before this keyword takes effect. This is also true when `ABDUMP` is used with this keyword. In the DBCTL environment, a `/CHECKPOINT` command with the `PURGE` keyword will be processed as though the `FREEZE` keyword was used instead of `PURGE`. `/CHECKPOINT FREEZE` in the DBCTL environment is correct because there are no message queues to empty.

The `DUMPQ` and `SNAPQ` keywords designate starting points from which the message queue data sets can be rebuilt. However, the `SNAPQ` option dumps the message queues online while IMS is running without causing a shutdown of IMS.

The PURGE keyword attempts to empty all the queues so that no outstanding work remains. For DBCTL, IMS performs FREEZE processing because there are no message queues.

In a DBCTL environment, when /CHECKPOINT FREEZE ABDUMP is entered, all of the DBCTL address spaces are dumped.

In a shared-queues environment, the DUMPQ and PURGE keywords cause IMS to shut down (as if you entered a /CHECKPOINT FREEZE command), but the message queues are not dumped or purged because the local IMS subsystem has no local queues. To dump the shared message queues when CQS terminates, use the /CQSET command before issuing the IMS shutdown checkpoint command.

The following table displays when to issue one of the three IMS shutdown options (FREEZE, DUMPQ, and PURGE) and the effect on the IMS resource.

Table 86. IMS shutdown options and their effect on IMS resources

Resource status	FREEZE keyword	DUMPQ keyword	PURGE keyword
Message processing regions stopped	At program completion	At program completion	When transaction queues are empty
Batch message processing regions stopped	At checkpoint, SYNC call, or program completion	At checkpoint, SYNC call, or program completion	At program completion
Line input stopped	At message completion	At message completion	At message completion
Line output stopped	At message completion	At message completion	When all messages complete
Transaction and message queues	Retained in queue data sets	Dumped to system log	Emptied normally
Message-driven regions stopped	At message completion	At program completion	When transaction queues are empty
Fast Path output messages queued	Dumped to system log	Dumped to system log	Emptied normally
Fast Path input messages queued	Discarded	Emptied normally	Emptied normally
Fast Path DEDB online utility region	At program completion	At program completion	At program completion
Fast Path DEDBs	Closed	Closed	Closed
MSDBs	Dumped to MSDB checkpoint data set	Dumped to MSDB checkpoint data set	Dumped to MSDB checkpoint data set
CCTL Regions	See DRA thread statistics (System Programming APIs) for a discussion of DRA threads.		

LEAVEGR

Deletes all affinities from the VTAM affinity table for the IMS subsystem on which this command is issued. Using this keyword removes the IMS subsystem from the generic resource group.

Recommendation: Cold start the DC component of an IMS subsystem that has been shut down with the LEAVEGR keyword to ensure that all affinities in IMS control blocks are also deleted. The IMS subsystem rejoins the generic resource group during startup.

If the VTAM ACB is closed (usually because of a /STOP DC command), a shutdown checkpoint command with the LEAVEGR keyword is rejected.

LEAVEPLEX

In an IMSplex, this keyword is specified if the IMS that is being shut down is not going to rejoin the IMSplex. Specify the LEAVEPLEX keyword when you do not intend to bring the IMS back up in the IMSplex.

If LEAVEPLEX is specified, and the IMS is a member of an IMSplex with global online change enabled, an attempt is made to remove the IMS ID from the OLCSTAT data set. If there is any error in removing the IMS ID from the OLCSTAT, message, DFS3443, DFS3444, or DFS3448 is written out to the system console and the IMS is shut down. In this case, the IMS ID might still be in the OLCSTAT data set and will have to be deleted by using the DFSUOLC utility.

NOCSSHUT

Is used with the /CHE DUMPQ, /CHE FREEZE, or /CHE PURGE commands to not shut down the CQS address space when the IMS control region terminates. The CQS address space remains active and connected to the message queue structures. NOCSSHUT is only applicable when IMS is running in a shared-queues environment. The default is to shut down the CQS address space when the IMS control region terminates.

QUIESCE

Halts processing of all VTAM terminals. When QUIESCE is specified, IMS sends the VTAM shutdown indicator to all VTAM terminals and waits until these nodes have completed processing before performing the normal checkpoint shutdown. During the processing of a quiesce shutdown, the master terminal operator might want to terminate the VTAM network without waiting for the orderly termination to complete. This can be done by entering the /CHECKPOINT command again, either with FREEZE, DUMPQ, or PURGE but without QUIESCE.

SNAPQ

Requests a simple checkpoint and dumps the contents of the message queues to the system log.

In a shared-queues environment, /CHECKPOINT SNAPQ does not snap the queues because the local IMS subsystem has no local queues. Use the /CQCHKPT command to initiate a CQS structure checkpoint.

In an XRF environment, /CHECKPOINT SNAPQ synchronizes the active and alternate IMS subsystems.

STATISTICS

Requests that IMS performance records be created and written to the system log. No other checkpoint processing occurs.

The /CHECKPOINT STATISTICS command does not create a system checkpoint on the log.

Usage notes

The /CHECKPOINT command can be used to take a simple checkpoint of IMS, with the option of also dumping the contents of the message queue data sets to the system log or to shut down IMS normally. When IMS is shut down by the /CHECKPOINT command, it can be restarted with the /NRESTART command.

This command can be issued to an IMSplex using the Batch SPOC utility.

There are two conditions under which IMS cannot complete a shutdown normally. The most frequent is when there are multiple-page messages on a master terminal non-VTAM line, paging is not complete, and the master terminal is sharing a communication line with other physical terminals. It might be necessary to use the /ASSIGN command to reassign the master terminal to a line by itself so that the /IDLE command can be issued to terminate the multiple page output. If the master terminal cannot be reassigned to another line, assign it to the system console line.

The second condition occurs when a number of system messages generated by IMS are awaiting delivery to the master terminal. All system messages destined for the master terminal will be delivered, because they can affect the way the system is restarted. The master terminal operator should acknowledge delivery of a message by causing an I/O interrupt; that is, pressing PA2, which in turn causes another message to be sent, if one exists. Another option is to assign the master terminal to the system console.

When the /CHECKPOINT command is used to shut down IMS, the /BROADCAST command can be helpful in notifying the remote terminal operators that IMS is shutting down.

If OTMA is active and a tpipe is idle for three consecutive system checkpoints, depending on certain eligibility requirements, the tpipe is removed.

Examples

The following are examples of the /CHECKPOINT command:

Example 1 for /CHECKPOINT command

Entry ET:

```
/CHECKPOINT
```

Response ET:

```
DFS058I (time stamp) CHECKPOINT COMMAND IN PROGRESS
DFS994I *CHKPT 82102/110247**SIMPLE*
```

Explanation: A simple checkpoint of IMS is written to the system log at 110247 (time) on 82102 (Julian date). The checkpoint number is 82102/110247.

Example 2 for /CHECKPOINT command

Entry ET:

```
/CHECKPOINT FREEZE
```

Response ET:

```
DFS058I (time stamp) CHECKPOINT COMMAND IN PROGRESS
DFS994I *CHKPT 82206/120118**FREEZE*
```

Explanation: IMS is terminated after all checkpoint freeze functions are completed. The checkpoint is written to the system log at 120118 (time) on 82206 (Julian date). The checkpoint number is 82206/120118.

Example 3 for /CHECKPOINT command

Entry ET:

/CHECKPOINT FREEZE QUIESCE

Response ET:

```
DFS058I (time stamp) CHECKPOINT COMMAND IN PROGRESS
DFS994I *CHKPT 82102/110247**FREEZE*
```

Explanation: IMS is terminated after all VTAM nodes have returned a shutdown-complete indicator to IMS and IMS has completed all checkpoint freeze functions. The checkpoint is written to the system log at 110247 (time) on 82102 (Julian date). The checkpoint number is 82102/110247.

Example 4 for /CHECKPOINT command

Entry ET:

/CHECKPOINT PURGE ABDUMP

Response ET:

```
DFS058I (time stamp) CHECKPOINT COMMAND IN PROGRESS
DFS994I *CHKPT 82128/101112**PURGE*
```

Explanation: IMS is terminated after all checkpoint purge functions are completed. The checkpoint is written to the system log at 101112 (time) on 82128 (Julian date). The checkpoint number is 82128/101112.

A z/OS ABEND message is issued when the dump of the IMS control region is completed.

Example 5 for /CHECKPOINT command

Entry ET:

/CHECKPOINT PURGE

Response ET:

```
DFS058I (time stamp) CHECKPOINT COMMAND IN PROGRESS
DFS994I *CHKPT 82103/131415**PURGE*
```

Explanation: IMS is terminated after all checkpoint purge functions are completed. The checkpoint is written to the system log at 131415 (time) on 82103 (Julian date). The checkpoint number is 82103/131415.

Example 6 for /CHECKPOINT command

Entry ET:

/CHECKPOINT STATISTICS

Response ET:

```
/DFS058I (timestamp) CHECKPOINT COMMAND IN PROGRESS
/DFS994I STATISTICS CHECKPOINT COMMAND COMPLETED
```

Explanation: IMS performance statistics records are written to the system log. No other information is saved. This checkpoint cannot be used for a system restart.

Chapter 14. /CLSDST command

The /CLSDST command causes IMS to disconnect a VTAM terminal.

Subsections:

- “Environment”
- “Syntax”
- “Keywords”
- “Usage notes” on page 154
- “Example” on page 155

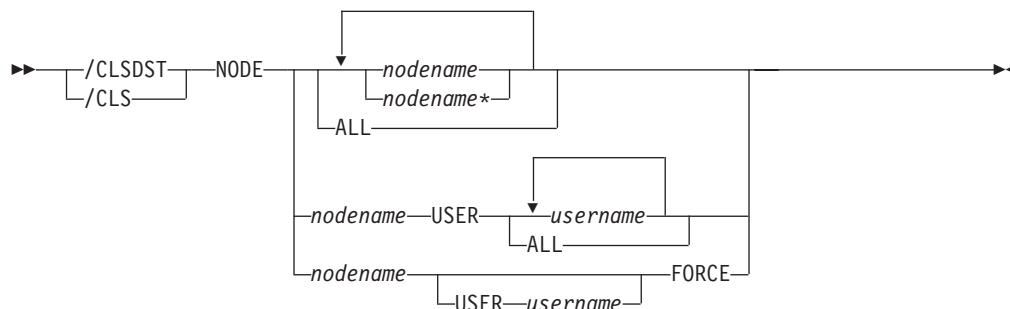
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 87. Valid environments for the /CLSDST command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/CLSDST	X		X
FORCE	X		X
NODE	X		X
USER	X		X

Syntax



Keywords

The following keywords are valid for the /CLSDST command:

FORCE

Allows IMS to reinitialize a hung node with I/O in progress. FORCE reinitializes one session and is valid only on an active IMS system. To activate FORCE on VTAM nodes, use the command /CLSDST NODE P1 FORCE.

For ISC VTAM nodes with parallel sessions, the USER keyword must be specified and only one USER parameter is allowed.

FORCE operates under the following conditions:

- A display from VTAM indicates that no session exists. If a session does exist, or is in process, you must issue the VTAM command VARY NET,INACT,FORCE to terminate the session, and the command must successfully complete. This command terminates all parallel sessions.

Attention: If VARY NET,INACT,FORCE is not issued or does not successfully complete before you issue the FORCE command, and the terminal is in the process of creation or termination, the results might be unpredictable.

- The session is connected to IMS and output is in progress. A /DISPLAY on the node indicates that a CID exists, that the node is connected (a status of CON is displayed), and that the node is not idle (a status of IDLE is not displayed).

NODE

Specifies the node to be disconnected by IMS. The specified node must be connected before a command is issued to disconnect it, as indicated by CON on the /DISPLAY NODE command referring to that terminal.

If the USER keyword is omitted for ISC nodes, all half-sessions of a session type 6 node are terminated. If the USER keyword is omitted, generic parameters are allowed for the NODE keyword.

The timing of the disconnection depends on the type of terminal:

- For keyboards or printers, console components and interactive terminals, the disconnection occurs at the next message boundary.
- For component types that group messages (such as a SLU 1 statement reader, printer, or disk), the disconnection occurs at the end of any group where processing is in progress.
- For 3270 displays, the disconnection occurs at the completion of the current (if any) I/O operation.

USER

Must be specified with the NODE keyword. NODE USER specifies the ISC user allocated to the ISC node or the dynamic user signed on to the dynamic node. When a /CLSDST NODE nodename USER username command is issued, it only affects the NODE if the USER is still associated with the node.

For non-ISC dynamic nodes, this command is valid only if the user is still signed on to the node. For ISC nodes, the half-sessions of the ISC node allocated to the specific users are terminated and the users are not deallocated from the session. On restart, the /OPNDST command must specify the same users and ID pairs.

Restrictions for using NODE and USER parameters together:

- Commands with the NODE USER keyword pair are valid only if:
 - The USER is signed on to the NODE
 - In an ISC environment, the USER is allocated to the NODE
 - The nodes and users already exist
- /CLSDST NODE USER commands are valid for ISC and non-ISC nodes and users.

Usage notes

/CLSDST resets preset mode, test mode, lock node, lock LTERM, pstop LTERM, and purge LTERM, because these statuses are not significant and therefore are not kept after a logon or restart.

This command can be issued to an IMSplex using the Batch SPOC utility.

The /CLSDST command will also do some other cleanup depending on the recovery settings for the node. Below are the actions taken:

RCVYSTSN=NO

/CLSDST acts like a /CHANGE NODE COLDSESS command for FINANCE and SLUP nodes by setting the session status to "cold".
/CLSDST will act like a /QUIESCE NODE command for ISC (LU6.1) nodes by initiating the shutdown and deallocating the user for the specified node. This action changes the session status to cold. With these actions taken by the /CLSDST command, the next session initiation request for this node will be allowed to again attempt a session cold start. For ETO nodes, the control block structure could be deleted, if no significant status exists.

RCVYCONV=NO

/CLSDST causes any IMS conversations (active and held) to be terminated. Any conversational message that is queued or being processed will have its output response message delivered asynchronously.

RCVYFP=NO

/CLSDST causes Fast Path status and messages to be discarded.

RCVYRESP=NO

/CLSDST resets full-function response mode.

If global resource information is not kept in Resource Manager (RM), /CLSDST logs a node off and resets status locally. If global resource information is kept in RM, /CLSDST resets status globally. If the node has no significant status, /CLSDST deletes the node in RM.

If ROUTE is specified, it should be specified with ROUTE(*). The command fails if not routed to the IMS where the node is active.

Example

Entry ET:

```
/CLSDST NODE WEST
```

Response ET:

```
DFS058I CLSDST COMMAND COMPLETED
```

Explanation: The node, WEST, is disconnected from IMS.

Chapter 15. /COMPT command

The /COMPT command sets a particular terminal component to a ready or not-ready state.

Output messages queued for a particular component will not be sent unless the component is ready. Depending on terminal type and the availability of messages queued for other components, output operations for other components can continue.

Subsections:

- “Environment”
- “Syntax” on page 158
- “Keywords” on page 158
- “Usage notes” on page 159
- “Examples” on page 159

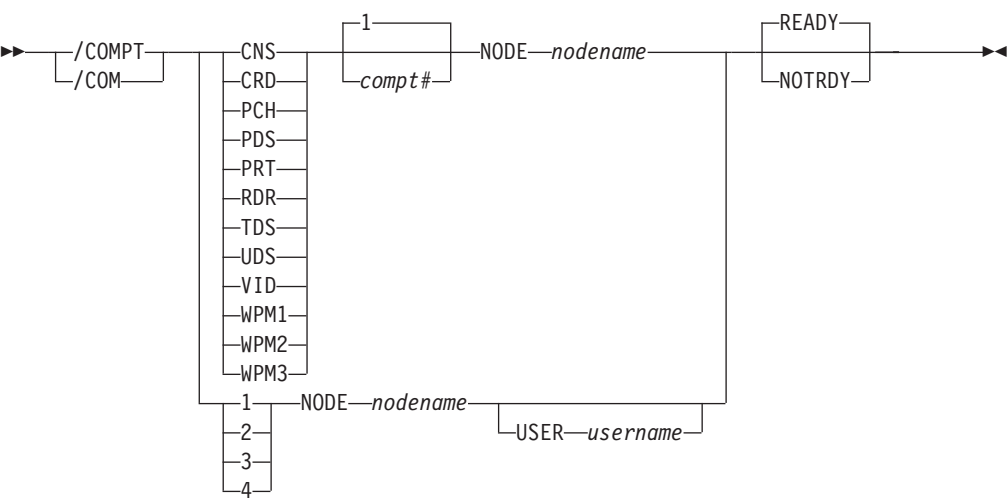
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 88. Valid environments for the /COMPT command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/COMPT	X		X
CNS	X		X
CRD	X		X
NODE	X		X
NOTRDY	X		X
PCH	X		X
PDS	X		X
PRT	X		X
RDR	X		X
READY	X		X
TDS	X		X
UDS	X		X
USER	X		X
VID	X		X
WPM1	X		X
WPM2	X		X
WPM3	X		X

Syntax



Keywords

The following keywords are valid for the /COMPT command:

CNS | CRD | PCH | PDS | PRT | RDR | TDS | UDS | VID | WPM1 | WPM2 | WPM3 |
1 | 2 | 3 | 4

Specifies the component that you want to set to a ready or not-ready state.

The command format can take two forms. That is, a component can be referenced by using a keyword, such as VID, or by using a number, such as 2.

When a keyword is used, a search is made of the components (as defined in the TERMINAL macro during IMS system definition) for the component type defined that corresponds to the specified keyword.

When a match is found, that component is made ready/not ready as specified by the command. If a number other than 1 follows the keyword, the corresponding occurrence of that component type is made ready/not ready.

/COMPT supports up to four components. When a number from 1 through 4 is used instead of a keyword, the component affected is the one defined in that position during system definition, independent of component type.

Restriction: When the /COMPT command contains the keyword CRD, it cannot also contain any of the following keywords: WPM1, WPM2, or WPM3.

READY

Sets the specified terminal component to a ready state.

NOTRDY

Sets the specified terminal component to a not-ready state.

NODE

Specifies the node name (as specified by the TERMINAL macro) of the terminal component that is to be set in ready or not-ready state.

USER

Specifies the ISC subpool name of the *nodename*. The USER keyword is required if the node specified on the command is an ISC node.

Usage notes

The ready or not-ready state set by the /COMPT command can be altered by the following:

- Another /COMPT command
- A /START, /RSTART, or /RCOMPT command
- An I/O error on the terminal component

The /COMPT command can only refer to a VTAM-attached terminal component.

Restrictions for using NODE and USER parameters together:

- Commands with the NODE USER keyword pair are valid only if:
 - The USER is signed on to the NODE
 - In an ISC environment, the USER is allocated to the NODE
 - The nodes and users already exist
- /COMPT (1|2|3|4) NODE USER (READY/NOTRDY) commands are valid for ISC and non-ISC nodes and users.

Examples

The following are examples of the /COMPT command:

Example 1 for /COMPT command

Entry ET:

```
/COMPT 4 NODE ABC READY
```

Response ET:

```
DFS058I  COMPT COMMAND COMPLETED
```

Explanation: The fourth component defined in the TERMINAL macro on node ABC is made ready to IMS.

Example 2 for /COMPT command

Entry ET:

```
/COMPT VID 2 NODE ABC READY
```

Response ET:

```
DFS058I  COMPT COMMAND COMPLETED
```

Explanation: The second display component on node ABC is declared operable to IMS.

Related reference:

Chapter 9, “/ASSIGN command,” on page 95

Chapter 16. /CQCHKPT command

The /CQCHKPT command initiates a CQS checkpoint for a specific coupling facility list structure or all the coupling facility list structures to which the IMS subsystem is connected.

Subsections:

- “Environment”
- “Syntax”
- “Keywords”
- “Usage notes” on page 162
- “Examples” on page 162

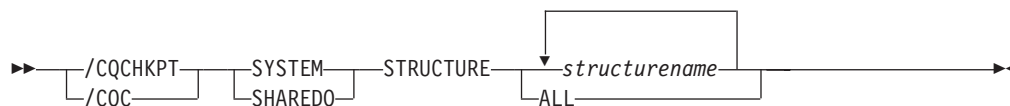
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 89. Valid environments for the /CQCHKPT command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/CQCHKPT	X		X
SHAREDQ	X		X
STRUCTURE	X		X
SYSTEM	X		X

Syntax



Keywords

The following keywords are valid for the /CQCHKPT command:

SHAREDQ

Specifies that the entire queue structure is to be checkpointed to the structure recovery data set. While the checkpoint is in progress for the structure, no CQS can access the structure.

During a structure checkpoint, every CQS connected to that structure also takes a system checkpoint.

Recommendation: When possible, issue this command when it will have the least performance impact to your online IMS subsystems.

STRUCTURE

Specifies a specific structure name (or all) for which a CQS checkpoint is to be taken. If an overflow structure exists for a structure, a checkpoint is taken for both the primary and overflow structure.

SYSTEM

Specifies that a system checkpoint is to be taken; the CQS internal tables are checkpointed and written to the CQS log. Only the CQS for which you enter the command takes a system checkpoint.

Usage notes

This command sends the DFS058 CQCHKPT COMMAND IN PROGRESS message to the inputting terminal, and sends an asynchronous response to the system console and master terminal when the CQS checkpoint is complete.

This command is valid only in a shared-queues environment.

This command can be issued to an IMSplex using the Batch SPOC utility.

Examples

The following are examples of the /CQCHKPT command:

Example 1 for /CQCHKPT command

Entry ET:

```
/CQCHKPT SYSTEM STRUCTURE IMSMSGQ01
```

Response ET:

```
DFS058I CQCHKPT COMMAND IN PROGRESS
CQS0030I SYSTEM CHECKPOINT COMPLETE, STRUCTURE IMSMSGQ01      ,
LOGTOKEN 0000000001687D3F CQS1CQS
DFS1972I CQCHKPT SYSTEM  COMMAND COMPLETE FOR STRUCTURE=IMSMSGQ01
```

Explanation: A CQS system checkpoint completes successfully.

Recommendation: Record the log token displayed in the CQS0030I message because you might need it for a CQS restart.

Example 2 for /CQCHKPT command

Entry ET:

```
/CQCHKPT SHAREDQ STRUCTURE IMSMSGQ01
```

Response ET:

```
DFS058I CQCHKPT COMMAND IN PROGRESS
CQS0220I CQS CQS1CQS  STARTED STRUCTURE CHECKPOINT FOR
STRUCTURE IMSMSGQ01      CQS1CQS
CQS0200I STRUCTURE IMSMSGQ01      QUIESCED FOR
STRUCTURE CHECKPOINT CQS1CQS
CQS0201I STRUCTURE IMSMSGQ01      RESUMED AFTER
STRUCTURE CHECKPOINT CQS1CQS
CQS0030I SYSTEM CHECKPOINT COMPLETE, STRUCTURE IMSMSGQ01      ,
LOGTOKEN 0000000001688652 CQS1CQS
CQS0221I CQS CQS1CQS  COMPLETED STRUCTURE CHECKPOINT
FOR STRUCTURE IMSMSGQ01      CQS1CQS
DFS1972I CQCHKPT SHAREDQ COMMAND COMPLETE FOR STRUCTURE=IMSMSGQ01
```

Explanation: A CQS structure checkpoint for a specific structure completes successfully.

Chapter 17. /CQQUERY command

The /CQQUERY command displays information regarding a specific coupling facility list structure or all the coupling facility list structures holding IMS messages.

The /CQQUERY STATISTICS command displays the statistics and status information for the coupling facility list structures specified by the STRUCTURE keyword.

Subsections:

- “Environment”
- “Syntax”
- “Keywords”
- “Usage notes” on page 164
- “Examples” on page 164

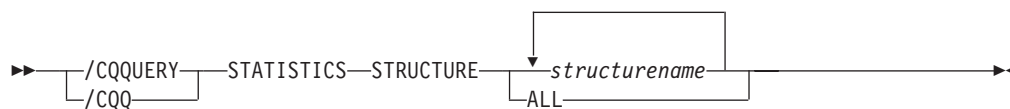
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 90. Valid environments for the /CQQUERY command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/CQQUERY	X		X
STATISTICS	X		X
STRUCTURE	X		X

Syntax



Keywords

The following keywords are valid for the /CQQUERY command:

STATISTICS

Specifies that statistics should be gathered and displayed.

STRUCTURE

Specifies that one or more structure names follow.

Only primary, coupling facility list-structure names used by IMS for shared queues are valid.

Usage notes

This command is valid only in a shared-queues environment.

The following statistics information is displayed:

- Number of data elements that can be allocated in the structure
- Number of list entries that can be allocated in the structure
- Number of data elements in use in the structure
- Number of list entries in use in the structure
- Entry-to-element ratio

The entry-to-element ratio is the ratio of list entries to list elements in the structure when the structure was first allocated, or last altered (for structures defined with ALLOWAUTOALT(YES)). The ratio value is initially derived by CQS from the OBJAVGSZ parameter in the CQSSGxxx PROCLIB member. The ratio can be changed by z/OS dynamically as needed for ALLOWAUTOALT(YES) structures. The ratio might also change slightly when a structure is rebuilt, because CQS uses the saved values of the actual number of allocated entries and elements to derive the entry-to-element ratio for the connection to a rebuild structure.

In an IMSplex, /CQQUERY displays information regarding a specific shared queue coupling facility list structure or all the shared queue coupling facility list structures holding IMS messages. /CQQUERY does not display any information about resource structures.

When the /CQQ command is issued through OM, command processing is not serialized through the IMS CTL TCB.

This command can be issued to an IMSplex by using the Batch SPOC utility.

Examples

The following are examples of the /CQQUERY command:

Example 1 for /CQQUERY command

Entry ET:

```
/CQQUERY STATISTICS STRUCTURE ALL
```

Response ET:

STRUCTURE NAME	LEALLOC	LEINUSE	ELMALLOC	ELMINUSE	LE/EL
IMSMGQ01	1789	11	1787	19	00001/00001
IMSMGQ010FLW	N/A	N/A	N/A	N/A	N/A
IMSEMHQ01	377	3	375	3	00001/00001
IMSEMHQ010FLW	N/A	N/A	N/A	N/A	N/A

08282/211714

Explanation: This command displays the structure statistics of the message queue and Fast Path EMH queue structures used by IMS. The list entries allocated (LEALLOC), the list entries in use (LEINUSE), the elements allocated (ELMALLOC) and the elements in use (ELMINUSE) show the usage of the structures. When CQS allocates a structure, it allocates a certain number of list entries and elements to manage data on the structure. A structure is full if all list entries are in use or if all elements are in use.

Example 2 for /CQQUERY command

Entry ET:

```
/CQQ STATISTICS STRUCTURE IMSMSGQ01
```

Response ET:

STRUCTURE NAME	LEALLOC	LEINUSE	ELMALLOC	ELMINUSE	LE/EL
IMSMSG101	9132	9027	9130	9071	00001/00001
IMSMSGQ010FLW	1915	1866	1912	1866	00001/00001

08282/211714

Explanation: This command displays the structure statistics of the message queue structure used by IMS and its associated overflow queue.

Related concepts:

 Using structure alter for CQS (System Administration)

Related reference:

 CQSSGxxx member of the IMS PROCLIB data set (System Definition)

Chapter 18. /CQSET command

Use a /CQSET SHUTDOWN SHAREDQ ON|OFF command to tell CQS whether to take a structure checkpoint during normal shutdown.

You can specify a structure checkpoint for a specific coupling facility or for all coupling facility list structures used by IMS.

Subsections:

- “Environment”
- “Syntax”
- “Keywords”
- “Usage notes” on page 168
- “Example” on page 168

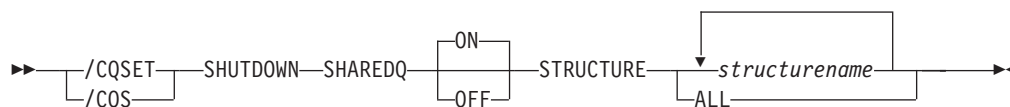
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 91. Valid environments for the /CQSET command and keywords

Command / Keyword	DB/DC	DBCTL	DCCTL
/CQSET	X		X
SHAREDQ	X		X
SHUTDOWN	X		X
STRUCTURE	X		X

Syntax



Keywords

The following keywords are valid for the /CQSET command:

SHAREDQ

Specifies that the entire queue structure is to be checkpointed to the structure recovery data set. While the checkpoint is in progress for the structure, no CQS can access the structure.

During a structure checkpoint, every CQS connected to that structure also takes a system checkpoint.

SHUTDOWN

Specifies that CQS should take a structure checkpoint during normal CQS shutdown.

STRUCTURE

Specifies a specific structure name (or all) for which a CQS checkpoint is to be taken. If an overflow structure exists for a structure, a checkpoint is taken for both the primary and overflow structure.

Usage notes

IMS initiates a normal CQS shutdown during a normal IMS shutdown.

This command is valid only in a shared-queues environment.

In an IMSplex, when the /CQS command is issued through OM command processing, it is not serialized through the IMS CTL TCB.

This command can be issued to an IMSplex using the Batch SPOC utility.

Example

Entry ET:

```
/CQSET SHUTDOWN SHAREDQ ON STRUCTURE ALL
```

Response ET:

```
DFS058I  CQSET COMMAND COMPLETE
```

Explanation: CQS will take a structure checkpoint when it shuts down.

Chapter 19. CREATE commands

Use the IMS CREATE commands to create resources and resource descriptors.

These commands can be issued through TSO SPOC or the Manage Resources options in the IMS Applications menu. These commands can also be issued to an IMSplex by using the Batch SPOC utility.

Subsections:

- “CREATE DB command”
- “CREATE DBDESC command” on page 177
- “CREATE OTMADESC command” on page 183
- “CREATE PGM command” on page 188
- “CREATE PGMDESC command” on page 199
- “CREATE RTC command” on page 208
- “CREATE RTCDESC command” on page 214
- “CREATE TRAN command” on page 219
- “CREATE TRANDESC command” on page 243

CREATE DB command

Use the CREATE DB command to create the database resource requirements for one or more physical databases managed by IMS.

Subsections:

- “Environment”
- “Syntax” on page 170
- “Keywords” on page 170
- “Usage notes” on page 172
- “Output fields” on page 173
- “Return, reason, and completion codes” on page 173
- “Examples” on page 175

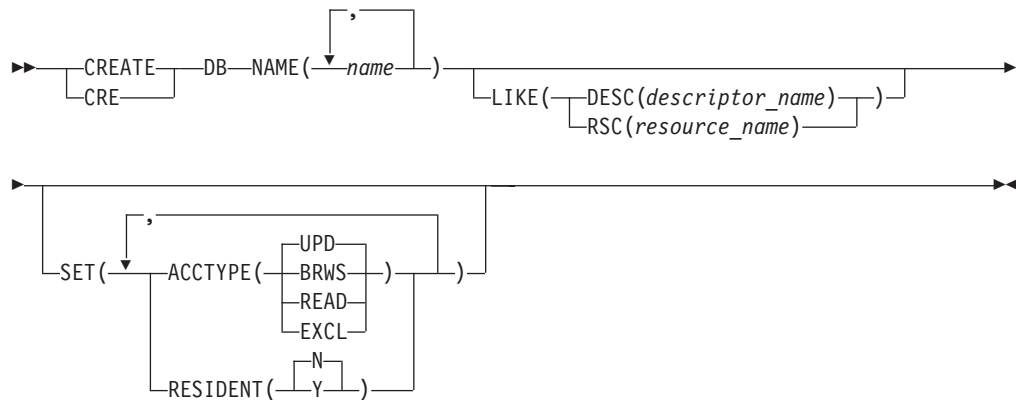
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 92. Valid environments for the CREATE DB command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
CREATE DB	X	X	
LIKE	X	X	
NAME	X	X	
SET	X	X	

Syntax



Default values shown in this syntax diagram reflect the default values that are defined in the IMS database descriptor, DFSDSDB1. If you define another descriptor as the default with a CREATE or UPDATE DBDESC command, the default values shown in this syntax diagram might not match the value defined in the current default descriptor.

Keywords

The following keywords are valid for the CREATE DB command:

LIKE

Specifies that the resource is created using an existing resource or descriptor as a model, instead of the default descriptor. The default descriptor is either the IMS descriptor DFSDSDB1, or the one that you define. The model type can either be a descriptor (DESC), or a resource (RSC). The new resource is created with all the same attributes as the model, except for the DEFAULT(Y) value. Attributes set explicitly by the CREATE command override the model attributes. Later changes to the model are not propagated to resources or descriptors that were created from it.

You can use QUERY commands to display the model name and model type used to create the resource. The model name and type returned from the QUERY command are provided for informational purposes only. The EXPORT command exports a resource definition, including the model name and model type, to the definition member. The IMPORT command imports a resource definition, including the model name and model type, from the definition member. An IMPORT command that creates a resource saves the model name and model type, but does not use the models attributes.

When you specify LIKE on a CREATE command, IMS sets the attributes of the newly created resource or descriptor to the models current attributes, except for the default attribute.

DESC(descriptor_name)

Specifies the name of the descriptor to use as a model to define this resource.

RSC(resource_name)

Specifies the name of the resource to use as a model to define this resource.

NAME

Specifies the 1-8 character name of the database (DBD name). Names must be alphanumeric (A through Z, 0 through 9, #, \$, and @). All database names must begin with an alphabetic character (A through Z, #, \$, and @) followed by 0-7 alphanumeric characters. Names cannot include a blank, comma, period, hyphen, or equal sign. Names cannot begin with DFS, except for DFSIVPxx and DFSSAMxx. Names cannot be BASICEDT, DBCDM, DBRC, ISCEDT, MSDB, SDB, or WTOR. A database resource and a database descriptor can have the same name.

SET

Specifies the attributes of the database to be created. If the LIKE keyword is omitted, attributes not specified take the value defined in the default descriptor, which is either IMS descriptor DFSDSDB1 or user-defined. If the LIKE keyword is specified, attributes not specified take the value defined in the model.

ACCTYPE()

Specifies the access intent for the named database, which is how the subsystem requesting access plans to use the database. Access type is used with the database sharing level declared to DBRC. Access types include the following options:

BRWS

The database is available for read-only processing on this IMS subsystem. The only programs that can use the database on this subsystem are those that have a PCB processing option of GO (PROCOPT=GO). Programs that access the data using the GO processing option might see uncommitted data since a sharing IMS subsystem could be updating the database. The database is opened for read-only processing.

EXCL

The database is to be used exclusively by this IMS subsystem. This exclusive access is guaranteed only when the database is registered to DBRC.

READ

The database is available for read-only processing in this IMS subsystem. Programs with update intent can be scheduled, but cannot update the database. Access type READ differs from access type BRWS in that the data is read with integrity (locking is performed) and all programs can access the data, not just those with a processing option of GO. The database is opened for read-only processing.

UPD

The database is available for update as well as read processing in the IMS subsystem. This is the default.

RESIDENT

Specifies the resident option. The RESIDENT(N) option takes effect immediately. The RESIDENT(Y) option takes effect at the next restart, unless the database was created as RESIDENT(Y) after the checkpoint from which this IMS is performing emergency restart. A database defined as a

DEDB or an MSDB in ACBLIB always sets the RESIDENT(Y) attribute, regardless of the RESIDENT value specified.

- N** The DMB associated with the named database resource is not made resident in storage. The DMB is loaded at scheduling time.
- Y** The DMB associated with the named database resource is made resident in storage at the next IMS restart. At the next IMS restart, IMS loads the DMB and initializes it. A resident database is accessed from local storage, which eliminates I/O to the ACBLIB. In an online environment, the DMB control blocks are stored in the ACBLIB. If the DLI/SAS address space exists, DLI/SAS loads the DMB; otherwise, it is the IMS control region that loads it. This makes the DMB dependent on the existence of the corresponding database resource.

Usage notes

The database can be HSAM, HISAM, HDAM, HIDAM, DEDB, MSDB, or a HALDB master database. Two database resources must be defined for a HIDAM database; one for the INDEX DBD, and one for the HIDAM DBD. No database resource should be defined for a PHIDAM primary index. One database must be defined for each secondary index that refers to any database defined to the online system. The database cannot be a HALDB partition. HALDB partitions can be defined using the HALDB Partition Definition utility.

A BLDL is performed on the DMB associated with this database. The database is created even if the DMB is not defined in ACBLIB. In this case, the database cannot be used. The database status is NOTINIT when a /DISPLAY DB or QUERY DB is issued for the database. Online Change must be used to add the DMB to ACBLIB, before the database can be used.

After a CREATE DB command for a HALDB master database, the user must issue a QUERY DB command or a /DISPLAY DB command for the HALDB master to determine if the partitions were built. If the partitions were not built, the user must issue one of the following commands to initialize the partitions:

- A /START DB *HALDB_Master* OPEN command
- An UPDATE DB NAME(*HALDB_Master*) START(ACCESS) OPTION(OPEN) command

Fast Path DEDB or MSDB-related control blocks are loaded.

If the DMB is in the ACBLIB library, IMS loads the DMB and can determine what type of database it is. IMS takes different actions depending on whether it is a full function database, a DEDB, or an MSDB.

- For full function databases, the DMB is loaded into the DMB pool. Even if the database is created with RESIDENT(Y), DMB residency does not take effect until the next IMS restart.
- For DEDBs, the DMCB (DEDB version of a DMB), is chained into the DMCB chain (all DEDB DMCBs are resident). The parameters are then checked for CI size and to see whether the DMCB contains an area that already exists. If the CI size of any AREA is larger than the CI size specified for the DBBF buffers (fast path global buffer pool), then the CREATE command fails with completion code E3. If the DMCB contains an area definition that already exists in the FPAL (Fast Path Area List), the CREATE command fails with completion code E4.
- For MSDBs, a special procedure is required to make the MSDB available. The MSDB can then be used at the next IMS restart

If the DMB is not in the ACBLIB library, then the DDIR control block is successfully created, but has an initial status of NOTINIT.

Resources exist in IMS until they are deleted using a DELETE command. Resources are recoverable across an IMS warm start or emergency restart. Resources are lost if IMS is cold started, unless cold start imports definitions that were exported while IMS was up.

The CREATE DB command is similar to local online change (using a /MODIFY command) or global online change (using an INITIATE OLC command) for database resources in the MODBLKS data set, except that databases are added dynamically.

Restrictions:

- The CREATE DB command can be issued only through the OM API.
- This command is not valid:
 - On the XRF alternate, RSR tracker, or FDBR region.
 - If online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx are defined with MODBLKS=OLC, or MODBLKS is not defined).

Output fields

The following table shows the CREATE DB output fields. The columns in the table are as follows:

Short label

Contains the short label generated in the XML output.

Keyword

Identifies keyword on the command that caused the field to be generated. N/A appears for output fields that are always returned. *error* appears for output fields that are returned only in case of an error.

Meaning

Provides a brief description of the output field.

Table 93. Output fields for the CREATE DB command

Short label	Keyword	Meaning
CC	N/A	Completion code.
CCTXT	<i>error</i>	Completion code text that briefly explains the meaning of the non-zero completion code.
DB	DB	Database name.
MBR	N/A	IMSplex member that built the output line.

Return, reason, and completion codes

The following table includes the return and reason codes and a brief explanation of the codes. The return or reason code returned for the command might also indicate an error from a CSL request.

Table 94. Return and reason codes for CREATE DB

Return code	Reason code	Meaning
X'00000000'	X'00000000'	Command completed successfully. The command output contains a line for each resource, accompanied by its completion code. See the completion code table for details.
X'00000008'	X'00002048'	Invalid SET attribute.
X'00000008'	X'00002117'	Invalid LIKE descriptor name.
X'00000008'	X'00002118'	Invalid LIKE resource name.
X'0000000C'	X'00003000'	Command was successful for some resources but failed for others. The command output contains a line for each resource, accompanied by its completion code. See the completion code table for details.
X'0000000C'	X'00003004'	Command was not successful for any of the resources. The command output contains a line for each resource, accompanied by its completion code. See the completion code table for details.
X'00000010'	X'0000400C'	Command is not valid on the XRF alternate.
X'00000010'	X'00004014'	Command is not valid on the RSR tracker.
X'00000010'	X'00004204'	Model is quiesced. Cannot quiesce the model.
X'00000010'	X'00004120'	Online change phase is in progress.
X'00000010'	X'00004300'	Command is not allowed because online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC, or MODBLKS not defined).
X'00000010'	X'00004301'	Command is not allowed because the database is defined RESIDENT(Y), the DMB indicates there is a logical relationship for the database, but the other database is not defined.
X'00000014'	X'00005004'	DFSOCMD response buffer could not be obtained.
X'00000014'	X'00005008'	DFSPPOOL storage could not be obtained.
X'00000014'	X'0000500C'	AWE could not be obtained.
X'00000014'	X'00005010'	Unable to obtain latch.

Errors unique to the processing of this command are returned as completion codes. The following table includes an explanation of the completion codes.

Table 95. Completion codes for the CREATE DB command

Completion code	Completion code text	Meaning
0		Command completed successfully for database.
11	RESOURCE ALREADY EXISTS	Database exists.
17	ANOTHER CMD IN PROGRESS	Quiescing the default descriptor failed because it was being referenced by another command.
5F	INVALID CHARACTERS IN NAME	Name is invalid because it contains an invalid character.

Table 95. Completion codes for the CREATE DB command (continued)

Completion code	Completion code text	Meaning
60	GETMAIN STORAGE ERROR	A GETMAIN request for storage was unsuccessful.
61	DFSBCB STORAGE ERROR	Request to get BCB storage for DDIR control block failed.
65	DMB POOL STORAGE ERROR	During a CREATE command for a DB resource, there was no storage available in the DMB pool to load a resident DMB.
8A	WILDCARD PARAMETER NOT SUPPORTED	The CREATE command does not support wildcard parameters. You must explicitly specify the names of the resources you want to create.
90	INTERNAL ERROR	An IMS system service failure.
93	RESERVED NAME	Name is reserved. For example, name starts with DFS (except for DFSSAMxx or DFSIVPxx), or is an IMS reserved name such as BASICEDT or WTOR.
BC	MAX 32767 DB EXCEEDED	The CREATE DB command failed, because it attempted to create the 32768th database. A maximum of 32,767 databases are allowed.
DE	ACBLIB READ FAILURE	A read request for a member in ACBLIB failed.
FA	AREA SIZE GREATER THAN BUFF SIZE	A CREATE command for a DEDB failed because one of the areas in the DEDB has a buffer size greater than the system buffer size (BSIZ).
E4	DUPLICATE AREA ALREADY EXISTS	A CREATE command for a DEDB failed because one of the areas in the DEDB already exists.

Examples

The following are examples of the CREATE DB command:

Example 1 for CREATE DB command

TSO SPOC input:

```
CREATE DB NAME(DB000001,DB000002,DB000003) SET(ACCTYPE(UPD),RESIDENT(Y))
```

TSO SPOC output:

DBName	MbrName	CC
DB000001	IMS1	0
DB000002	IMS1	0
DB000003	IMS1	0

OM API input:

```
CMD(CREATE DB NAME(DB000001,DB000002,DB000003) SET(ACCTYPE(UPD),RESIDENT(Y)))
```

OM API output:

```
<imsout>
<ctl>
<omname>OM10M </omname>
<omvsn>1.3.0</omvsn>
<xmlvsn>20 </xmlvsn>
<stime>2006.254 23:22:04.212509</stime>
<stotime>2006.254 23:22:04.267816</stotime>
<staseq>BF6461C25FD1D8C5</staseq>
<stoseq>BF6461C26D528480</stoseq>
<rqsttkn1>USRT011 10162204</rqsttkn1>
<rc>00000000</rc>
<rsn>00000000</rsn>
</ctl>
<cmd>
<master>IMS1 </master>
<userid>USRT011 </userid>
<verb>CRE </verb>
<kwd>DB </kwd>
<input>CREATE DB NAME(DB000001,DB000002,DB000003)
        SET(ACCTYPE(UPD),RESIDENT(Y)) </input>
</cmd>
<cmdrsphdr>
<hdr slbl="DB" llbl="DBName" scope="LCL" sort="a" key="1" scroll="no"
  len="8" dtype="CHAR" align="left" />
<hdr slbl="MBR" llbl="MbrName" scope="LCL" sort="a" key="2" scroll="no"
  len="8" dtype="CHAR" align="left" />
<hdr slbl="CC" llbl="CC" scope="LCL" sort="n" key="0" scroll="yes"
  len="4" dtype="INT" align="right" skipb="no" />
<hdr slbl="CCTXT" llbl="CCText" scope="LCL" sort="n" key="0"
  scroll="yes" len="*" dtype="CHAR" skipb="yes" align="left" />
</cmdrsphdr>
<cmdrspdata>
<rsp>DB(DB000001) MBR(IMS1) CC( 0) </rsp>
<rsp>DB(DB000002) MBR(IMS1) CC( 0) </rsp>
<rsp>DB(DB000003) MBR(IMS1) CC( 0) </rsp>
</cmdrspdata>
</imsout>
```

TSO SPOC input:

```
QRY DB NAME(DB00*) SHOW(ACCTYPE,RESIDENT,DEFNTYPE,MODEL)
```

TSO SPOC output:

DBName	MbrName	CC TYPE	LAcc	Rsdnt	LRsdnt	ModelName	ModelType	DefnType
DB000001	IMS1	0	UPD	Y	N	DFSDSDB1	DESC	CREATE
DB000002	IMS1	0	UPD	Y	N	DFSDSDB1	DESC	CREATE
DB000003	IMS1	0	UPD	Y	N	DFSDSDB1	DESC	CREATE

Explanation: Several databases are created dynamically, with an access type of update (UPD) and an attribute of resident. Attributes not specified on the command are set to the attributes defined in the database default descriptor. The QRY DB command displays the database attributes specified on the SHOW keyword. The database TYPE is shown as blank for both databases, since there is no DMB in ACBLIB and IMS cannot tell what the database type is. The resident attribute (Rsdnt) is shown as Y (yes), but the local resident attribute (Lrsdnt) is shown as N (no), since the resident attribute does not take effect until the next restart. The database default descriptor used to create the databases is shown as ModelName DFSDSDB1 and ModelType DESC for descriptor. The definition type Defntype is CREATE, since both of these databases were defined with a CREATE command.

Related concepts:

➡ How to interpret CSL request return and reason codes (System Programming APIs)

Related tasks:

➡ Adding MSDB databases dynamically to an online IMS system (Database Administration)

Related reference:

Chapter 2, “Command keywords and their synonyms,” on page 57

CREATE DBDESC command

Use the CREATE DBDESC command to create database descriptors, which serve as models for creating database resources or other database descriptors.

A descriptor is created with a value set for every attribute.

Subsections:

- “Environment”
- “Syntax”
- “Keywords” on page 178
- “Usage notes” on page 180
- “Output fields” on page 180
- “Return, reason, and completion codes” on page 181
- “Examples” on page 182

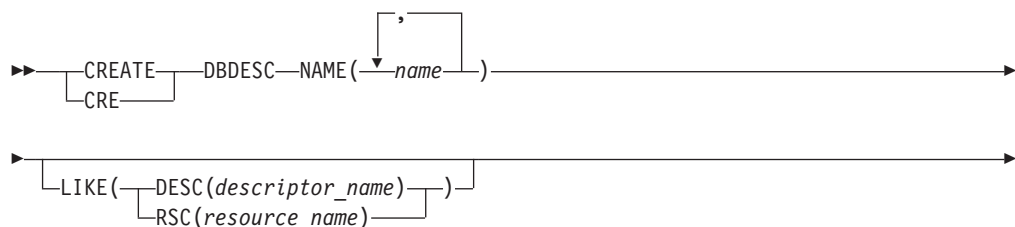
Environment

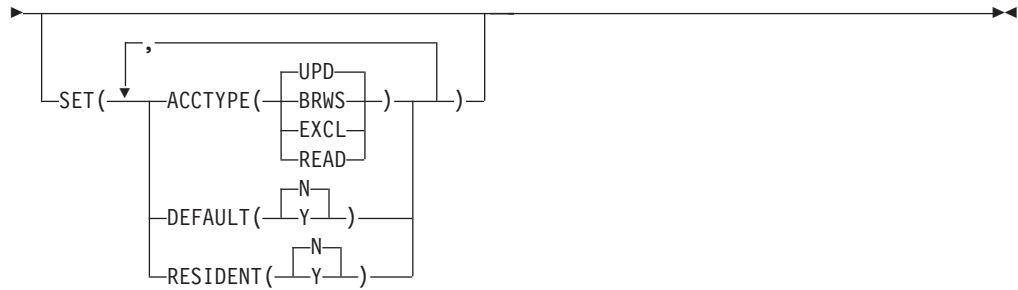
The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 96. Valid environments for the CREATE DBDESC command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
CREATE DBDESC	X	X	
LIKE	X	X	X
NAME	X	X	X
SET	X	X	X

Syntax





Default values shown in this syntax diagram reflect the default values that are defined in the IMS database descriptor, DFSDSDB1. If you define another descriptor as the default with a CREATE or UPDATE DBDESC command, the default values shown in this syntax diagram might not match the value defined in the current default descriptor.

Keywords

The following keywords are valid for the CREATE DBDESC command:

LIKE

Specifies that the descriptor is created using an existing descriptor as a model, instead of the default descriptor. The default descriptor is either the IMS descriptor DFSDSDB1, or user-defined. The model type can either be a descriptor (DESC), or a resource (RSC). The descriptor is created with all the same attributes as the model, except for the DEFAULT(Y) value. Attributes set explicitly by the CREATE command override the model attributes. DEFAULT(Y) must be specified explicitly to make a descriptor the default descriptor. Later changes to the model are not propagated to resources or descriptors that were created from it.

Use QUERY commands to display the model name and model type used to create the descriptor. The model name and type returned from the QUERY command are provided for informational purposes only. The EXPORT command exports a resource definition including the model name and model type to the definition member. The IMPORT command imports a resource definition including the model name and model type from the definition member. An IMPORT command that creates a resource saves the model name and model type, but does not use the model's attributes.

When you specify LIKE on a CREATE command, IMS uses the model's current attributes to set the attributes of the newly-created descriptor, except for the default attribute.

DESC(descriptor_name)

Specifies the name of the descriptor to use as a model to define this descriptor.

RSC(resource_name)

Specifies the name of the resource to use as a model to define this descriptor.

NAME

Specifies the 1-8 character name of the database descriptor. Names must be alphanumeric (A through Z, 0 through 9, #, \$, and @). All database descriptor names must begin with an alphabetic character (A through Z, #, \$, and @)

followed by 0–7 alphanumeric characters. Names cannot include a blank, comma, period, hyphen, or equal sign. Names cannot begin with DFS, except for DFSIVPxx and DFSSAMxx. Names cannot be BASICEDT, DBCDM, DBRC, ISCEDT, MSDB, SDB, or WTOR. A database resource and a database descriptor can have the same name.

SET

Specifies the attributes of the database to be created. If the LIKE keyword is omitted, attributes not specified take the value defined in the default descriptor, which is either IMS descriptor DFSDSDB1 or user-defined. If the LIKE keyword is specified, attributes not specified take the value defined in the model.

ACCTYPE()

Specifies the access intent for the named database, which is how the subsystem requesting access plans to use the database. Access type is used in conjunction with the database sharing level declared to DBRC.

UPD

The database is available for update as well as read processing in the IMS subsystem. This is the default.

BRWS

The database is available for read-only processing on this IMS subsystem. The only programs that can use the database on this subsystem are those that have a PCB processing option of GO (PROCOPT=GO). Programs that access the data using the GO processing option might see uncommitted data since a sharing IMS subsystem could be updating the database. The database is opened for read-only processing.

EXCL

The database is to be used exclusively by this IMS subsystem. This exclusive access is guaranteed only when the database is registered to DBRC.

READ

The database is available for read-only processing in this IMS subsystem. Programs with update intent can be scheduled, but cannot update the database. Access type READ differs from access type BRWS in that the data is read with integrity (locking is performed) and all programs can access the data, not just those with a processing option of GO. The database is opened for read-only processing.

DEFAULT

Specifies whether the descriptor is the default.

N The descriptor is not the default.

Y The descriptor is the default, which resets the existing default descriptor to DEFAULT(N). When a descriptor is created without the LIKE keyword, any attribute not specified on the CREATE command takes the value defined in the default descriptor. Only one descriptor can be defined as the default for a resource type. IMS defines a default database descriptor called DFSDSDB1, where all attributes are defined with the default value. Defining a user-defined descriptor as the default overrides the IMS-defined descriptor. Since only one database descriptor can be the default at one time, only one database name may be specified with DEFAULT(Y).

RESIDENT

Specifies the resident option. The RESIDENT(N) option takes effect right away. The RESIDENT(Y) option takes effect at the next restart, unless the database was created as RESIDENT(Y) after the checkpoint from which this IMS is performing emergency restart. A database defined as a DEDB in ACBLIB always sets the RESIDENT(Y) attribute when the DEDB is loaded, regardless of the RESIDENT value specified. RESIDENT(N) is rejected for a DEDB

- N** The DMB associated with the named database resource is not made resident in storage. The DMB is loaded at scheduling time.
- Y** The DMB associated with the named database resource is made resident in storage at the next IMS restart. At the next IMS restart, IMS loads the DMB and initializes it. A resident database is accessed from local storage, which eliminates I/O to the ACBLIB. In an online environment, the DMB control blocks are stored in the ACBLIB. If the DLI/SAS address space exists, DLI/SAS loads the DMB; otherwise, it is the IMS control region that loads it. This makes the DMB dependent on the existence of the corresponding database resource.

Usage notes

Attributes not explicitly specified on the CREATE command take the default value. Any database resource or descriptor can be created using this descriptor as a model, by specifying the CREATE command with LIKE(DESC(descriptor_name)).

Descriptors exist for the life of the IMS unless they are deleted using a DELETE command. The descriptors are recoverable across an IMS warm start or emergency restart. Descriptors are lost if IMS is cold started, unless cold start imports definitions that were exported while IMS was up.

The CREATE DBDESC command can only be issued through the Operations Manager API. This command applies to DB/DC and DBCTL systems. This command is not valid on the XRF alternate, RSR tracker, or FDBR region. The CREATE DBDESC command is not valid if online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC or MODBLKS not defined).

Output fields

The following table shows the CREATE DBDESC output fields. The columns in the table are as follows:

Short label

Contains the short label generated in the XML output.

Keyword

Identifies keyword on the command that caused the field to be generated. N/A appears for output fields that are always returned. *error* appears for output fields that are returned only in case of an error.

Meaning

Provides a brief description of the output field.

Table 97. Output fields for the CREATE DBDESC command

Short label	Keyword	Meaning
CC	N/A	Completion code.

Table 97. Output fields for the CREATE DBDESC command (continued)

Short label	Keyword	Meaning
CCTXT	<i>error</i>	Completion code text that briefly explains the meaning of the non-zero completion code.
DESC	DBDESC	Database descriptor name.
MBR	N/A	IMSpIex member that built the output line.
OLDDEF	DBDESC	Old default descriptor name, if this descriptor is made the default by specifying DEFAULT(Y). The old default descriptor is no longer the default.

Return, reason, and completion codes

The following table includes the return and reason codes and a brief explanation of the codes. The return or reason code returned for the command might also indicate an error from a CSL request.

Table 98. Return and reason codes for CREATE DBDESC

Return code	Reason code	Meaning
X'00000000'	X'00000000'	Command completed successfully. The command output contains a line for each descriptor, accompanied by its completion code. See the completion code table for details.
X'00000008'	X'00002048'	Invalid SET attribute.
X'00000008'	X'00002117'	Invalid LIKE descriptor name.
X'00000008'	X'00002118'	Invalid LIKE resource name.
X'00000008'	X'00002133'	Multiple name parameters specified with DEFAULT(Y) is invalid. Only one descriptor may be the default at one time.
X'0000000C'	X'00003000'	Command was successful for some descriptors but failed for others. The command output contains a line for each descriptor, accompanied by its completion code. See the completion code table for details.
X'0000000C'	X'00003004'	Command was not successful for any of the descriptors. The command output contains a line for each descriptor, accompanied by its completion code. See the completion code table for details.
X'00000010'	X'0000400C'	Command is not valid on the XRF alternate.
X'00000010'	X'00004014'	Command is not valid on the RSR tracker.
X'00000010'	X'00004120'	Online change phase is in progress.
X'00000010'	X'00004204'	Model is quiesced. Cannot quiesce model.
X'00000010'	X'00004300'	Command is not allowed because online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC, or MODBLKS not defined).
X'00000010'	X'00004301'	Command is not allowed because the database is defined RESIDENT(Y), the DMB indicates there is a logical relationship for the database, but the other database is not defined.
X'00000014'	X'00005004'	DFSOCMD response buffer could not be obtained.

Table 98. Return and reason codes for CREATE DBDESC (continued)

Return code	Reason code	Meaning
X'00000014'	X'00005008'	DFSPool storage could not be obtained.
X'00000014'	X'0000500C'	AWE could not be obtained.

Errors unique to the processing of this command are returned as completion codes. The following table includes an explanation of the completion codes.

Table 99. Completion codes for the CREATE DBDESC command

Completion code	Completion code text	Meaning
0		Command completed successfully for database descriptor.
11	RESOURCE ALREADY EXISTS	Database descriptor already exists.
17	ANOTHER CMD IN PROGRESS	Quiescing the default descriptor failed because it was being referenced by another command.
5F	INVALID CHARACTERS IN NAME	Name is invalid because it contains an invalid character.
60	GETMAIN STORAGE ERROR	A GETMAIN request for storage was unsuccessful.
61	DFSBCB STORAGE ERROR	Request to get BCB storage for DDIR control block failed.
8A	WILDCARD PARAMETER NOT SUPPORTED	You must explicitly specify the names of the descriptors you want to create. The CREATE command does not support wildcard parameters.
90	INTERNAL ERROR	An IMS system service failure.
93	RESERVED NAME	Name is reserved. For example, name starts with DFS (except for DFSSAMxx or DFSIVPxx), or is an IMS reserved name such as BASICEDT or WTOR.

Examples

The following are examples of the CREATE DBDESC command:

Example 1 for CREATE DBDESC command

In this example, the database descriptors listed in the command with the NAME keyword are created with update access. Attributes not specified on the command are assigned the system defaults.

TSO SPOC input:

```
CREATE DBDESC NAME(DBHDAM1,DBHDAM2,DBHDAM3,DBHDAM4) SET(ACCTYPE(UPD))
```

TSO SPOC output:

DBName MbrName CC
DBHDAM1 IMS1 0
DBHDAM2 IMS1 0
DBHDAM3 IMS1 0
DBHDAM4 IMS1 0

Related concepts:

 How to interpret CSL request return and reason codes (System Programming APIs)

Related reference:

Chapter 2, “Command keywords and their synonyms,” on page 57

CREATE OTMADESC command

Use the CREATE OTMADESC command to create a OTMA destination descriptor without restarting IMS.

Subsections:

- “Environment”
- “Syntax”
- “Keywords” on page 184
- “Usage notes” on page 185
- “Output fields” on page 185
- “Return, reason, and completion codes” on page 186
- “Examples” on page 187

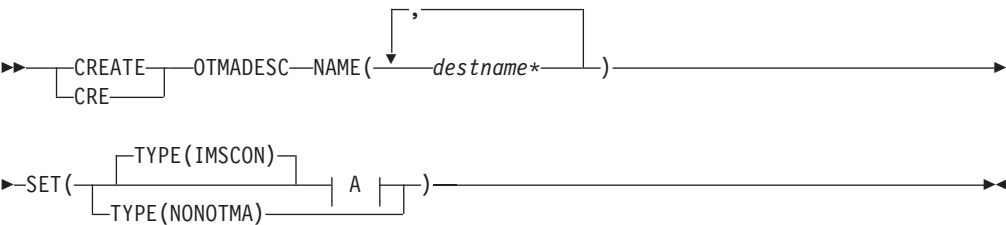
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the commands and keywords.

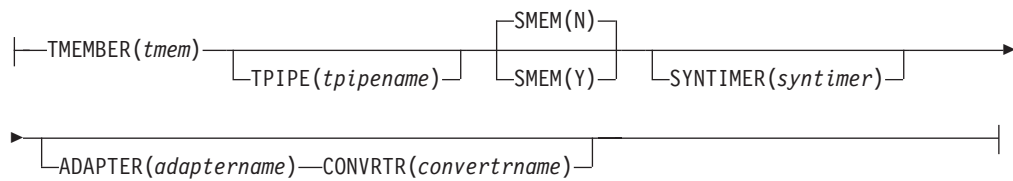
Table 100. Valid environments for the CREATE OTMADESC command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
CREATE OTMADESC	X		X
NAME	X		X
SET	X		X

Syntax



A:



Keywords

The following keywords are valid for the CREATE OTMADESC command:

ADAPTER(*adaptername*)

An optional keyword for TYPE(IMSCON). The *adaptername* is a 1- to 8-character name that identifies the IMS Connect adapter. If TYPE(NONOTMA) is specified, you cannot specify this keyword.

CONVRTR(*convrtrname*)

A required parameter only if the ADAPTER keyword is specified. The *convrtrname* is a 1- to 8-character converter name used by the adapter. Coding this keyword without the ADAPTER keyword or with TYPE(NONOTMA) will cause an error.

NAME(*destname**)

A required keyword parameter that specifies a 1- to 8-character destination name. The destination name can have an asterisk (*) at the end to mask groups of names. An asterisk by itself is a valid name and is an entry in the table of destination routing descriptors. A masked name that encompasses another masked name does not have to be created in the order from most specific to most generic. However, the search order starts from the most specific to the most generic.

Creating a destination name that already exists in the system is an error.

SMEM(N | Y)

An optional parameter that can either be a Y or N value to indicate whether the TMEMBER name specified in the TMEMBER parameter is a super member. If the TMEMBER name is a super member, the length of the TMEMBER name has a maximum of 4 characters. SMEM and TYPE(NONOTMA) are mutually exclusive.

SYNTIMER(*syntimer*)

An optional parameter that specifies the timeout value that when reached, the synchronous callout reply expires because an ACK/NAK or reply from the client has not been received. The value *syntimer*, which is expressed in hundredths of a second, must be numeric and within a range of 0 through 999999, inclusive. When the parameter is coded, a numeric value must be specified. If SYNTIMER(0) is specified, the value defaults to 1000, which is equivalent to 10 seconds.

TMEMBER(*tmemb*)

A required parameter for TYPE(IMSCON). The *tmemb* value is a 1- to 16-character OTMA TMEMBER name. Coding this keyword with TYPE(NONOTMA) causes an error. If SMEM(Y) is specified, *tmemb* is a maximum of 4-character super member name.

TPIPE(*tpipename*)

An optional parameter that is a 1- to 8-character TPIPE name when TYPE(IMSCON) is specified. If this keyword is not coded, the TPIPE name is the destination name specified in the NAME keyword. This keyword is not valid if TYPE(NONOTMA) is specified. If the TPIPE is not coded and the NAME is a mask, the TPIPE will be a specific destination name that matched the mask in the table of destination routing descriptors and not the NAME keyword.

TYPE(IMSCON | NONOTMA)

An optional keyword that can either be IMSCON or NONOTMA. IMSCON takes the default value if TYPE parameter is not specified. If TYPE(IMSCON) is specified, TMEMBER is a required keyword and the rest of the keyword parameters (such as TPIPE, SMEM, or ADAPTER) are optional. If TYPE(NONOTMA) is specified, coding any of these required or optional keyword parameters is not allowed.

Usage notes

The CREATE OTMADESC command is used to facilitate the creation of OTMA destination descriptors while IMS is up and running. The user can add new routing descriptors dynamically in addition to the statically defined destination routing descriptors in DFSYDTx of IMS.PROCLIB. The order in which the destination routing descriptors are coded is unrestricted and need not be coded in the order from most specific to most generic destination routing descriptor name. However, the search order in the table of destination routing descriptors will be performed from most specific to most generic.

Note: Note the distinction between the coding in DFSYDTx and the search order that is performed internally in the table of destination routing descriptors. In DFSYDTx, the rule of coding does not require the order from most specific to most generic; however, the search order in the table of destination routing descriptor is performed from most specific to most generic.

The destination routing descriptors are part of the checkpoint records used for persistency on IMS restart. Also, all CREATE OTMADESC commands will generate log records. The checkpoint log record is X4035 and the log record for CREATE, DELETE, and UPDATE is X221B. During an IMS warm restart, the destination routing descriptors will be rebuilt based on the checkpoint records. In case of an ERE restart, the log records will be used to completely rebuild the destination routing descriptors after the checkpoint records have been processed. Because of the rebuilding process, the routing descriptors in member DFSYDTx in PROCLIB will not be read and processed. However, during cold start processing, the routing descriptors in member DFSYDTx will be read and processed.

The CREATE OTMADESC command is not valid in an XRF alternate, RSR tracking, or an FDBR region environment. The checkpoint and log records will be used to update the destination routing descriptors in these environments. The CREATE OTMADESC command becomes a valid command only when the XRF alternate or the RSR tracking environment becomes the active IMS environment.

Output fields

The following table shows the CREATE OTMADESC output fields. The columns in the table are:

Short label

Contains the short label generated in the XML output.

Long label

Contains the column heading for the output field in the formatted output.

Keyword

Identifies the keyword on the command that caused the field to be generated. N/A appears for output fields that are always returned. *error* appears for output fields that are returned only in case of an error.

Meaning

Provides a brief description of the output field.

Table 101. Output fields for the CREATE OTMADESC command

Short label	Long label	Keyword	Meaning
CC	CC	N/A	Completion code for the line of output. The completion code indicates whether IMS was able to process the command for the specified resource. See "Return, reason, and completion codes" for more information. The completion code is always returned.
CCTXT	CCText	N/A	Completion code text that briefly explains the meaning of the non-zero completion code. This field is returned only for an error completion code.
DEST	DestName	NAME	Destination name.
MBR	MbrName	N/A	Member name.

Return, reason, and completion codes

An IMS return and reason code is returned to OM by the CREATE OTMADESC command. The OM return and reason codes that might be returned as a result of the CREATE OTMADESC command are standard for all commands entered through the OM API.

The following table includes the return and reason codes and a brief explanation of the codes. The return or reason code returned for the command might also indicate an error from a CSL request.

Table 102. Return and reason codes for the CREATE OTMADESC command

Return code	Reason code	Meaning
X'00000000'	X'00000000'	Command completed successfully. The command output contains a line for each resource, accompanied by its completion code. See the completion codes table for details.
X'02000008'	X'00002000'	The command contains an invalid verb or no client is registered for the verb.
X'02000008'	X'00002004'	The command contains an invalid primary keyword or no client is registered for the keyword.
X'02000008'	X'00002028'	The command contains an invalid keyword.
X'02000008'	X'0000202C'	The command contains an unknown positional parameter.
X'02000008'	X'00002034'	The command contains an incomplete keyword parameter.
X'02000008'	X'00002038'	The command is missing a required parameter.

Table 102. Return and reason codes for the CREATE OTMADESC command (continued)

Return code	Reason code	Meaning
X'02000008'	X'0000203C'	The command contains an invalid keyword parameter value.

The following table includes an explanation of the completion codes. Errors unique to the processing of this command are returned as completion codes. A completion code is returned for each action against an individual resource.

Table 103. Completion codes for the CREATE OTMADESC command

Completion code	Completion code text	Meaning
0	Command completed successfully	The CREATE OTMADESC command completed successfully for the resource.
153	Adapter blank, Convrtr not blank	Both ADAPTER() and CONVRTR() keywords must be either both blanks or both contain valid names.
154	Adapter not blank, Convrtr blank	Both ADAPTER() and CONVRTR() keywords must be either both blanks or both contain valid names.
155	NONOTMA, other parms specified	For TYPE(NONOTMA), no other keywords must be specified, such as TYPE(), TMEMBER(), SMEM(), ADAPTER(), or CONVRTR().
156	SMEM(Y), super mbr name > 4 char	For SMEM(Y), the TMEMBER value must not be greater than 4 characters.
157	SMEM(Y), Tmember parm not specfd	The TMEMBER keyword is a required parameter when SMEM(Y) is specified.
159	TMEMBER is required for IMSCON	For TYPE(IMSCON), a value for the TMEMBER keyword is required and must be specified.
162	Descriptor already exist in tbl	The descriptor being created already exists in the table of destination routing descriptors.
167	SYNTIMER must have numeric value	The timeout value must have a value expressed in numbers within parenthesis.
169	SYNTIMER has nonnumeric value	The value must not contain alphabetic characters or any character that is not numeric.

Examples

The following are examples of the CREATE OTMADESC command:

Example 1 for CREATE OTMADESC command

TSO SPOC input:

```
CREATE OTMADESC NAME(OTMACL*) SET(TYPE(IMSCON) TMEMBER(HWS2))
```

TSO SPOC output:

DestName	MbrName	CC
OTMACL*	IMSA	0

Explanation: In the example, the CREATE OTMADESC command is issued with NAME(OTMACL*) and the descriptor OTMACL* is included in the table of destination routing descriptors.

Example 2 for CREATE OTMADESC command

TSO SPOC input:

```
CREATE OTMADESC NAME(OTMACL99) SET(TYPE(IMSCON) TMBER(HWS1) TPIPE(HWS1TP01))
```

TSO SPOC output:

DestName	MbrName	CC
OTMACL99	IMSA	0

Explanation: If the CREATE OTMADESC command is issued with the TPIPE keyword, the descriptor OTMACL99 is included in the table of destination routing descriptors. Although not shown in the example, a CREATE command issued for OTMACL* would be ahead of the CREATE for OTMACL99.

Related concepts:

 How to interpret CSL request return and reason codes (System Programming APIs)

Related tasks:

 Specifying a remote transaction code (Communications and Connections)

Related reference:

Chapter 2, “Command keywords and their synonyms,” on page 57

CREATE PGM command

Use the CREATE PGM command to define the program resource requirements for application programs that run under the control of the DB/TM environment, as well as for application programs that access databases through DBCTL.

The program resource describes an application program that operates in a message processing region, Fast Path message-driven program region, batch processing region, batch message processing region, or CCTL threads. Program resources combined with transactions define the scheduling and resource requirements for a message-driven application program.

Subsections:

- “Environment” on page 189
- “Syntax” on page 189
- “Keywords” on page 189
- “Usage notes” on page 193
- “Output fields” on page 194
- “Return, reason, and completion codes” on page 194
- “Examples” on page 196

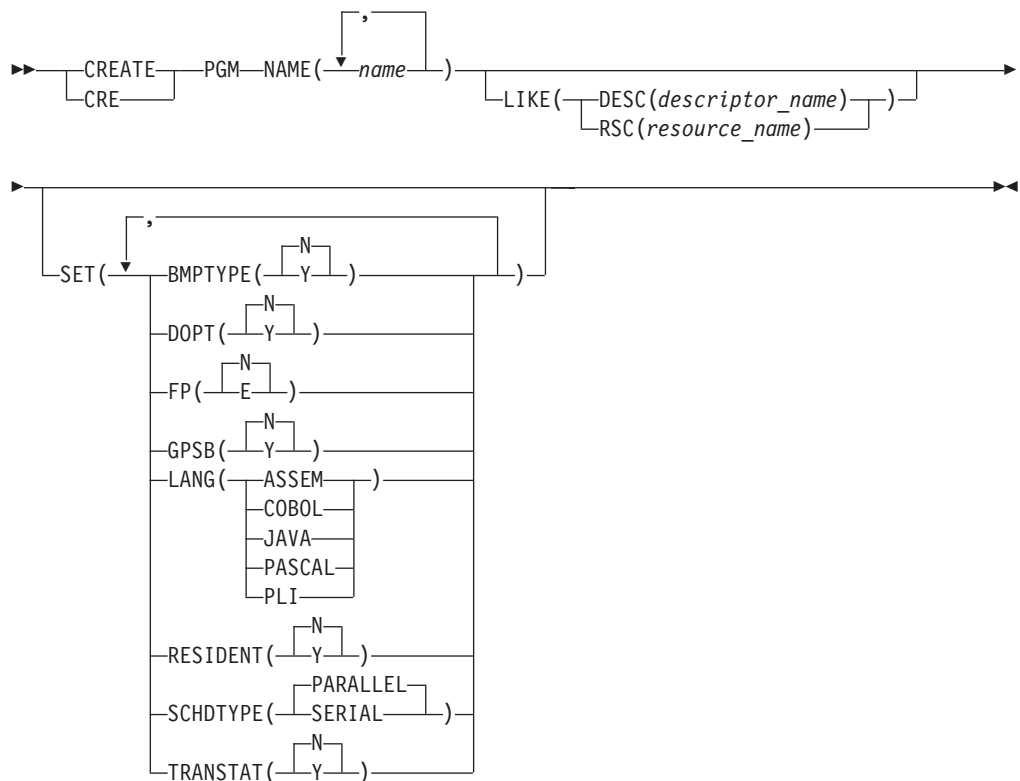
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 104. Valid environments for the *CREATE PGM* command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
CREATE PGM	X	X	X
LIKE	X	X	X
NAME	X	X	X
SET	X	X	X

Syntax



Default values shown in this syntax diagram reflect the default values that are defined in the IMS program descriptor, DFSDSPG1. If you define another descriptor as the default with a *CREATE* or *UPDATE PGMDESC* command, the default values shown in this syntax diagram might not match the value defined in the current default descriptor.

Keywords

The following keywords are valid for the *CREATE PGM* command:

LIKE

Specifies that the resource is created using an existing resource or descriptor as a model, instead of the default descriptor. The default descriptor is either the IMS descriptor DFSDSPG1, or user-defined. The model type can either be a descriptor (DESC), or a resource (RSC). The new resource is created with all the same attributes as the model. Attributes set explicitly by the CREATE command override the model attributes. Later changes to the model are not propagated to resources or descriptors that were created from it.

The QUERY commands can be used to display the model name and model type used to create the resource. The model name and type returned from the QUERY command are provided for informational purposes only. The EXPORT command exports a resource definition, including the model name and model type, to the definition member. The IMPORT command imports a resource definition, including the model name and model type, from the definition member. An IMPORT command that creates a resource saves the model name and model type, but does not use the models attributes.

DESC(descriptor_name)

Specifies the name of the descriptor to use as a model to define this resource.

RSC(resource_name)

Specifies the name of the resource to use as a model to define this resource.

NAME

Specifies the 1-8 character name of the program. Names must be alphanumeric (A through Z, 0 through 9, #, \$, and @). All program names must begin with an alphabetic character (A through Z, #, \$, and @) followed by zero to seven alphanumeric characters. Names cannot include a blank, comma, period, hyphen, or equal sign. Names cannot begin with DFS, except for DFSIVPxx and DFSSAMxx. Names cannot be BASICEDT, DBCDM, DBF#FPU0, DBRC, ISCEDT, MSDB, SDB, or WTOR. Each local program name must be unique. If the program is defined with BMPTYPE(N) and FP(N), the program name and associated PSB name must be the same. A program resource and a program descriptor can have the same name.

SET

Specifies the attributes of the program to be created. If the LIKE keyword is omitted, attributes not specified take the value defined in the default descriptor, which is either IMS descriptor DFSDSPG1 or user-defined. If the LIKE keyword is specified, attributes not specified take the value defined in the model.

BMPTYPE()

BMP type option. Specifies whether the program executes in a BMP type region or not. A BMP type region can be a BMP region or a JBP region. PSBs scheduled by DB2[®] stored procedures, by programs running under WebSphere[®] Application Server, and by other users of the ODBA interface may be defined with BMPTYPE Y or N.

N The program does not execute in a BMP type region. It might execute in an IMS TM MPP, JMP, or IFP region or it might use either the ODBA or DRA interface. This specification should be used for programs running in IMS TM MPP, JMP, and IFP regions, or PSBs scheduled by CICS[®] programs using DBCTL and other users of the DRA interface. This is the default.

Y The program executes in a BMP type region. It might execute in an

IMS BMP region or a JBP region. Any associated transactions are assigned normal and limit priority values of zero.

FP(E) and BMPTYPE(Y) are mutually exclusive.

DOPT

Specifies the dynamic option.

- N** The PSB associated with the program is not to be located dynamically. The PSB must exist in ACBLIB, otherwise the program is set to a NOTINIT status and cannot be scheduled. This is the default.
- Y** The PSB associated with this program is located dynamically. Each time the program associated with this PSB is scheduled, the latest copy of the PSB is loaded from ACBLIB. The PSB does not need to be in any data set defined for ACBLIB until it is actually required to process a transaction. A new version of the PSB can be defined in ACBLIB and is picked up the next time the PSB is scheduled. DOPT PSBs referencing DBDs that are missing from ACBLIB cannot be scheduled. When the program terminates, the PSB is deleted from the PSB pool.

Keyword combination rules include the following:

- DOPT(Y) and GPSB(Y) are mutually exclusive.
- DOPT(Y) and LANG(JAVA) is a valid combination.
- LANG is invalid with GPSB(N), except if DOPT(Y) and LANG(JAVA).
- LANG(JAVA), DOPT(Y), and GPSB(N) is a valid combination.
- RESIDENT(Y) and DOPT(Y) are mutually exclusive.
- SCHDTYPE(PARALLEL) and DOPT(Y) are mutually exclusive.

FP Specifies the Fast Path option.

E

The program is a Fast Path-exclusive program. This implicitly defines a wait-for-input (WFI) program. Either a transaction or a routing code that can be assigned by the user Input Edit/Routing exit routine must be defined for the Fast Path-exclusive program, in order for this program to be usable.

Fast Path must be defined in the IMS system.

- N** The program is not a Fast Path-exclusive program. This is the default. When FP(N) is specified, any attempt to use Fast Path resources or commands will yield unpredictable results.

Keyword combination rules include the following:

- FP(E) requires that Fast Path be defined.
- LANG(JAVA) and FP(E) are mutually exclusive.
- BMPTYPE(N) and FP(E) are mutually exclusive.

GPSB

Specifies the generated PSB option.

- N** Use N to specify that the PSB associated with the program is not generated by IMS. The PSB must exist in ACBLIB, otherwise the program is set to a NOTINIT status and cannot be scheduled. This is the default.
- Y** Use Y to specify that the PSB associated with the program is generated by IMS. It is not loaded from ACBLIB. The scheduling process of all

environments generates a PSB containing an I/O PCB and an alternate modifiable PCB. You do not need to perform the PSBGEN and ACBGEN. The generated PSB contains an I/O PCB named IOPCBbbb and a modifiable, alternate PCB named TPPCB1bb. With an alternate modifiable PCB, an application can use the CHNG call to change the output destination and send output to a destination other than the input destination.

Keyword combination rules include the following:

- DOPT(Y) and GPSB(Y) are mutually exclusive.
- DOPT(Y) and LANG(JAVA) is a valid combination.
- GPSB(Y) requires LANG.
- LANG is invalid with GPSB(N), except if DOPT(Y) and LANG(JAVA).
- LANG(JAVA), DOPT(Y), and GPSB(N) is a valid combination.
- RESIDENT(Y) and GPSB(Y) are mutually exclusive.

LANG

Specifies the language interface of the program for a GPSB, or defines a DOPT(Y) program as using the Java™ language.

In order to define a DOPT program using the Java language, the program must be defined with DOPT(Y) and LANG(JAVA). DOPT PSBs are not loaded at IMS restart, they are loaded every time the program is scheduled. When the program is scheduled for the first time, IMS does not know the language until after the program is scheduled in a region and the PSB is loaded. Unless LANG(JAVA) is defined for the DOPT(Y) program, the program is incorrectly scheduled in a non-Java region.

LANG parameter	Meaning
ASSEM	Assembler
COBOL	COBOL
JAVA	Java
PASCAL	Pascal
PLI	PL/I

Keyword combination rules include the following:

- LANG is invalid with GPSB(N), except if DOPT(Y) and LANG(JAVA).
- DOPT(Y) and LANG(JAVA) is a valid combination.
- LANG(JAVA), DOPT(Y), and GPSB(N) is a valid combination.
- LANG(JAVA) and FP(E) are mutually exclusive.

RESIDENT

Specifies the resident option. The RESIDENT(N) option takes effect right away. The RESIDENT(Y) option takes effect at the next restart, unless an error is encountered such as no PSB in ACBLIB for the program, or if the program was created as RESIDENT(Y) after the checkpoint from which this IMS is performing emergency restart.

- N** Use N to specify that the PSB associated with the program is not made resident in storage. The PSB is loaded at scheduling time. This is the default. The RESIDENT(N) option takes effect immediately.
- Y** The PSB associated with the program is made resident in storage at IMS cold start or restart. IMS loads the PSB and initializes it. A resident PSB is

accessed in local storage, which avoids I/O to the ACBLIB. In an online environment, the PSB control blocks are stored in the ACBLIB.

Keyword combination rules include the following:

- DOPT(Y) and RESIDENT(Y) are mutually exclusive.
- GPSB(Y) and RESIDENT(Y) are mutually exclusive.

SCHDTYPE

Specifies whether this program can be scheduled into more than one message region or batch message region simultaneously.

PARALLEL

The program can be scheduled in multiple regions simultaneously. This is the default.

SERIAL

The program can be scheduled in only one region at a time.

Keyword combination rules include the following:

- DOPT(Y) and SCHDTYPE(PARALLEL) are mutually exclusive.

TRANSTAT

Specifies whether transaction level statistics should be logged. The value specified has meaning only if the program is a JBP or a non-message driven BMP. If Y is specified, transaction level statistics are written to the log in a X'56FA' log record.

N Transaction level statistics should not be logged.

Y Transaction level statistics should be logged.

The TRANSTAT keyword is optional. If a value is not specified for the TRANSTAT keyword, the system default is used. The system default for the transaction level statistics parameter is set with the TRANSTAT parameter in the DFSDFxxx PROCLIB member. If a value is not specified for the TRANSTAT parameter, the system default is set to N. The TRANSTAT keyword on the CREATE PGM command gives the user the ability to override the system default when creating a program resource.

Usage notes

BLDL is performed on the PSB associated with this program (except DOPT or GPSB). If the PSB is not defined in ACBLIB, the program is created anyway and the command results in a completion code of zero, even though it cannot be scheduled. The program status is NOTINIT when a /DIS PGM or QRY PGM is issued for the program. Online Change must be used to add the PSB to ACBLIB, before the application program can be scheduled.

Resources exist for the life of the IMS unless they are deleted using a DELETE command. The resources and descriptors are recoverable across an IMS warm start or emergency restart. Resources and descriptors are lost if IMS is cold started, unless cold start imports definitions that were exported while IMS was up.

The CREATE PGM command is similar to local online change (using a /MODIFY command) or global online change (INITIATE OLC) for application program resources in the MODBLKS data set, except that programs are added dynamically.

A CREATE PGM command can be issued only through the Operations Manager API. This command applies to DB/DC, DBCTL and DCCTL systems. These commands are not valid on the XRF alternate, RSR tracker, or FDBR region. The CREATE command is not valid if online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC or MODBLKS not defined).

When a program is created, if the PSB is in the ACBLIB library, the PSB is loaded into the PSB pool at first schedule. If the program is created with RESIDENT(Y), the PSB is made resident at the next IMS restart. If the PSB is not in the ACBLIB library, the program is created anyway, but marked bad because it is unusable. A QRY PGM command specified with SHOW(ALL) or SHOW(STATUS) shows the program status as NOTINIT-40-NOPSB, which means there is no PSB in the ACBLIB library for it. You must use online change for the ACBLIB library to add the PSB before the program can be used

Output fields

The following table shows the CREATE PGM output fields. The columns in the table are as follows:

Short label	Contains the short label generated in the XML output.
Keyword	Identifies keyword on the command that caused the field to be generated. N/A appears for output fields that are always returned. <i>error</i> appears for output fields that are returned only in case of an error.
Meaning	Provides a brief description of the output field.

Table 105. Output fields for the CREATE PGM command

Short label	Keyword	Meaning
CC	N/A	Completion code.
CCTXT	<i>error</i>	Completion code text that briefly explains the meaning of the non-zero completion code.
MBR	N/A	IMSplex member that built the output line.
PGM	PGM	Program name.

Return, reason, and completion codes

The following table includes the return and reason codes and a brief explanation of the codes. The return or reason code returned for the command might also indicate an error from a CSL request.

Table 106. Return and reason codes for CREATE PGM

Return code	Reason code	Meaning
X'00000000'	X'00000000'	Command completed successfully. The command output contains a line for each resource, accompanied by its completion code. See the completion code table for details.

Table 106. Return and reason codes for CREATE PGM (continued)

Return code	Reason code	Meaning
X'00000008'	X'00002009'	Multiple values specified for the same attribute are invalid. For example, you cannot specify both BMPTYPE(Y) and BMPTYPE(N). This reason code is applicable only when you create a program by using the DFSINSX0 user exit.
X'00000008'	X'00002048'	Invalid SET attribute.
X'00000008'	X'00002106'	DOPT(Y) mutually exclusive with RESIDENT(Y). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was gotten from the model.
X'00000008'	X'00002107'	DOPT(Y) mutually exclusive with SCHDTYPE(PARALLEL). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was gotten from the model.
X'00000008'	X'0000210B'	FP(E) mutually exclusive with BMPTYPE(Y). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was gotten from the model.
X'00000008'	X'0000210D'	FP(E) mutually exclusive with LANG(JAVA). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was gotten from the model.
X'00000008'	X'00002113'	GPSB(Y) mutually exclusive with DOPT(Y). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was gotten from the model.
X'00000008'	X'00002114'	GPSB(N) mutually exclusive with LANG.
X'00000008'	X'00002115'	GPSB(Y) mutually exclusive with RESIDENT(Y). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was gotten from the model.
X'00000008'	X'00002117'	Invalid LIKE descriptor name.
X'00000008'	X'00002118'	Invalid LIKE resource name.
X'00000008'	X'00002131'	GPSB(Y) requires LANG to be specified.
X'00000008'	X'00002132'	DOPT(Y) not supported with LANG except for LANG(JAVA). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was gotten from the model.
X'0000000C'	X'00003000'	Command was successful for some resources but failed for others. The command output contains a line for each resource, accompanied by its completion code. See the completion code table for details.
X'0000000C'	X'00003004'	Command was not successful for any of the resources. The command output contains a line for each resource, accompanied by its completion code. See the completion code table for details.
X'00000010'	X'0000400C'	Command is not valid on the XRF alternate.
X'00000010'	X'00004014'	Command is not valid on the RSR tracker.
X'00000010'	X'00004024'	No FP defined, so FP(E) invalid.

Table 106. Return and reason codes for CREATE PGM (continued)

Return code	Reason code	Meaning
X'00000010'	X'00004120'	Online change phase is in progress.
X'00000010'	X'00004204'	Model is quiesced. Cannot quiesce model.
X'00000010'	X'00004300'	Command is not allowed because online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC, or MODBLKS not defined).
X'00000014'	X'00005004'	DFSOCMD response buffer could not be obtained.
X'00000014'	X'00005008'	DFSPOOL storage could not be obtained.
X'00000014'	X'0000500C'	AWE could not be obtained.
X'00000014'	X'00005010'	Unable to obtain latch.

Errors unique to the processing of this command are returned as completion codes. The following table includes an explanation of the completion codes.

Table 107. Completion codes for the CREATE PGM command

Completion code	Completion code text	Meaning
0		Command completed successfully for the program.
11	RESOURCE ALREADY EXISTS	Program exists.
5F	INVALID CHARACTERS IN NAME	Name is invalid because it contains an invalid character.
61	DFSBCB STORAGE ERROR	Request to get BCB storage for PDIR control block failed.
8A	WILDCARD PARAMETER NOT SUPPORTED	CREATE command does not support wildcard parameters. You must explicitly specify the names of the resources you want to create.
93	RESERVED NAME	Name is reserved. For example, name starts with DFS (except for DFSSAMxx or DFSIVPxx), or is an IMS reserved name such as BASICEDT or WTOR.
BA	NOT ALLOWED FOR MRQ PSB	CREATE command failed for MRQ PSB because an attribute was specified that is not supported for the MRQ PSB: BMPTYPE(N), DOPT(Y), GPSB(Y), FP(E), RESIDENT(Y), SCHDTYPE(SERIAL)
B8	NO PSB IN ACBLIB	The DFSINSX0 exit attempted specified that the create should fail if no PSB for the program exists in ACBLIB.

Examples

The following are examples of the CREATE PGM command:

Example 1 for CREATE PGM command

TSO SPOC input:

```
CREATE PGM NAME(PGM00001) SET(BMPTYPE(Y))
```

TSO SPOC output:

PgmName	MbrName	CC
PGM00001	IMS1	0

OM API input:

```
CMD(CREATE PGM NAME(PGM00001) SET(BMPTYPE(Y)))
```

OM API output:

```
<imsout>
<ctl>
<omname>OM10M </omname>
<omvsn>1.3.0</omvsn>
<xm1vsn>20 </xm1vsn>
<statime>2006.254 22:20:06.531446</statime>
<stotime>2006.254 22:20:06.542510</stotime>
<staseq>BF6453E8EAD76197</staseq>
<stoseq>BF6453E8ED8AE98C</stoseq>
<rqsttkn1>USRT011 10152006</rqsttkn1>
<rc>00000000</rc>
<rsn>00000000</rsn>
</ctl>
<cmd>
<master>IMS1 </master>
<userid>USRT011 </userid>
<verb>CRE </verb>
<kwd>PGM </kwd>
<input>CREATE PGM NAME(PGM00001) SET(BMPTYPE(Y)) </input>
</cmd>
<cmdrsphdr>
<hdr slbl="PGM" llbl="PgmName" scope="LCL" sort="a" key="1" scroll="no"
  len="8" dtype="CHAR" align="left" />
<hdr slbl="MBR" llbl="MbrName" scope="LCL" sort="a" key="2" scroll="no"
  len="8" dtype="CHAR" align="left" />
<hdr slbl="CC" llbl="CC" scope="LCL" sort="n" key="0" scroll="yes"
  len="4" dtype="INT" align="right" skipb="no" />
<hdr slbl="CCTXT" llbl="CCText" scope="LCL" sort="n" key="0"
  scroll="yes" len="*" dtype="CHAR" skipb="yes" align="left" />
</cmdrsphdr>
<cmdrspdata>
<rsp>PGM(PGM00001) MBR(IMS1) CC( 0) </rsp>
</cmdrspdata>
</imsout>
```

TSO SPOC input:

```
QRY PGM NAME(PGM00001) SHOW(MODEL,BMPTYPE,DEFNTYPE)
```

TSO SPOC output:

PgmName	MbrName	CC	RgnType	BMPTYPE	ModelName	ModelType	DefnType
PGM00001	IMS1	0	BMP	Y	DFSDSPG1	DESC	CREATE

Explanation: Create a batch program called PGM00001. Attributes not specified on the command are assigned the defaults from the program default descriptor. The QRY PGM command shows the model name DFSDSPG1 and model type DESC for the program default descriptor.

Example 2 for CREATE PGM command

TSO SPOC input:

```
CREATE PGM NAME(DFSSAM02,PLAPJK02,PGM00002,WTOR,PGM*)
```

TSO SPOC output:

PgmName	MbrName	CC	CCText
DFSSAM02	IMS1	11	RESOURCE ALREADY EXISTS
PGM*	IMS1	8A	WILDCARD PARAMETER NOT SUPPORTED
PGM00002	IMS1	0	
PLAPJK02	IMS1	11	RESOURCE ALREADY EXISTS
WTOR	IMS1	93	RESERVED NAME

OM API input:

```
CMD(CREATE PGM NAME(DFSSAM02,PLAPJK02,PGM00002,WTOR,PGM*))
```

OM API output:

```
<imsout>
<ctl>
<omname>OM10M </omname>
<omvsn>1.3.0</omvsn>
<xm1vsn>20 </xm1vsn>
<stime>2006.254 23:05:22.692697</stime>
<stotime>2006.254 23:05:22.738636</stotime>
<staseq>BF645E0740259287</staseq>
<stoseq>BF645E074B5CC902</stoseq>
<rqsttkn1>USRT011 10160522</rqsttkn1>
<rc>0200000C</rc>
<rsn>00003008</rsn>
<rsnmsg>CSLN054I</rsnmsg>
<rsntxt>None of the clients were successful.</rsntxt>
</ctl>
<cmderr>
<mbr name="IMS1 ">
<typ>IMS </typ>
<styp>DBDC </styp>
<rc>0000000C</rc>
<rsn>00003000</rsn>
<rsntxt>At least one rqst successful</rsntxt>
</mbr>
</cmderr>
<cmd>
<master>IMS1 </master>
<userid>USRT011 </userid>
<verb>CRE </verb>
<kwd>PGM </kwd>
<input>CREATE PGM NAME(DFSSAM02,PLAPJK02,PGM00002,WTOR,PGM*) </input>
</cmd>
<cmdrsphdr>
<hdr slbl="PGM" llbl="PgmName" scope="LCL" sort="a" key="1" scroll="no"
len="8" dtype="CHAR" align="left" />
<hdr slbl="MBR" llbl="MbrName" scope="LCL" sort="a" key="2" scroll="no"
len="8" dtype="CHAR" align="left" />
<hdr slbl="CC" llbl="CC" scope="LCL" sort="n" key="0" scroll="yes"
len="4" dtype="INT" align="right" skipb="no" />
<hdr slbl="CCTXT" llbl="CCText" scope="LCL" sort="n" key="0"
scroll="yes" len="*" dtype="CHAR" skipb="yes" align="left" />
</cmdrsphdr>
<cmdrspdata>
<rsp>PGM(DFSSAM02) MBR(IMS1) CC( 11) CCTXT(RESOURCE ALREADY EXISTS)
</rsp>
<rsp>PGM(PLAPJK02) MBR(IMS1) CC( 11) CCTXT(RESOURCE ALREADY EXISTS)
</rsp>
<rsp>PGM(PGM00002) MBR(IMS1) CC( 0) </rsp>
<rsp>PGM(WTOR ) MBR(IMS1) CC( 93) CCTXT(RESERVED NAME) </rsp>
```

|
|
|
|

```
<rsp>PGM(PGM*      ) MBR(IMS1) CC(  8A) CCTXT(WILDCARD PARAMETER NOT
SUPPORTED) </rsp>
</cmdrspdata>
</imsout>
```

Explanation: Several programs fail to be created because of different error conditions. The CREATE commands that fail return a nonzero completion code (CC) and completion code text (CCText) that briefly describes the completion code. The CREATE command fails for programs DFSSAM02 and PLAPJK02, because they already exist. The CREATE command succeeds for program PGM00002. The CREATE command fails for program WTOR, because WTOR is a reserved name that cannot be used as a resource name. The CREATE command fails for program PGM*, because an asterisk is an invalid character that cannot be used in a resource name.

Related concepts:

 How to interpret CSL request return and reason codes (System Programming APIs)

Related reference:

Chapter 2, “Command keywords and their synonyms,” on page 57

CREATE PGMDESC command

Use the CREATE PGMDESC command to create program descriptors. A descriptor is a model that can be used to create descriptors or resources.

A descriptor is created with a value set for every attribute. Attributes not explicitly specified on the CREATE command take the default value. Any program resource or descriptor can be created using this descriptor as a model, by specifying the CREATE command with LIKE(DESC(descriptor_name)).

Subsections:

- “Environment”
- “Syntax” on page 200
- “Keywords” on page 200
- “Usage notes” on page 204
- “Output fields” on page 204
- “Return, reason, and completion codes” on page 205
- “Examples” on page 207

Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 108. Valid environments for the CREATE PGMDESC command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
CREATE PGMDESC	X	X	X
LIKE	X	X	X
NAME	X	X	X
SET	X	X	X

Syntax



Default values shown in this syntax diagram reflect the default values that are defined in the IMS program descriptor, DFSDSPG1. If you define another descriptor as the default with a CREATE or UPDATE PGMDESC command, the default values shown in this syntax diagram might not match the value defined in the current default descriptor.

Keywords

The following keywords are valid for the CREATE PGMDESC command:

LIKE

Specifies that the descriptor is created using an existing resource or descriptor as a model, instead of the default descriptor. The default descriptor is either the IMS descriptor DFSDSPG1, or user-defined. The model type can either be a descriptor (DESC), or a resource (RSC). The descriptor is created with all the same attributes as the model, except for the DEFAULT(Y) value. Attributes set explicitly by the CREATE command override the model attributes.

DEFAULT(Y) must be specified explicitly to make a descriptor the default descriptor. Later changes to the model are not propagated to resources or descriptors that were created from it.

The QUERY commands can be used to display the model name and model type used to create the descriptor or resource. The model name and type returned from the QUERY command are provided for informational purposes only. The EXPORT command exports a resource definition including the model name and model type to the definition member. The IMPORT command imports a resource definition including the model name and model type from the definition member. An IMPORT command that creates a resource saves the model name and model type, but does not use the models attributes.

DESC(descriptor_name)

Specifies the name of the descriptor to use as a model to define this descriptor.

RSC(resource_name)

Specifies the name of the resource to use as a model to define this descriptor.

NAME

Specifies the 1-8 character name of the descriptor. Names must be alphanumeric (A through Z, 0 through 9, #, \$, and @). All program names must begin with an alphabetic character (A through Z, #, \$, and @) followed by 0 - 7 alphanumeric characters. Names cannot include a blank, comma, period, hyphen, or equal sign. Names cannot begin with DFS, except for DFSIVPxx and DFSSAMxx. Names cannot be BASICEDT, DBCDM, DBF#FPU0, DBRC, ISCEDT, MSDB, SDB, or WTOR. Each local program name must be unique. If the descriptor is defined with BMPTYPE(N) and FP(N), the program name and associated PSB name must be the same. A program resource and a program descriptor can have the same name.

SET

Specifies the attributes of the descriptor to be created. If the LIKE keyword is omitted, attributes not specified take the value defined in the default descriptor, which is either IMS descriptor DFSDSPG1 or user-defined. If the LIKE keyword is specified, attributes not specified take the value defined in the model.

BMPTYPE()

BMP type option. Specifies whether the program executes in a BMP type region or not. A BMP type region might be a BMP region or a JBP region.

- N** The program does not execute in a BMP type region. It can execute in an IMS TM MPP, JMP, or IFP region or it can use either the ODBA or DRA interface. This specification should be used for programs running in IMS TM MPP, JMP, and IFP regions, or PSBs scheduled by CICS programs using DBCTL and other users of the DRA interface. This is the default.
- Y** The program executes in a BMP type region. It can execute in an IMS BMP region or a JBP region. Any associated transactions are assigned normal and limit priority values of zero.

DEFAULT

Specifies whether the descriptor is the default.

- N** The descriptor is not the default.

- Y** The descriptor is the default, which resets the existing default descriptor to DEFAULT(N). When a descriptor or resource is created without the LIKE keyword, any attribute not specified on the CREATE command takes the value defined in the default descriptor. Only one descriptor can be defined as the default for a resource type. IMS defines a default program descriptor called DFSDSPG1, where all attributes are defined with the default value. Defining a user-defined descriptor as the default overrides the IMS-defined descriptor. Since only one program descriptor can be the default at one time, only one program name can be specified with DEFAULT(Y).

DOPT

Specifies the dynamic option.

- N** The PSB associated with the program is not to be located dynamically. The PSB must exist in ACBLIB, otherwise the program is set to a NOTINIT status and cannot be scheduled. This is the default.
- Y** The PSB associated with this program is located dynamically. Each time the program associated with this PSB is scheduled, the latest copy of the PSB is loaded from ACBLIB. The PSB does not need to be in any data set defined for ACBLIB until it is actually required to process a transaction. A new version of the PSB can be defined in ACBLIB and is picked up the next time the PSB is scheduled. DOPT PSBs referencing DBDs that are missing from ACBLIB cannot be scheduled. When the program terminates, the PSB is deleted from the PSB pool.

Keyword combination rules include the following:

- DOPT(Y) and GPSB(Y) are mutually exclusive.
- DOPT(Y) and LANG(JAVA) is a valid combination.
- LANG is invalid with GPSB(N), except if DOPT(Y) and LANG(JAVA).
- LANG(JAVA), DOPT(Y), and GPSB(N) is a valid combination.
- RESIDENT(Y) and DOPT(Y) are mutually exclusive.
- SCHDTYPE(PARALLEL) and DOPT(Y) are mutually exclusive.

FP Specifies the Fast Path option.

- E** The program is a Fast Path-exclusive program. This implicitly defines a wait-for-input (WFI) program. Either a transaction or a routing code that can be assigned by the user Input Edit/Routing exit routine must be defined for the Fast Path-exclusive program, in order for this program to be usable.

Fast Path must be defined in the IMS system.

- N** The program is not a Fast Path-exclusive program. This is the default. When FP(N) is specified, any attempt to use Fast Path resources or commands will yield unpredictable results.

Keyword combination rules include the following:

- FP(E) requires that Fast Path be defined.
- LANG(JAVA) and FP(E) are mutually exclusive.
- BMPTYPE(N) and FP(E) are mutually exclusive.

GPSB

Specifies the generated PSB option.

- N** The PSB associated with the program is not generated by IMS. The PSB

must exist in ACBLIB, otherwise the program is set to a NOTINIT status and cannot be scheduled. This is the default.

- Y** The PSB associated with the program is generated by IMS. It is not loaded from ACBLIB. The scheduling process of all environments generates a PSB containing an I/O PCB and an alternate modifiable PCB. You do not need to perform the PSBGEN and ACBGEN. The generated PSB contains an I/O PCB named IOPCBbbb and a modifiable, alternate PCB named TPPCB1bb. With an alternate modifiable PCB, an application can use the CHNG call to change the output destination and send output to a destination other than the input destination.

Keyword combination rules include the following:

- DOPT(Y) and GPSB(Y) are mutually exclusive.
- DOPT(Y) and LANG(JAVA) is a valid combination.
- GPSB(Y) requires LANG.
- LANG is invalid with GPSB(N), except if DOPT(Y) and LANG(JAVA).
- LANG(JAVA), DOPT(Y), and GPSB(N) is a valid combination.
- RESIDENT(Y) and GPSB(Y) are mutually exclusive.

LANG

Specifies the language interface of the program for a GPSB.

LANG parameter	Meaning
ASSEM	Assembler
COBOL	COBOL
JAVA	Java
PASCAL	Pascal
PLI	PL/I

Keyword combination rules include the following:

- LANG is invalid with GPSB(N), except if DOPT(Y) and LANG(JAVA).
- DOPT(Y) and LANG(JAVA) is a valid combination.
- LANG(JAVA), DOPT(Y), and GPSB(N) is a valid combination.
- LANG(JAVA) and FP(E) are mutually exclusive.

RESIDENT

Specifies the resident option.

- N** The PSB associated with the program is not made resident in storage. The PSB is loaded at scheduling time. This is the default.
- Y** The PSB associated with the program is made resident in storage immediately. IMS loads the PSB and initializes it. A resident PSB is accessed in local storage, which avoids I/O to the ACBLIB. In an online environment, the PSB control blocks are stored in the ACBLIB. Resident PSBs are loaded by IMS restart, a CREATE PGM or an UPDATE PGM command that defines the PSB as resident.

Keyword combination rules include the following:

- DOPT(Y) and RESIDENT(Y) are mutually exclusive.
- GPSB(Y) and RESIDENT(Y) are mutually exclusive.

SCHDTYPE

Specifies whether this program can be scheduled into more than one message region or batch message region simultaneously.

PARALLEL

The program can be scheduled in multiple regions simultaneously. This is the default.

SERIAL

The program can only be scheduled in one region at a time.

Keyword combination rules include the following:

- DOPT(Y) and SCHDTYPE(PARALLEL) are mutually exclusive.

TRANSTAT

Specifies whether transaction level statistics should be logged. The value specified has meaning only if the descriptor is a JBP or a non-message driven BMP. If Y is specified, transaction level statistics are written to the log in a X'56FA' log record.

N Transaction level statistics should not be logged.

Y Transaction level statistics should be logged.

The TRANSTAT keyword is optional. If a value is not specified for the TRANSTAT keyword, the system default is used. The system default for the transaction level statistics parameter is set with the TRANSTAT parameter in the DFSDFxxx PROCLIB member. If a value is not specified for the TRANSTAT parameter, the system default is set to N. The TRANSTAT keyword on the CREATE PGM or CREATE PGMDESC command gives the user the ability to override the system default when creating a program or program descriptor.

Usage notes

Descriptors exist for the life of the IMS unless they are deleted using a DELETE command. The resources and descriptors are recoverable across an IMS warm start or emergency restart. Resources and descriptors are lost if IMS is cold started, unless cold start imports definitions that were exported while IMS was up.

The CREATE PGMDESC command can be issued only through the Operations Manager API. This command applies to DB/DC, DBCTL and DCCTL systems. This command is not valid on the XRF alternate, RSR tracker, or FDBR region. The CREATE command is not valid if online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC or MODBLKS not defined).

Output fields

The following table shows the CREATE PGMDESC output fields. The columns in the table are as follows:

Short label

Contains the short label generated in the XML output.

Keyword

Identifies keyword on the command that caused the field to be generated. N/A appears for output fields that are always returned. *error* appears for output fields that are returned only in case of an error.

Meaning

Provides a brief description of the output field.

Table 109. Output fields for the CREATE PGMDESC command

Short label	Keyword	Meaning
CC	N/A	Completion code.
CCTXT	<i>error</i>	Completion code text that briefly explains the meaning of the nonzero completion code.
DESC	PGMDESC	Program descriptor name.
MBR	N/A	IMSpIex member that built the output line.
OLDDEF	PGMDESC	Old default descriptor name, if this descriptor is made the default by specifying DEFAULT(Y). The old default descriptor is no longer the default.

Return, reason, and completion codes

The following table includes the return and reason codes and a brief explanation of the codes. The return or reason code returned for the command might also indicate an error from a CSL request.

Table 110. Return and reason codes for CREATE PGMDESC

Return code	Reason code	Meaning
X'00000000'	X'00000000'	Command completed successfully. The command output contains a line for each descriptor, accompanied by its completion code. See the completion code table for details.
X'00000008'	X'00002048'	Invalid SET attribute.
X'00000008'	X'00002106'	DOPT(Y) mutually exclusive with RESIDENT(Y). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'00002107'	DOPT(Y) mutually exclusive with SCHDTYPE(PARALLEL). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'0000210B'	FP(E) mutually exclusive with BMPTYPE(Y). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'0000210D'	FP(E) mutually exclusive with LANG(JAVA). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'00002113'	GPSB(Y) mutually exclusive with DOPT(Y). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'00002114'	GPSB(N) mutually exclusive with LANG.

Table 110. Return and reason codes for CREATE PGMDESC (continued)

Return code	Reason code	Meaning
X'00000008'	X'00002115'	GPSB(Y) mutually exclusive with RESIDENT(Y). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'00002117'	Invalid LIKE descriptor name.
X'00000008'	X'00002118'	Invalid LIKE resource name.
X'00000008'	X'00002131'	GPSB(Y) requires LANG to be specified.
X'00000008'	X'00002132'	DOPT(Y) not supported with LANG except for LANG(JAVA). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'00002133'	Multiple name parameters were specified with DEFAULT(Y). Only one descriptor can be the default at one time.
X'0000000C'	X'00003000'	Command was successful for some descriptors but failed for others. The command output contains a line for each descriptor, accompanied by its completion code. See the completion code table for details.
X'0000000C'	X'00003004'	Command was not successful for any of the descriptors. The command output contains a line for each descriptor, accompanied by its completion code. See the completion code table for details.
X'00000010'	X'0000400C'	Command is not valid on the XRF alternate.
X'00000010'	X'00004014'	Command is not valid on the RSR tracker.
X'00000010'	X'00004024'	No FP defined, so FP(E) invalid.
X'00000010'	X'00004120'	Online change phase is in progress.
X'00000010'	X'00004204'	Model is quiesced. Cannot quiesce model.
X'00000010'	X'00004300'	Command is not allowed because online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC, or MODBLKS not defined).
X'00000014'	X'00005004'	DFSOCMD response buffer could not be obtained.
X'00000014'	X'00005008'	DFSPOOL storage could not be obtained.
X'00000014'	X'0000500C'	AWE could not be obtained.
X'00000014'	X'00005010'	Unable to obtain latch.

Errors unique to the processing of this command are returned as completion codes. The following table includes an explanation of the completion codes.

Table 111. Completion codes for the CREATE PGMDESC command

Completion code	Completion code text	Meaning
0		Command completed successfully for program descriptor.
11	RESOURCE ALREADY EXISTS	Program descriptor already exists.

Table 111. Completion codes for the CREATE PGMDESC command (continued)

Completion code	Completion code text	Meaning
5F	INVALID CHARACTERS IN NAME	Name is invalid because it contains an invalid character.
61	DFSBCB STORAGE ERROR	Request to get BCB storage for PDIR control block failed.
8A	WILDCARD PARAMETER NOT SUPPORTED	The CREATE command does not support wildcard parameters. You must explicitly specify the names of the descriptors you want to create.
93	RESERVED NAME	Name is reserved. For example, name starts with DFS (except for DFSSAMxx or DFSIVPxx), or is an IMS reserved name such as BASICEDT or WTOR.

Examples

The following are examples of the CREATE PGMDESC command:

Example 1 for CREATE PGMDESC command

TSO SPOC input:

```
CREATE PGMDESC NAME(FPEDESC) SET(DOPT(Y) FP(E) BMPTYPE(N),SCHDTYPE(SERIAL))
```

TSO SPOC output:

```
DescName  MbrName  CC
FPEDESC   IMS1      0
```

OM API input:

```
CMD(CREATE PGMDESC NAME(FPEDESC) SET(DOPT(Y) FP(E) BMPTYPE(N),SCHDTYPE(SERIAL)))
```

OM API output:

```
<imsout>
<ctl>
<omname>OM10M </omname>
<omvsn>1.3.0</omvsn>
<xm1vsn>20 </xm1vsn>
<stime>2006.254 22:51:06.632728</stime>
<stotime>2006.254 22:51:06.633257</stotime>
<staseq>BF645AD6D921890E</staseq>
<stoseq>BF645AD6D9429A8E</stoseq>
<rqsttkn1>USRT011 10155106</rqsttkn1>
<rc>00000000</rc>
<rsn>00000000</rsn>
</ctl>
<cmd>
<master>IMS1 </master>
<userid>USRT011 </userid>
<verb>CRE </verb>
<kwd>PGMDESC </kwd>
<input>CREATE PGMDESC NAME(FPEDESC) SET(DOPT(Y) FP(E)
      BMPTYPE(N),SCHDTYPE(SERIAL)) </input>
</cmd>
<cmdrsphdr>
<hdr slbl="DESC" llbl="DescName" scope="LCL" sort="a" key="1"
```

```

scroll="no" len="8" dtype="CHAR" align="left" />
<hdr slbl="MBR" llbl="MbrName" scope="LCL" sort="a" key="2" scroll="no"
len="8" dtype="CHAR" align="left" />
<hdr slbl="CC" llbl="CC" scope="LCL" sort="n" key="0" scroll="yes"
len="4" dtype="INT" align="right" skipb="no" />
<hdr slbl="CCTXT" llbl="CCText" scope="LCL" sort="n" key="0"
scroll="yes" len="*" dtype="CHAR" skipb="yes" align="left" />
</cmdrsphdr>
<cmdrspdata>
<rsp>DESC(FPEDESC ) MBR(IMS1) CC( 0) </rsp>
</cmdrspdata>
</imsout>

```

Explanation: Creates a descriptor with attributes appropriate for a Fast Path exclusive program. Subsequent Fast Path exclusive programs can be created more easily by using this descriptor.

Related concepts:

 How to interpret CSL request return and reason codes (System Programming APIs)

Related reference:

Chapter 2, “Command keywords and their synonyms,” on page 57

CREATE RTC command

Use the CREATE RTC command to create a Fast Path routing code that can be used by the Fast Path Input Edit/Routing Exit Routine (DBFHAGU0) to route a transaction to a different application program within the same load balancing group for processing.

Subsections:

- “Environment”
- “Syntax” on page 209
- “Keywords” on page 209
- “Usage notes” on page 210
- “Output fields” on page 211
- “Return, reason, and completion codes” on page 211
- “Examples” on page 213

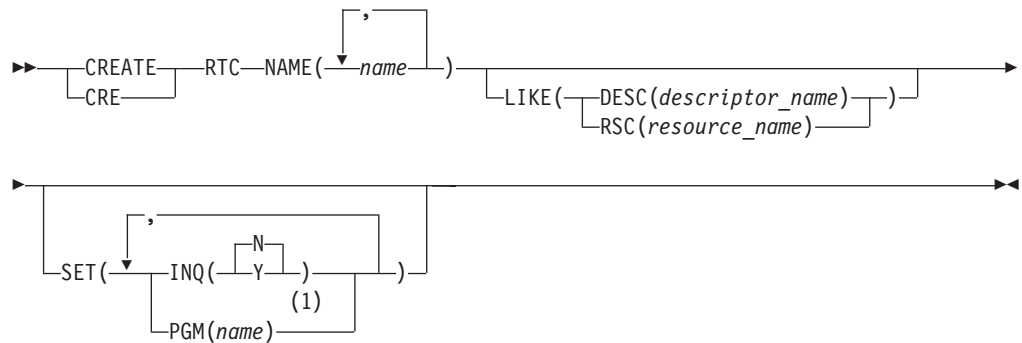
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 112. Valid environments for the CREATE RTC command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
CREATE RTC	X		X
LIKE	X		X
NAME	X		X
SET	X		X

Syntax



Notes:

- 1 The PGM() keyword is required if the default descriptor or other descriptor from which the resource is being created does not already have a program defined.

Default values shown in this syntax diagram reflect the default values that are defined in the IMS routing code descriptor, DBFDSRT1. If you define another descriptor as the default with a CREATE or UPDATE RTCDESC command, the default values shown in this syntax diagram might not match the value defined in the current default descriptor.

Keywords

The following keywords are valid for the CREATE RTC command:

LIKE

Specifies that the resource is created using an existing resource or descriptor as a model, instead of the default descriptor. The default descriptor is either the IMS descriptor DBFDSRT1, or user-defined. The model type can either be a descriptor (DESC), or a resource (RSC). The new resource is created with all the same attributes as the model, except for the DEFAULT(Y) value. Attributes set explicitly by the CREATE command override the model attributes. Later changes to the model are not propagated to resources or descriptors that were created from it.

QUERY commands can be used to display the model name and model type used to create the resource. The model name and type returned from the QUERY command are provided for informational purposes only. The EXPORT command exports a resource definition, including the model name and model type, to the definition member. The IMPORT command imports a resource definition, including the model name and model type, from the definition member. An IMPORT command that creates a resource saves the model name and model type, but does not use the models attributes.

When LIKE is used on a CREATE command, the models current attributes are used to set the attributes of the newly created resource.

DESC(descriptor_name)

Specifies the name of the descriptor to use as a model to define this resource.

RSC(resource_name)

Specifies the name of the resource to use as a model to define this resource.

NAME

Specifies the one- to eight-character alphanumeric routing code. Names must be alphanumeric (A through Z, 0 through 9, #, \$, and @). Names cannot include a blank, comma, period, hyphen, or equal sign. Names cannot begin with DFS, except for DFSIVPxx and DFSSAMxx. Names cannot be BASICEDT, DBCDM, DBFDSRT1, DBRC, ISCEDT, MSDB, SDB, or WTOR. Routing codes can be duplicates of either transaction names or logical terminal names, but each must be unique within the set of routing codes. A set of routing codes is the group of all routing codes associated with the same program. A routing code resource and a routing code descriptor can have the same name.

SET

Specifies the attributes of the routing code to be created. If the LIKE keyword is omitted, attributes not specified take the value defined in the default descriptor, which is either IMS descriptor DBFDSRT1 or user-defined. If the LIKE keyword is specified, attributes not specified take the value defined in the model.

INQ

- N** This is not an inquiry transaction. This is the default.
- Y** This is an inquiry transaction. Any message associated with the routing code is an inquiry transaction. This should be specified only for transactions that do not cause a change to a database. Programs are prohibited from issuing Insert, Delete, or Replace calls to a database when processing a transaction defined as INQ(Y).

PGM

Specifies the name of the program associated with the routing code. For a CREATE RTC command, the program must exist and be defined with a BMPTYPE(N). The PGM() keyword is required if the default descriptor or other descriptor from which the resource is being created does not already have a program defined.

Usage notes

Resources exist for the life of the IMS unless they are deleted using a DELETE command. The resources are recoverable across an IMS warm start or emergency restart. Resources are lost if IMS is cold started, unless cold start imports definitions that were exported while IMS was up.

The CREATE RTC command is similar to local online change (using a /MODIFY command) or global online change (INITIATE OLC) for routing code resources in the MODBLKS data set, except that routing codes are added dynamically.

The CREATE RTC command can be issued only through the Operations Manager API. Fast Path must be installed on the system. This command applies to DB/DC and DCCTL systems. This command is not valid on the XRF alternate, RSR tracker, or FDBR region. The CREATE command is not valid if online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC or MODBLKS not defined).

Output fields

The following table shows the CREATE RTC output fields. The columns in the table are as follows:

Short label

Contains the short label generated in the XML output.

Keyword

Identifies keyword on the command that caused the field to be generated. N/A appears for output fields that are always returned. *error* appears for output fields that are returned only in case of an error.

Meaning

Provides a brief description of the output field.

Table 113. Output fields for the CREATE RTC command

Short label	Keyword	Meaning
CC	N/A	Completion code.
CCTXT	<i>error</i>	Completion code text that briefly explains the meaning of the non-zero completion code.
MBR	N/A	IMSplex member that built the output line.
RTC	RTC	Routing code name.

Return, reason, and completion codes

The following table includes the return and reason codes and a brief explanation of the codes. The return or reason code returned for the command might also indicate an error from a CSL request.

Table 114. Return and reason codes for CREATE RTC

Return code	Reason code	Meaning
X'00000000'	X'00000000'	Command completed successfully. The command output contains a line for each resource, accompanied by its completion code. See the completion code table for details.
X'00000008'	X'00002048'	Invalid SET attribute.
X'00000008'	X'00002117'	Invalid LIKE descriptor name.
X'00000008'	X'00002118'	Invalid LIKE resource name.
X'00000008'	X'00002120'	No PGM() defined.
X'00000008'	X'00002123'	Invalid PGM name. PGM was specified explicitly, or gotten from the model. If the IMS-defined descriptor DBFDSRT1 was used, the command failed because DBFDSRT1 defines no program name.
X'00000008'	X'00002133'	Multiple name parameters were specified with DEFAULT(Y). Only one descriptor can be the default at one time.
X'0000000C'	X'00003000'	Command was successful for some resources but failed for others. The command output contains a line for each resource, accompanied by its completion code. See the completion code table for details.

Table 114. Return and reason codes for CREATE RTC (continued)

Return code	Reason code	Meaning
X'0000000C'	X'00003004'	Command was not successful for any of the resources. The command output contains a line for each resource, accompanied by its completion code. See the completion code table for details.
X'00000010'	X'0000400C'	Command is not valid on the XRF alternate.
X'00000010'	X'00004014'	Command is not valid on the RSR tracker.
X'00000010'	X'00004024'	No Fast Path defined.
X'00000010'	X'00004120'	Online change phase is in progress.
X'00000010'	X'00004204'	Model is quiesced. Cannot quiesce model.
X'00000010'	X'00004300'	Command is not allowed because online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC, or MODBLKS not defined).
X'00000010'	X'0000431C'	Program is quiesced. Cannot quiesce program.
X'00000014'	X'00005004'	DFSOCMD response buffer could not be obtained.
X'00000014'	X'00005008'	DFSPOOL storage could not be obtained.
X'00000014'	X'0000500C'	AWE could not be obtained.
X'00000014'	X'00005010'	Unable to obtain latch.

Errors unique to the processing of this command are returned as completion codes. The following table includes an explanation of the completion codes.

Table 115. Completion codes for the CREATE RTC command

Completion code	Completion code text	Meaning
0		Command completed successfully for routing code.
11	RESOURCE ALREADY EXISTS	Routing code already exists.
17	ANOTHER CMD IN PROGRESS	Another command (such as DELETE PGM or UPDATE PGM) is in progress for the program referenced by this routing code.
5F	INVALID CHARACTERS IN NAME	Name is invalid because it contains an invalid character.
61	DFSBCB STORAGE ERROR	Request to get BCB storage for RCTE control block failed.
7A	RTC/FP(N) PGM CONFLICT	Routing code to be created conflicts with program defined as non-Fast Path FP(N).
8A	WILDCARD PARAMETER NOT SUPPORTED	The CREATE command does not support wildcard parameters. You must explicitly specify the names of the resources you want to create.
90	INTERNAL ERROR	Internal error.

Table 115. Completion codes for the CREATE RTC command (continued)

Completion code	Completion code text	Meaning
93	RESERVED NAME	Name is reserved. For example, name starts with DFS (except for DFSSAMxx or DFSIVPxx), or is an IMS reserved name such as BASICEDT or WTOR.

Examples

The following are examples of the CREATE RTC command:

Example 1 for CREATE RTC command

TSO SPOC input:

```
CRE RTC (NAME(RTC00001)) LIKE(RSC(TXCDRN14))
```

TSO SPOC output:

```
RtcName MbrName CC
RTC00001 IMS1 0
```

OM API input:

```
CMD(CRE RTC (NAME(RTC00001)) LIKE(RSC(TXCDRN14)))
```

OM API output:

```
<imsout>
<ctl>
<omname>OM10M </omname>
<omvsn>1.3.0</omvsn>
<xm1vsn>20 </xm1vsn>
<statime>2006.254 23:36:59.043090</statime>
<stotime>2006.254 23:36:59.043761</stotime>
<staseq>BF646517C0512E05</staseq>
<stoseq>BF646517C07B1705</stoseq>
<rqsttkn1>USRT011 10163658</rqsttkn1>
<rc>00000000</rc>
<rsn>00000000</rsn>
</ctl>
<cmd>
<master>IMS1 </master>
<userid>USRT011 </userid>
<verb>CRE </verb>
<kwd>RTC </kwd>
<input>CRE RTC (NAME(RTC00001)) LIKE(RSC(TXCDRN14)) </input>
</cmd>
<cmdrsphdr>
<hdr slbl="RTC" llbl="RtcName" scope="LCL" sort="a" key="1" scroll="no"
len="8" dtype="CHAR" align="left" />
<hdr slbl="MBR" llbl="MbrName" scope="LCL" sort="a" key="2" scroll="no"
len="8" dtype="CHAR" align="left" />
<hdr slbl="CC" llbl="CC" scope="LCL" sort="n" key="0" scroll="yes"
len="4" dtype="INT" align="right" />
</cmdrsphdr>
<cmdrspdata>
<rsp>RTC(RTC00001) MBR(IMS1) CC( 0) </rsp>
</cmdrspdata>
</imsout>
```

TSO SPOC input:

```
QRY RTC (NAME(RTC0*)) SHOW(MODEL,INQ,PGM,DEFNTYPE)
```

TSO SPOC output:

Rtcode	MbrName	CC	PgmName	Inq	ModelName	ModelType	DefnType
RTC00001	IMS1	0	DDLTRN14	N	TXCDRN14	RSC	CREATE

Explanation: A CREATE RTC command is issued to create routing code RTC00001 like an already existing routing code called TXCDRN14. The QRY RTC command shows the model name TXCDRN14, specified by the LIKE keyword, and model type RSC, for routing code TXCDRN14.

Related concepts:

 How to interpret CSL request return and reason codes (System Programming APIs)

Related reference:

Chapter 2, “Command keywords and their synonyms,” on page 57

CREATE RTCDESC command

Use the CREATE RTCDESC command to create Fast Path routing code descriptors.

A descriptor is a model that can be used to create routing code descriptors or resources. A descriptor is created with a value set for every attribute. Attributes not explicitly specified on the CREATE command take the default value. Any routing code resource or descriptor can be created using this descriptor as a model, by specifying the CREATE command with LIKE(DESC(descriptor_name)).

Subsections:

- “Environment”
- “Syntax” on page 215
- “Keywords” on page 215
- “Usage notes” on page 216
- “Output fields” on page 217
- “Return, reason, and completion codes” on page 217
- “Examples” on page 219

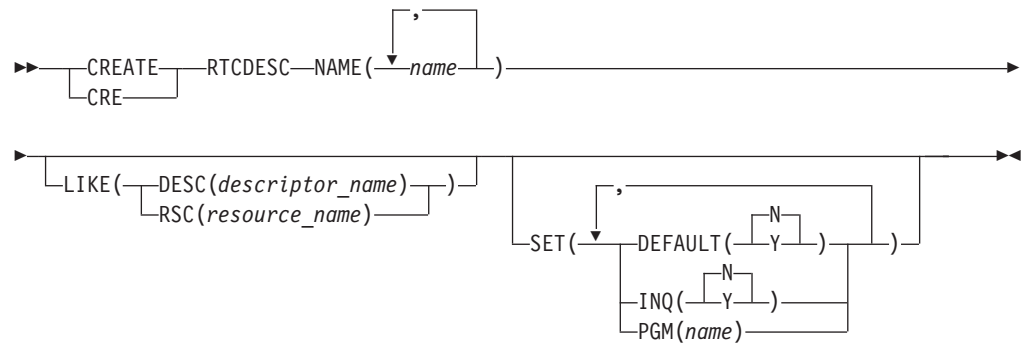
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 116. Valid environments for the CREATE RTCDESC command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
CREATE RTCDESC	X		X
LIKE	X		X
NAME	X		X
SET	X		X

Syntax



Default values shown in this syntax diagram reflect the default values that are defined in the IMS routing code descriptor, DBFDSRT1. If you define another descriptor as the default with a CREATE or UPDATE RTCDESC command, the default values shown in this syntax diagram might not match the value defined in the current default descriptor.

Keywords

The following keywords are valid for the CREATE RTCDESC command:

LIKE

Specifies that the descriptor is created using an existing resource or descriptor as a model, instead of the default descriptor. The default descriptor is either the IMS descriptor DBFDSRT1, or user-defined. The model type can either be a descriptor (DESC), or a resource (RSC). The descriptor is created with all the same attributes as the model, except for the DEFAULT(Y) value. Attributes set explicitly by the CREATE command override the model attributes. DEFAULT(Y) must be specified explicitly to make a descriptor the default descriptor. Later changes to the model are not propagated to resources or descriptors that were created from it.

QUERY commands can be used to display the model name and model type used to create the descriptor or resource. The model name and type returned from the QUERY command are provided for informational purposes only. The EXPORT command exports a resource definition including the model name and model type to the definition member. The IMPORT command imports a resource definition including the model name and model type from the definition member. An IMPORT command that creates a resource saves the model name and model type, but does not use the model's attributes.

When LIKE is used on a CREATE command, the model's current attributes are used to set the attributes of the newly-created resource or descriptor, except for the default attribute.

DESC(descriptor_name)

Specifies the name of the descriptor to use as a model to define this descriptor.

RSC(resource_name)

Specifies the name of the resource to use as a model to define this descriptor.

NAME

Specifies the one- to eight-character alphanumeric routing code descriptor. Names must be alphanumeric (A through Z, 0 through 9, #, \$, and @). Names cannot include a blank, comma, period, hyphen, or equal sign. Names cannot begin with DFS, except for DFSIVPxx and DFSSAMxx. Names cannot be BASICEDT, DBCDM, DBFDSRT1, DBRC, ISCEDT, MSDB, SDB, or WTOR. Routing codes can be duplicates of either transaction names or logical terminal names, but each must be unique within the set of routing codes. A set of routing codes is the group of all routing codes associated with the same program. A routing code resource and a routing code descriptor can have the same name.

SET

Specifies the attributes of the routing code descriptor to be created. If the LIKE keyword is omitted, attributes not specified take the value defined in the default descriptor, which is either IMS descriptor DBFDSRT1 or user-defined. If the LIKE keyword is specified, attributes not specified take the value defined in the model.

DEFAULT

Specifies whether the descriptor is the default.

- N** The descriptor is not the default.
- Y** The descriptor is the default, which resets the existing default descriptor to DEFAULT(N). When a descriptor or resource is created without the LIKE keyword, any attribute not specified on the CREATE command takes the value defined in the default descriptor. Only one descriptor can be defined as the default for a resource type. IMS defines a default routing code descriptor called DBFDSRT1, where all attributes are defined with the default value. Defining a user-defined descriptor as the default overrides the IMS-defined descriptor. Since only one routing code descriptor can be the default at one time, only one routing code parameter may be specified with DEFAULT(Y).

INQ

- N** This is not an inquiry transaction. This is the default.
- Y** This is an inquiry transaction. Any message associated with the routing code descriptor is an inquiry transaction. This should be specified only for transactions that do not cause a change to a database. Programs are prohibited from issuing Insert, Delete, or Replace calls to a database when processing a transaction defined as INQ(Y).

PGM

Specifies the name of the program associated with the routing code descriptor.

Usage notes

Descriptors exist for the life of the IMS unless they are deleted using a DELETE command. The resources and descriptors are recoverable across an IMS warm start or emergency restart. Descriptors are lost if IMS is cold started, unless cold start imports definitions that were exported while IMS was up.

The CREATE RTCDESC command can only be issued through the Operations Manager API. Fast Path must be installed on the system. This command applies to DB/DC and DCCTL systems. This command is not valid on the XRF alternate, RSR tracker, or FDBR region. The CREATE command is not valid if online change

for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC or MODBLKS not defined).

Output fields

The following table shows the CREATE RTCDESC output fields. The columns in the table are as follows:

Short label

Contains the short label generated in the XML output.

Keyword

Identifies keyword on the command that caused the field to be generated. N/A appears for output fields that are always returned. *error* appears for output fields that are returned only in case of an error.

Meaning

Provides a brief description of the output field.

Table 117. Output fields for the CREATE RTCDESC command

Short label	Keyword	Meaning
CC	N/A	Completion code.
CCTXT	<i>error</i>	Completion code text that briefly explains the meaning of the non-zero completion code.
DESC	RTCDESC	Routing code descriptor name.
MBR	N/A	IMSpIex member that built the output line.
OLDDEF	RTCDESC	Old default descriptor name, if this descriptor is made the default by specifying DEFAULT(Y). The old default descriptor is no longer the default.

Return, reason, and completion codes

The following table includes the return and reason codes and a brief explanation of the codes. The return or reason code returned for the command might also indicate an error from a CSL request.

Table 118. Return and reason codes for CREATE RTCDESC

Return code	Reason code	Meaning
X'00000000'	X'00000000'	Command completed successfully. The command output contains a line for each descriptor, accompanied by its completion code. See the completion code table for details.
X'00000008'	X'00002048'	Invalid SET attribute.
X'00000008'	X'00002117'	Invalid LIKE descriptor name.
X'00000008'	X'00002118'	Invalid LIKE resource name.
X'00000008'	X'00002123'	Invalid PGM name. PGM was specified explicitly, or gotten from the model. If the IMS-defined descriptor DBFDSRT1 was used, the command failed because DBFDSRT1 defines no program name.
X'00000008'	X'00002137'	Multiple name parameters specified with DEFAULT(Y) is invalid. Only one descriptor can be the default at one time.

Table 118. Return and reason codes for CREATE RTCDESC (continued)

Return code	Reason code	Meaning
X'0000000C'	X'00003000'	Command was successful for some descriptors but failed for others. The command output contains a line for each descriptor, accompanied by its completion code. See the completion code table for details.
X'0000000C'	X'00003004'	Command was not successful for any of the descriptors. The command output contains a line for each descriptor, accompanied by its completion code. See the completion code table for details.
X'00000010'	X'0000400C'	Command is not valid on the XRF alternate.
X'00000010'	X'00004014'	Command is not valid on the RSR tracker.
X'00000010'	X'00004024'	No Fast Path defined.
X'00000010'	X'00004120'	Online change phase is in progress.
X'00000010'	X'00004204'	Model is quiesced. Cannot quiesce model.
X'00000010'	X'00004300'	Command is not allowed because online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC, or MODBLKS not defined).
X'00000014'	X'00005004'	DFSOCMD response buffer could not be obtained.
X'00000014'	X'00005008'	DFSPOOL storage could not be obtained.
X'00000014'	X'0000500C'	AWE could not be obtained.
X'00000014'	X'00005010'	Unable to obtain latch.

Errors unique to the processing of this command are returned as completion codes. The following table includes an explanation of the completion codes.

Table 119. Completion codes for the CREATE RTCDESC command

Completion code	Completion code text	Meaning
0		Command completed successfully for routing code descriptor.
11	RESOURCE ALREADY EXISTS	Routing code descriptor already exists.
17	ANOTHER CMD IN PROGRESS	Another command (such as DELETE PGM or UPDATE PGM) is in progress for the program referenced by this routing code descriptor.
5F	INVALID CHARACTERS IN NAME	Name is invalid because it contains an invalid character.
61	DFSBCB STORAGE ERROR	Request to get BCB storage for RCTE control block failed.
7A	RTC/FP(N) PGM CONFLICT	Routing code to be created conflicts with program defined as non-Fast Path FP(N).
8A	WILDCARD PARAMETER NOT SUPPORTED	CREATE command does not support wildcard parameters. You must explicitly specify the names of the resources you want to create.

Table 119. Completion codes for the CREATE RTCDESC command (continued)

Completion code	Completion code text	Meaning
90	INTERNAL ERROR	Internal error
93	RESERVED NAME	Name is reserved. For example, name starts with DFS (except for DFSSAMxx or DFSIVPxx), or is an IMS reserved name such as BASICEDT or WTOR.

Examples

The following are examples of the CREATE RTCDESC command:

Example 1 for CREATE RTCDESC command

TSO SPOC input:

```
CRE RTCDESC NAME(DRCTRN02,DRCTRN03) LIKE(RSC(FPTRN01)) SET(PGM(FPPSB03))
```

TSO SPOC output:

```
DescName MbrName CC
DRCTRN02 IMS1 0
DRCTRN03 IMS1 0
```

Explanation: A CREATE RTCDESC command is issued to create two routing code descriptors at IMS1 in an IMSplex. Routing code descriptors DRCTRN02 and DRCTRN03 are defined using the existing routing code resource called FPTRN01. Routing code FPTRN01 is defined with INQ(Y). Descriptors DRCTRN02 and DRCTRN03 are defined using routing code FPTRN01 as a model for the INQ(Y) attribute, but overriding the program name by explicitly specifying PGM(FPPSB03) on the command.

Related concepts:

 How to interpret CSL request return and reason codes (System Programming APIs)

Related reference:

Chapter 2, “Command keywords and their synonyms,” on page 57

CREATE TRAN command

Use the CREATE TRAN command to create a transaction code that causes the application program associated with the program resource defined by PGM() to be scheduled for execution in an IMS message processing region.

The transaction provides IMS with information that influences the application program scheduling algorithm. The program resource defined by PGM() keyword must exist for the CREATE TRAN command to complete successfully.

Subsections:

- “Environment” on page 220
- “Syntax” on page 220
- “Keywords” on page 222
- “Usage notes” on page 236

- “Output fields” on page 236
- “Return, reason, and completion codes” on page 237
- “Examples” on page 242

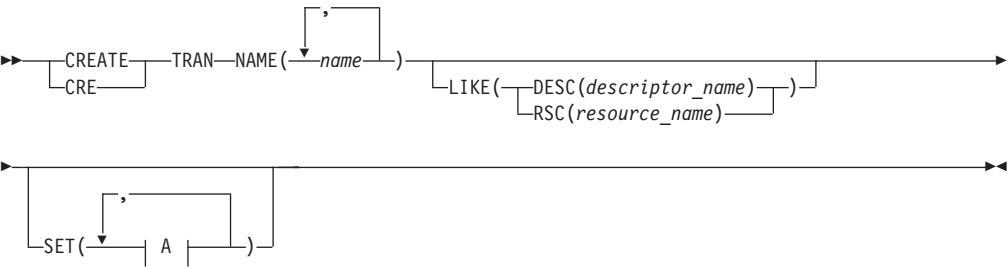
Environment

The following table lists the environments (DB/BC, DBCTL, and DCCTL) from which the command keywords can be issued.

Table 120. Valid environments for the CREATE TRAN command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
CREATE TRAN	X		X
LIKE	X		X
NAME	X		X
SET	X		X

Syntax



A:

AOCMD (☐ N ☐ CMD ☐ TRAN ☐ Y)	
CLASS (☐ 1 ☐ class)	
CMTMODE (☐ SNGL ☐ MULT)	
CONV (☐ N ☐ Y)	
DCLWA (☐ N ☐ Y)	
DIRROUTE (☐ N ☐ Y)	
EDITRTN (name)	
EDITUC (☐ Y ☐ N)	
EMHBSZ (size)	
EXPRTIME (seconds)	
FP (☐ N ☐ E ☐ p)	
INQ (☐ N ☐ Y)	
LCT (☐ 65535 ☐ value)	
LPRI (☐ 1 ☐ value)	
MAXRGN (☐ 0 ☐ number)	
MSGTYPE (☐ MULTSEG ☐ SNGLSEG)	
MSNAME (name)	
NPRI (☐ 1 ☐ value)	
PARLIM (☐ 65535 ☐ value)	
PGM (name)	
PLCT (☐ 65535 ☐ value)	
PLCTTIME (☐ 6553500 ☐ hundredths of seconds)	
RECOVER (☐ Y ☐ N)	
REMOTE (☐ N ☐ Y)	
RESP (☐ N ☐ Y)	
SEGNO (☐ 0 ☐ number)	
SEGSZ (☐ 0 ☐ size)	
SERIAL (☐ N ☐ Y)	
SIDL (localsysid)	
SIDR (remotesysid)	
SPASZ (size)	
SPATRUNC (☐ R ☐ S)	
TRANSTAT (☐ N ☐ Y)	
WFI (☐ N ☐ Y)	

Default values shown in this syntax diagram reflect the default values that are defined in the IMS transaction descriptor, DFSDSTR1. If you define another descriptor as the default with a CREATE or UPDATE TRANDESC command, the default values shown in this syntax diagram might not match the value defined in the current default descriptor.

Keywords

The following keywords are valid for the CREATE TRAN command:

LIKE

Specifies that the resource is created using an existing resource or descriptor as a model, instead of the default descriptor. The default descriptor is either the IMS descriptor DFSDSTR1, or user-defined. The model type can either be a descriptor (DESC), or a resource (RSC). The new resource is created with all the same attributes as the model. Attributes set explicitly by the CREATE command override the model attributes. Later changes to the model are not propagated to resources or descriptors that were created from it.

The QUERY commands can be used to display the model name and model type used to create the resource. The model name and type returned from the QUERY command are provided for informational purposes only. The EXPORT command exports a resource definition, including the model name and model type, to the definition member. The IMPORT command imports a resource definition, including the model name and model type, from the definition member. An IMPORT command that creates a resource saves the model name and model type, but does not use the models attributes.

DESC(*descriptor_name*)

Specifies the name of the descriptor to use as a model to define this resource.

RSC(*resource_name*)

Specifies the name of the resource to use as a model to define this resource.

NAME

Specifies the 1-8 character name of the transaction. Names must be alphanumeric (A through Z, 0 through 9, #, \$, and @). Names cannot include a blank, comma, period, hyphen, or equal sign. Names cannot begin with DFS, except for DFSCONE, DFSIVPxx, and DFSSAMxx. Names cannot be BASICEDT, DBCDM, DBRC, ISCEDT, MSDB, SDB, or WTOR. A transaction resource and a transaction descriptor can have the same name. A transaction cannot have the same name as an lterm.

SET

Specifies the attributes of the transaction to be created. If the LIKE keyword is omitted, attributes not specified take the value defined in the default descriptor, which is either the IMS descriptor DFSDSTR1, or user-defined. If the LIKE keyword is specified, attributes not specified take the value defined in the model. A transaction must have the same characteristics in all systems where it is defined when it is shared. These characteristics include:

- Nonconversational/conversational
- SPA size if conversational
- Single-/multi-segment messages
- Noninquiry/inquiry

- Recoverable/nonrecoverable
- Response mode/non-response mode
- Fast Path exclusive/Fast Path potential/non-Fast Path

AOCMD

Specifies the AOI option that indicates whether the transaction can issue the type-1 AOI CMD call or the type-2 AOI ICMD call. If AOCMD is defined as CMD, TRAN, or Y, and the AOI1 execute parameter is defined as AOI1=N, no authorization checking is done, and the transaction is permitted to issue CMD and ICMD calls.

- N** Indicates that the transaction is not permitted to issue type-1 AOI CMD calls. The transaction is permitted to issue type-2 AOI ICMD calls.

CMD

Indicates that the transaction is permitted to issue type-1 AOI CMD calls and type-2 AOI ICMD calls. If the AOI1 execute parameter is defined as C, R, or A, authorization checking is based on which transactions can issue a particular command. In this case, the commands (or the first three characters of the commands) need to be defined to RACF or an equivalent product as a user. The type-1 AOI transactions must be defined as profiles under the TIMS class, and for each transaction, the commands it can issue must be specified. Defining AOCMD(CMD) requires you to create fewer user IDs than you need to create for the AOCMD(TRAN) definition. However, defining AOCMD(CMD) requires you to create or modify a larger number of resource profiles.

TRAN

Indicates that the transaction is permitted to issue type-1 AOI CMD calls and type-2 AOI ICMD calls. If the AOI1 execute parameter is defined as C, R, or A, the transaction code is used for authorization. The first authorization check results in the accessor environment element (ACEE) being built. This environment is kept for use by future authorization checks. The type-1 AOI transaction needs to be defined to RACF or an equivalent product as a user. The transactions will then be specified on RACF PERMIT statements for each command they are allowed to issue from a type-1 AOI transaction. Specifying AOI transactions as users to RACF might conflict with the name of a user already defined to RACF. If this occurs, then either the transaction name or the existing user name needs to be changed.

- Y** Indicates that the transaction is permitted to issue type-1 AOI CMD calls and type-2 AOI ICMD calls. If the AOI1 execute parameter is defined as C, R, or A, the user ID or the program name is used for authorization. For some environments, if a Get Unique call has not yet occurred, the program name is used for authorization.

CLASS

Specifies the transaction class, which is an attribute used to select a transaction for scheduling. A transaction can be scheduled if there is a message processing region available for that class. The value can be a number from 1 to 999. The default is 1. This value must not exceed the value given (by specification or default) on the MAXCLAS= keyword of the IMSCTRL macro.

Define CPI-C transactions with a different message class from that used for non-CPI-C transactions. IMS handles all CPI-C transactions as priority zero within the transaction class.

CMTMODE

Specifies when database updates and non-express output messages are committed. This operand affects emergency restart.

MULT

Database updates and non-express output messages are committed only when the application program terminates normally, when the processing limit count has been reached, or, in the case of a pseudo-WFI dependent region, when there are no more messages on the queue. For example, if five transactions are processed during a single schedule of a program, all five are committed only when the fifth one is completed and the program terminates. Until a transaction has been committed, locks for updated database records are not released and non-express output messages are not queued for output. If an application ends abnormally before committing its messages, emergency restart requeues all the messages that were processed within the commit scope and makes them available for reprocessing.

If the transaction results in the application calling an external subsystem, such as DB2, the Commit Verify exit provided by the external subsystem can determine whether CMTMODE(MULT) is supported. See documentation under the Commit Verify exit routine in *IMS Version 11 Exit Routines*.

SNGL

Database updates and non-express output messages are committed when the application program completes processing each transaction. IMS invokes commit processing either when the application program requests the next message (issues a GU to the IO-PCB), or when the application program terminates. If an application ends abnormally before committing its message, emergency restart requeues the message that was in process before the abend and makes it available for reprocessing. This is the default.

Note: The TRANSACT macro MODE keyword uses a default of MULT. The CREATE TRAN command CMTMODE keyword uses a default of SNGL.

Keyword combination rules include the following:

- CMTMODE(MULT) and CONV(Y) are mutually exclusive.
- CMTMODE(MULT) and WFI(Y) are mutually exclusive.

CONV

Specifies the conversation option.

N The transaction is not conversational. This is the default.

Y The transaction is conversational. The transaction message is destined for a conversational program. A conversational program processes transactions made up of several steps. A conversational program receives a message from a terminal, replies to the terminal, but saves the data from the transaction in a scratchpad area (SPA). When the person at the terminal enters more data, the program has the data it saved from the last message in the SPA, so it can continue processing the request without the person at the terminal having to enter the data again.

Keyword combination rules include the following:

- CMTMODE(MULT) and CONV(Y) are mutually exclusive.
- FP(E) and CONV(Y) are mutually exclusive.
- CONV(Y) requires SPASZ and SPATRUNC.

- RECOVER(N) and CONV(Y) are mutually exclusive.
- SPASZ and CONV(N) are mutually exclusive.
- SPATRUNC and CONV(N) are mutually exclusive.

DCLWA

Specifies the log write-ahead option. If not specified and the default descriptor is the IMS-defined descriptor DFSDSTR1, the value is defined to be the DFSDFxxx PROCLIB member DCLWA parameter at IMS cold start. Changing the DFSDFxxx DCLWA value across a restart has no effect on the default descriptor DCLWA value. If DCLWA is not defined in the DFSDFxxx PROCLIB member, the default is DCLWA=Y.

N IMS should not perform log write-ahead. Specify N if input message integrity and the consistency of output messages with associated database updates is not required. DCLWA does not apply to response mode or Fast Path input processing, and is ignored during IMS execution.

Y

IMS should perform log write-ahead for recoverable, nonresponse input messages and transaction output messages. This ensures the following:

- A nonresponse input transaction is made recoverable across IMS failures before IMS acknowledges receipt of the input.
- Database changes are made recoverable before IMS sends associated output reply messages.
- Information in the log buffers is written to the IMS log, before the associated input acknowledgment or output reply is sent to the terminal.

Define DCLWA(Y) for all VTAM terminal types.

DIRROUTE

Specifies the MSC directed routing option.

N The application program processing a transaction is not informed of the system which originated the transaction. The name of the originating LTERM is placed in the I/O PCB. This is the default.

Y The application program processing a transaction is informed of the system which originated the transaction, if MSC directed routing is used in a multiple IMS system configuration. An MSNAME corresponding to a logical path back to the originating system is placed in the I/O PCB.

EDITRTN

Specifies the 1- to 8-character name of your transaction input edit routine that edits messages before the program receives the message. This name must be alphanumeric (A through Z, 0 through 9, #, \$, and @). It must begin with an alphabetic character (A through Z, #, \$, @). It cannot include a blank, comma, period, hyphen, or equal. It cannot include the wildcard characters * or %.

The specified edit routine can either be an edit routine defined during the system definition process with the EDIT= parameter on the TRANSACT macro or it can be a new routine. If the routine is a new routine, the routine must reside in one of the RESLIB concatenated data sets. A maximum of 255 input edit routines are supported.

If the edit routine specified on the command is new to IMS, IMS attempts to load the routine from RESLIB. If the load fails, the command is rejected. If the edit routine specified is already defined to IMS, a decision is made whether to load a new copy of the routine or to use the existing copy. If the routine was

generated into the system, but there are no transactions referencing the routine, IMS first attempts to load a new copy of the module from RESLIB. If the load is successful, the dynamic copy of the edit routine is used. The generated copy cannot be used again unless IMS is cold started. If the load of the dynamic routine fails, the generated copy is used. If the edit routine was generated into the system and other transactions reference it, the generated copy of the module is used.

EDITRTN is used for a Fast Path potential transaction when the transaction is routed to IMS.

For input from LU 6.2 devices, the user edit exit routine DFSLUEE0 is called instead of the transaction input edit routine specified in EDITRTN.

Keyword combination rules include the following:

- FP(E) and EDITRTN are mutually exclusive.

EDITUC

Specifies the edit to uppercase option.

N The input data is not translated to uppercase. It can consist of upper and lowercase characters as entered from the terminal.

Y The input data is to be translated to uppercase before it is presented to the processing program. If FP(E) or FP(P), the transaction is to be translated to uppercase before being presented to the edit/routing exit routine. This is the default.

Specifying EDITUC(Y) for VTAM terminals prevents the transmission of embedded device control characters.

EMHBSZ

Specifies the EMH buffer size required to run the Fast Path transaction. This overrides the EMHL execution parameter. If EMHBSZ is not specified, the EMHL execution parameter value is used. The value can be a number from 0 to 30 720.

Keyword combination rules include the following:

- EMHBSZ>0 requires Fast Path to be defined.
- FP(N) and EMHBSZ>0 are mutually exclusive.

EXPTIME

Specifies the elapsed time in seconds that IMS can use to cancel the input transaction. After a transaction is submitted to IMS, the transaction could be delayed for processing because of a stopped transaction or a potential system slow down. In that case, the user or client application could time out before the transaction is processed. When IMS eventually schedules and processes the transaction, the response message is no longer wanted. With the elapsed time specified for the transaction, IMS can flag the input transaction as expired so that the system does not waste CPU cycles to process the unwanted transaction.

The value can be a number, in seconds, which can range from 0 to 65535. The default is 0, which means that no expiration time is set for this transaction. The transaction expiration attribute is supported by all of the IMS TM interfaces.

Restriction: The transaction expiration checking is not performed at the GU time for Fast Path transactions, IMS conversational transactions, and program-to-program switch transactions.

FP Specifies the Fast Path option.

- E** The transaction is processed exclusively as Fast Path. A Fast Path routing code by the same name is created. The program must be defined as Fast Path exclusive.
- N** The transaction is not a candidate for Fast Path processing. The program identified by PGM() must be defined as not Fast Path. This is the default.
- P** The transaction is a potential candidate for Fast Path processing. Fast Path-potential transactions must be able to run under two programs: a Fast Path exclusive program a non-Fast Path program. This CREATE TRAN command defines the non-Fast Path program with PGM(). A Fast Path exclusive program should be defined to which this transaction can be routed. Fast Path-potential transactions must be processed by a user edit/routing exit to determine whether the transaction is actually to be processed by IMS Fast Path. If it is to be processed by IMS Fast Path, the edit/routing exit routine associates the transaction with a routing code. This routing code identifies which Fast Path program is to process the transaction.

The program defined by PGM() must not be defined as Fast Path exclusive.

Keyword combination rules include the following:

- EDITRTN and FP(E) are mutually exclusive.
- FP(P) and FP(E) require Fast Path to be defined.
- CONV(Y) and FP(E) are mutually exclusive.
- MSGTYPE(MULTSEG) and FP(E) are mutually exclusive.
- MSGTYPE(MULTSEG) and FP(P) are mutually exclusive.
- MSNAME and FP(E) are mutually exclusive.
- MSNAME and FP(P) are mutually exclusive.
- RECOVER(N) and FP(E) are mutually exclusive.
- RECOVER(N) and FP(P) are mutually exclusive.
- RESP(N) and FP(E) are mutually exclusive.
- RESP(N) and FP(P) are mutually exclusive.
- SIDL and FP(E) are mutually exclusive.
- SIDL and FP(P) are mutually exclusive.
- SIDR and FP(E) are mutually exclusive.
- SIDR and FP(P) are mutually exclusive.

INQ

Specifies the inquiry option.

- N** This is not an inquiry transaction. This is the default.
- Y** This is an inquiry transaction. If INQ(Y) is specified, you can also specify whether this transaction should be recovered during an IMS emergency or normal restart using the RECOVER() parameter.

This option should be specified only for those transactions that, when entered, do not cause a change in any database. Programs are prohibited from issuing ISRT, DLET, or REPL calls to a database when scheduled to process a transaction defined as INQ(Y).

An application program cannot do an SQL INSERT, DELETE, or UPDATE when the IMS transaction is defined with INQ(Y).

Keyword combination rules include the following:

- RECOVER(N) and INQ(N) are mutually exclusive.

LCT

Specifies the limit count. This is the number that, when compared to the number of input transactions queued and waiting to be processed, determines whether the normal or limit priority value is assigned to this transaction. The value can be a number from 1 to 65535. The default is 65535.

The limit count value is ignored for a transaction processed by a BMP.

The limit count value is ignored in a shared-queues environment.

The limit count value does not apply to FP exclusive transactions and is ignored.

LPRI

Specifies the limit priority. This is the scheduling priority to which this transaction is raised when the number of input transactions enqueued and waiting to be processed is equal to or greater than the limit count value. The scheduling priority is an attribute used to select a transaction for scheduling. A transaction of higher priority is scheduled before a lower priority one, if they are defined with the same class. The value can be a number from 0 through 14. The default is 1.

When the limit priority is used and the scheduling priority is raised to the limit priority, the priority is not reduced to the normal priority until all messages enqueued for this transaction name are processed. If you do not want the limit priority for this transaction, define equal values for the normal priority and limit priority, and a limit count of 65535.

When a transaction is processed exclusively by a batch message program (BMP), define the limit priority as 0. If the program specified by PGM() is defined with a program type of batch, the current priority is forced to be 0. However, a batch message processing region (BMP) can process transactions with current scheduling priorities other than 0.

This priority also controls the priority of messages created by this transaction and sent to a destination in a remote system. See also the discussion on MSC priorities under the NPRI definition.

The limit priority value is ignored for a transaction processed by a BMP.

Scheduling ignores the limit priority value for batch programs. If the transaction refers to a batch program and a non-zero LPRI value is specified, it is set to 0.

The limit priority value is ignored in a shared queues environment.

MAXRGN

Specifies the maximum region count. This count value limits the number of message processing program (MPP) regions that can be concurrently scheduled to process a transaction. When the number of MPP regions is not limited, one transaction might monopolize all available regions. The value can be a number between 0 and the value specified on the MAXPST= control region parameter. MAXRGN(0) means that no limit is imposed. If you define the program with a scheduling type of SERIAL, omit the MAXRGN parameter or define it as 0.

Keyword combination rules include the following:

- PARLIM(65535) and MAXRGN>0 are mutually exclusive.
- SERIAL(Y) and MAXRGN>0 are mutually exclusive.

MSGTYPE

Specifies the message type (single segment or multiple segment). It specifies the time at which an incoming message is considered complete and available to be routed to an application program for subsequent processing.

If MSC-directed routing is used in a multiple IMS system configuration, IMS does not ensure that both the message and the transaction destined to process that message are either single segment or multiple segments.

MULTSEG

The incoming message can be more than one segment in length. It is not eligible for scheduling to an application program until an end-of-message indication is received, or a complete message is created by MFS. This is the default.

SNGLSEG

The incoming message is one segment in length. It becomes eligible for scheduling when the terminal operator indicates end-of-segment.

Keyword combination rules include the following:

- FP(E) and MSGTYPE(MULTSEG) are mutually exclusive.
- FP(P) and MSGTYPE(MULTSEG) are mutually exclusive.

MSNAME

Specifies the one- to eight-character name of the logical link path in a multiple IMS system configuration (MSC). A logical link path is a path between any two IMS systems. The IMS systems are identified by the remote system ID and the local system ID associated with the logical link path. The remote system ID identifies the system in which messages using this path are to be processed. The local system ID identifies this system. If this transaction is exported, the local and remote system IDs are exported, not the msname. For a CREATE TRAN command adding a remote transaction, the MSNAME must already be defined.

Keyword combination rules include the following:

- FP(E) and MSNAME are mutually exclusive.
- FP(P) and MSNAME are mutually exclusive.
- SIDL and MSNAME are mutually exclusive.
- SIDR and MSNAME are mutually exclusive.

NPRI

Specifies the normal scheduling priority. The scheduling priority is an attribute used to select a transaction for scheduling. A transaction of higher priority is scheduled before a lower priority one, if they are defined with the same class. When a transaction resource is created, the current priority (CPRI), or the scheduling priority, is initialized to the normal priority (NPRI). The normal priority is also assigned to a transaction as the current priority when the number of input transactions enqueued and waiting to be processed is less than the limit count value. The value can be a number from 0 through 14. The default is 1.

This priority also controls the priority of messages created by this transaction and sent to a destination in a remote system.

When a transaction is processed exclusively by a batch message program (BMP), code the normal priority as 0.

When a transaction is processed exclusively by a batch message program (BMP), define the limit priority as 0. If the program specified by PGM() is defined with a program type of batch, the current priority is forced to be 0. However, a batch message processing region (BMP) can process transactions with current scheduling priorities other than 0.

For remote transactions, the priority used to send the transaction to the processing system, which is termed the MSC link message priority. The three MSC link message priority groups are:

- Low
- Medium
- High

The low priority group consists of primary requests in the input terminal system. This group is assigned remote transaction priorities from 0 to 6. The medium group consists of secondary requests, responses, primary requests in an intermediate system, and primary requests in the input terminal system. This group is assigned a remote transaction priority of 7. The high group consists of primary requests in the input terminal system. Messages in this group are assigned remote transaction priorities from 8 to 14. Within each group, messages have a priority based on the current priority value of the transaction or remote transaction in the input terminal system for primary requests, and on the latest processing system for secondary requests and responses.

In an MSC configuration, the transaction priority determines the priority used to send messages inserted by this transaction across an MSC link. If the transaction inserts multiple messages to the same destination (for example, pages to a printer) and these messages must be sent in the order inserted, the normal and limit priority values should be the same. If the normal and limit priority values are not identical, messages inserted at a higher priority than previously inserted messages could arrive at their destination first. (This restriction does not apply to multiple segments of the same message.)

The normal priority value is ignored for a transaction processed by a BMP.

Scheduling ignores the normal priority value for batch programs. If the transaction refers to a batch program and a non-zero NPRI value is specified, it is set to 0.

PARLIM

Specifies the parallel processing limit count. This is the maximum number of messages that can currently be queued, but not yet processed, by each active message region currently scheduled for this transaction. This is the threshold value to be used when the associated program is defined with a scheduling type of parallel. An additional region is scheduled whenever the current transaction enqueue count exceeds the PARLIM value multiplied by the number of regions currently scheduled for this transaction.

The value can be a number from 0 to 32767 or 65535. PARLIM(0) indicates that any input message can cause a new region to be scheduled because the scheduling condition is always being met (the number of messages are greater than zero). If you specify PARLIM(0), you should specify a MAXRGN value to limit the number of regions that can be scheduled to process a particular transaction. PARLIM(65535) means that parallel processing is disabled and IMS allows the transaction to be scheduled in only one region at a time. PARLIM(65535) is the default.

The value specified for PARLIM applies to message processing programs (MPPs) only; it is not supported for batch message processing programs (BMPs).

If you define the transaction as serial or the program with a scheduling type as SERIAL, define PARLIM(65535).

In a shared-queues environment (when the scheduling type is PARALLEL), any PARLIM value other than 65535 causes a new region to be scheduled whenever the successful consecutive GU count exceeds the PARLIM value multiplied by the number of regions currently scheduled for this transaction. For shared-queues environments, the successful consecutive GU count is used instead of the queue count. New regions continue to be scheduled up to the maximum number of regions specified on MAXRGN.

The PARLIM keyword is not applicable to FPE transactions and should be allowed to default to 65535. A PARLIM value can be specified for FPE transactions, but it is ignored by scheduling. Specifying a PARLIM value that is not the default will result in a BAL status shown for an FPE transaction on commands such as /DISPLAY TRAN or QUERY TRAN. The PARLIM and BAL status can be ignored for FPE transactions.

Keyword combination rules include the following:

- MAXRGN>0 and PARLIM(65535) are mutually exclusive.
- SERIAL(Y) and PARLIM value 0 - 32767 are mutually exclusive.

PGM

Specifies the name of the program associated with the transaction.

For a CREATE TRAN command specified with REMOTE(N), the program must exist. PGM() is required, except for remote transactions defined with REMOTE(Y).

PLCT

Specifies the processing limit count. This is maximum number of messages sent to the application program by IMS for processing without reloading the application program. The value must be a number from 0 through 65535. PLCT(0) means the maximum number of messages sent to the application is one and the application program is reloaded before receiving a subsequent message. PLCT(65535) means that no limit is to be placed upon the number of messages processed at a single program load. Values 1 through 65535 are eligible for quick reschedule processing. The default is 65535.

The value is used to determine how many messages an application program is allowed to process in a single scheduling cycle. When the application program requests, and receives, the number of messages indicated, any subsequent requests result in one of two actions.

- IMS indicates “no more messages exist” if any of the following conditions is true:
 - The region is not an MPP.
 - The currently scheduled mode is not CMTMODE(SNGL).
 - Equal or higher priority transactions are enqueued for the region.

IMS might have other messages enqueued for the application program. It is the responsibility of the application program to terminate when it receives an indicator that no more messages are available. Termination of the application program makes the region it occupied available for rescheduling. This feature makes it possible for IMS to enable scheduling of higher priority transactions that entered the system while the previous transactions

were in process. In addition, if any equal-priority transactions are enqueued, they become eligible for scheduling on a first-in, first-out (FIFO) basis.

- The region goes through quick reschedule and returns the next message to the application if all of the following conditions are true:
 - The region is an MPP.
 - The transaction is CMTMODE(SNGL).
 - No equal or higher transactions are enqueued.
 - Messages are still enqueued for the application program.

PLCTTIME

Specifies the processing limit count time. This is the amount of time (in hundredths of seconds) allowable to process a single transaction (or message). The number specifies the maximum CPU time allowed for each message to be processed in the message processing region.

Batch Message Programs (BMPs) are not affected by this setting.

The value can be a number, in hundredths of seconds, that can range from 1 to 6553500. A value of 6553500 means no time limit is placed on the application program. The default is 6553500.

If Fast Path is used, this keyword specifies, for a given transaction name, the amount of time (in hundredths of seconds) the program is allowed to process a single transaction message. The time represents real time that elapses during transaction processing (not accumulated task time). Real time is used because the input terminal is in response mode and cannot enter another transaction until the response is sent. In this case PLCT() is ignored.

The value controls application program looping. You are not required to optimize the value for program-transaction execution time. However, the time value assigned should not be less than the expected per-transaction execution time. If the scheduled application program exceeds the product of PLCTTIME() and PLCT(), the application program ends abnormally. If an IMS STIMER value of 2 is specified on the DFSMPR procedure, the region does not abend until completion of the DL/I call.

The application program must not use STIMER timer services. IMS uses STIMER timer services to time the execution of transactions. If an application program issues an MVS STIMER macro, it cancels the STIMER timer services set by IMS. Use the STIMERM macro instead for application program timer requests.

RECOVER

Specifies the recovery option.

- Y** The transaction is recovered during IMS emergency or normal restart. This is the default.
- N** The transaction is not recovered.

Keyword combination rules include the following:

- CONV(Y) and RECOVER(N) are mutually exclusive.
- FP(E) and RECOVER(N) are mutually exclusive.
- FP(P) and RECOVER(N) are mutually exclusive.
- INQ(N) and RECOVER(N) are mutually exclusive.

REMOTE

Specifies the remote option.

- N** The transaction is not remote. The transaction is local and runs on the local system. This is the default.
- Y** The transaction is remote. The transaction runs on a remote system.

Keyword combination rules include the following:

- REMOTE(Y) requires MSNAME or SIDR and SIDL.

RESP

Specifies the response-mode option.

- N** The transaction is not response mode. For terminals specifying or accepting a default of OPTIONS=TRANRESP, input should not stop after this transaction is entered. This is the default.
- Y** The transaction is response mode. The terminal from which the transaction is entered is held and prevents further input until a response is received. For terminals specifying or accepting a default of OPTIONS=TRANRESP, no additional messages are to be allowed after this transaction is entered until this transaction sends a response message back to the terminal. Response mode can be forced or negated by individual terminal definition. RESP(Y) is ignored during online processing for all terminals that do not operate in response mode.

Keyword combination rules include the following:

- FP(E) and RESP(N) are mutually exclusive.
- FP(P) and RESP(N) are mutually exclusive.

SEGNO

Specifies the segment number. This is the maximum number of application program output segments that are allowed into the message queues per Get Unique (GU) call from the application program. The value can be a number from 0 through 65535. The default is 0. If SEGNO(0) is defined, the number of segments is not checked by the online system at execution time.

SEGSZ

Specifies the segment size. This is the maximum number of bytes allowed in any one output segment. The value can be a number from 0 through 65535. The default is 0. If SEGSZ(0) is defined, the segment size is not checked by the online system at execution time.

The maximum output message segment to an LU 6.2 device is 32767. If a transaction is expected to send output to an LU 6.2 device, the SEGSIZE parameter should be no greater than 32767. However, this is not enforced during processing of the command, because IMS cannot determine the device type for the message destination until output time.

SERIAL

Specifies the serial option.

- N** Messages for the transaction are not processed serially. Message processing can be processed in parallel. Messages are placed on the suspend queue after a U3303 pseudoabend. Scheduling continues until repeated failures result in the transaction being stopped with a USTOP. This is the default.
- Y** Messages for the transaction are processed serially. U3303 pseudoabends do not cause the message to be placed on the suspend queue but rather on the front of the transaction message queue, and the transaction is stopped

with a USTOP. The USTOP of the transaction is removed when the transaction or the class is started with a /START or UPD TRAN command.

Keyword combination rules include the following:

- MAXRGN>0 and SERIAL(Y) are mutually exclusive.
- PARLIM value 0 - 32767 and SERIAL(Y) are mutually exclusive.

SIDL

Specifies the system identification (SYSID) of the local system in a multiple-IMS system (MSC) configuration. The local system is the originating system to which responses are returned. The value can be a number from 1 to 2036, if MSC is enabled, or 0, if MSC is not enabled. The local SYSID can be defined in any or all of the MSNAMEs or transactions.

For a local transaction where SIDL is not specified, SIDL is defined with a value of the lowest system ID when MSC is enabled on this system, or SIDL is defined with a value of 0 when MSC is not enabled on this system.

The local system ID (SIDL) and the remote system ID (SIDR) are the same for local transactions. When creating a local transaction, if the SIDL and SIDR values are not defined as local to this IMS, the lowest system ID is used for the SIDL and SIDR values.

The SIDL parameter is independent of the link type (CTC, MTM, VTAM) specified on the TYPE= keyword of the MSPLINK macro statement.

Keyword combination rules include the following:

- FP(E) and SIDL are mutually exclusive, unless SIDL and SIDR are specified as a pair and are equal to the local system ID of this IMS.
- FP(P) and SIDL are mutually exclusive.
- MSNAME and SIDL are mutually exclusive.
- SIDL value must be defined to this IMS.

SIDR

Specifies the system identification (SYSID) of the remote system in a multiple-IMS system (MSC) configuration. The remote system is the system on which the application program executes. The value can be a number from 1 to 2036 if MSC is enabled, or 0 if MSC is not enabled. The remote SYSID specified must also be defined for an MSNAME.

Local transactions must have the SIDR value set equal to the SIDL value. Both values must be set to the same local SYSID.

The SIDR parameter is independent of the link type (CTC, MTM, VTAM) specified on the TYPE= keyword of the MSPLINK macro statement.

Keyword combination rules include the following:

- FP(E) and SIDR are mutually exclusive, unless SIDL and SIDR are specified as a pair and are equal to the local system ID of this IMS.
- FP(P) and SIDR are mutually exclusive.
- MSNAME and SIDR are mutually exclusive.
- SIDR value must be defined to this IMS.

SPASZ

Specifies the scratchpad area (SPA) size, in bytes, for a conversational transaction. The value can be a number from 16 and 32767.

Keyword combination rules include the following:

- CONV(N) and SPASZ are mutually exclusive.
- FP(E) and SPASZ are mutually exclusive.

SPATRUNC

Specifies the scratchpad area (SPA) truncation option of a conversational transaction. This keyword defines whether the SPA data should be truncated or preserved across a program switch to a transaction that is defined with a smaller SPA. If this keyword is not specified for a conversational transaction, the value is obtained from the model (RSC, DESC, or default descriptor). If the SPATRUNC value is not specified or set in the model, the SPATRUNC value is set based on the value specified for the TRUNC parameter in the DFSDCxxx PROCLIB member at IMS cold start. Changing the DFSDCxxx TRUNC value across a restart has no effect on the default descriptor SPATRUNC value.

When a conversation initially starts, and when a program is switched, the SPATRUNC option is checked and set or reset as specified. When the option is set, it remains set for the life of the conversation, or until a program switch occurs to a transaction that specifies the option is to be reset.

When a program switch occurs, the truncated data option for the new transaction is first checked, and that specification is set for the conversation and is used for the SPA inserted into the output message. If the option is not specified for the new transaction, the option currently in effect for the conversation is used.

S IMS preserves all of the data in the SPA, even when a program switch is made to a transaction that is defined with a smaller SPA. The transaction with the smaller SPA does not see the truncated data, but when the transaction switches to a transaction with a larger SPA, the truncated data is used.

R The truncated data is not preserved.

Keyword combination rules include the following:

- CONV(N) and SPATRUNC are mutually exclusive.
- FP(E) and SPATRUNC are mutually exclusive.

TRANSTAT

Specifies whether transaction level statistics are to be logged for message driven programs. If Y is specified, transaction level statistics are written to the log in a X'56FA' log record.

N Transaction level statistics are not logged.

Y Transaction level statistics are logged.

The TRANSTAT keyword is optional. If not specified and the default descriptor is the IMS-defined descriptor DFSSTR1, the value is defined to be the DFSDFxxx PROCLIB member TRANSTAT parameter at IMS cold start. Changing the DFSDFxxx TRANSTAT value across a restart has no effect on the default descriptor TRANSTAT value. You can use the TRANSTAT keyword on the CREATE TRAN command or the CREATE TRANDESC command to override the system default when you create a transaction or transaction descriptor.

WFI

Specifies the wait-for-input option. This attribute does not apply to Fast Path transactions, which always behave as wait-for-input transactions.

- N** This is not a wait-for-input transaction. This is the default.
- Y** This is a wait-for-input transaction. A message processing or batch processing application program that processes WFI transactions is scheduled and invoked normally. If the transaction to be processed is defined as WFI, the program is allowed to remain in main storage after it has processed the available input messages. The QC status code (no more messages) is returned to the program if the processing limit count (PLCT) is reached; a command is entered to change the status of the scheduled transaction, database, program, or class; commands relating to the databases used by the transaction are entered, or IMS is terminated with a checkpoint shutdown.

Keyword combination rules include the following:

- CMTMODE(MULT) and WFI(Y) are mutually exclusive.

Usage notes

In an IMSplex where an RM and a resource structure are defined, the transaction names are saved in the resource structure.

Resources exist for the life of the IMS unless they are deleted using a DELETE command. Resources are recoverable across an IMS warm start or emergency restart. Resources are lost if IMS is cold started, unless cold start imports definitions that were exported while IMS was up.

The CREATE TRAN command is similar to local online change (using a /MODIFY command) or global online change (using an INITIATE OLC command) for transaction resources in the MODBLKS data set, except that transactions are added dynamically.

The CREATE TRAN command can be issued only through the Operations Manager API. These commands apply to DB/DC and DCCTL systems. This command is not valid on the XRF alternate, RSR tracker, or FDBR region. The CREATE command is not valid if online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC or MODBLKS not defined).

Output fields

The following table shows the CREATE TRAN output fields. The columns in the table are as follows:

Short label

Contains the short label generated in the XML output.

Keyword

Identifies keyword on the command that caused the field to be generated. N/A appears for output fields that are always returned. The value *error* appears for output fields that are returned only in case of an error.

Meaning

Provides a brief description of the output field.

Table 121. Output fields for the CREATE TRAN command

Short label	Keyword	Meaning
CC	N/A	Completion code.

Table 121. Output fields for the CREATE TRAN command (continued)

Short label	Keyword	Meaning
CCTXT	<i>error</i>	Completion code text that briefly explains the meaning of the non-zero completion code.
MBR	N/A	IMSplex member that built the output line.
TRAN	TRAN	Transaction name.

Return, reason, and completion codes

An IMS return and reason code is returned to OM by the CREATE TRAN command. The OM return and reason codes that might be returned as a result of the CREATE TRAN command are standard for all commands entered through the OM.

The following table includes the return and reason codes and a brief explanation of the codes. The return or reason code returned for the command might also indicate an error from a CSL request.

Table 122. Return and reason codes for the CREATE TRAN command

Return code	Reason code	Meaning
X'00000000'	X'00000000'	Command completed successfully. The command output contains a line for each resource, accompanied by its completion code. See the completion code table for details.
X'00000008'	X'00002009'	Multiple values specified for the same attribute are invalid. For example, you cannot specify both RESP(Y) and RESP(N). This reason code is applicable only when you create a transaction using the DFSINSX0 user exit.
X'00000008'	X'0000204C'	The class value is invalid.
X'00000008'	X'00002050'	The current priority CPRI value is invalid.
X'00000008'	X'00002054'	The limit count LCT value is invalid.
X'00000008'	X'00002058'	The limit priority LPRI is invalid.
X'00000008'	X'0000205C'	The maximum region MAXRGN is invalid.
X'00000008'	X'00002060'	The normal priority NPRI value is invalid.
X'00000008'	X'00002064'	The parallel limit count PARLIM value is invalid.
X'00000008'	X'00002068'	The processing limit count PLCT is invalid.
X'00000008'	X'0000206C'	The segment number SEGNO value is invalid.
X'00000008'	X'00002070'	The segment size SEGSZ value is invalid.
X'00000008'	X'00002100'	CMTMODE(MULT) mutually exclusive with WFI(Y). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'00002101'	CONV(Y) mutually exclusive with CMTMODE(MULT). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.

Table 122. Return and reason codes for the CREATE TRAN command (continued)

Return code	Reason code	Meaning
X'00000008'	X'00002103'	CONV(N) mutually exclusive with SPASZ>0 or SPATRUNC. Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'00002104'	CONV(Y) mutually exclusive with RECOVER(N). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'00002105'	CONV(Y) requires SPASZ and SPATRUNC. Either SPASZ was not explicitly specified or defined in the model, or SPATRUNC was not explicitly specified or defined in the model. CONV(Y) was either explicitly specified or defined in the model.
X'00000008'	X'00002108'	Invalid EDITRTN name. EDITRTN was specified explicitly or obtained from the model.
X'00000008'	X'00002109'	Maximum 255 edit routines exceeded. EDITRTN was specified explicitly or obtained from the model.
X'00000008'	X'0000210A'	Invalid EMHBSZ. One of the following situations occurred: • The EMHB size specified is either greater than the maximum size, which is 30720 • The EMHB size specified plus the length of the X'5901' log record prefix is greater than the log buffer size
X'00000008'	X'0000210C'	FP(E) mutually exclusive with EDITRTN. Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'0000210E'	FP(E) or FP(P) mutually exclusive with MSC keyword, either MSNAME or SIDR and SIDL. Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'0000210F'	FP(E) or FP(P) mutually exclusive with MSGTYPE(MULTSEG). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'00002110'	FP(N) mutually exclusive with EMHBSZ > 0. Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'00002111'	FP(E) or FP(P) mutually exclusive with RECOVER(N). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'00002112'	FP(E) or FP(P) mutually exclusive with RESP(N). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.

Table 122. Return and reason codes for the CREATE TRAN command (continued)

Return code	Reason code	Meaning
X'00000008'	X'00002116'	INQ(N) mutually exclusive with RECOVER(N). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'00002117'	Invalid LIKE descriptor name.
X'00000008'	X'00002118'	Invalid LIKE resource name.
X'00000008'	X'00002119'	MSC keyword MSNAME or SIDR and SIDL are mutually exclusive with application program defined as Fast Path exclusive (FP(E)) associated with this transaction.
X'00000008'	X'0000211A'	Invalid MSNAME name.
X'00000008'	X'0000211B'	MSNAME mutually exclusive with SIDR and SIDL.
X'00000008'	X'0000211D'	MAXRGN>0 mutually exclusive with PARLIM(65535). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'0000211E'	MAXRGN>0 mutually exclusive with SERIAL(Y). Either keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'00002120'	PGM() definition missing. PGM must be defined for local transactions either explicitly or in the model.
X'00000008'	X'00002121'	PARLIM value mutually exclusive with SERIAL(Y). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'00002123'	Invalid PGM name. PGM was specified explicitly, or obtained from the model. If the IMS-defined descriptor DFSDSTR1 was used, the command failed because DFSDSTR1 defines no program name.
X'00000008'	X'00002125'	If REMOTE(Y) is specified, the SIDR value must be a remote SYSID and the SIDL value must be a local SYSID. If neither the MSNAME keyword nor the SIDR and SIDL keywords are specified explicitly, the SIDR and SIDL values are obtained from the model. If REMOTE(N) is specified, the SIDR value must be equal to the SIDL value. The SIDR and SIDL values can be specified explicitly or obtained from the model. The MSNAME keyword is not allowed with REMOTE(N). The REMOTE value can be specified explicitly or obtained from the model.
X'00000008'	X'00002126'	Invalid SIDL value.
X'00000008'	X'00002127'	SIDL/SIDR must be specified as a pair. Either SIDL was specified alone or SIDR was specified alone.
X'00000008'	X'00002128'	Invalid SIDR value.
X'00000008'	X'0000212A'	The CREATE TRAN command is rejected for the transaction, because it specifies a batch program and an attribute value that is not allowed for a batch program such as a PARLIM value other than 65535.

Table 122. Return and reason codes for the CREATE TRAN command (continued)

Return code	Reason code	Meaning
X'00000008'	X'00002135'	Parlim/schdtype(serial) conflict. If PARLIM is specified and defined with a value other than 65535 and the program is defined as schdtype(serial), the command is rejected.
X'00000008'	X'00002140'	Fast Path exclusive FP(E) is mutually exclusive with any conversation keyword, including CONV(Y), SPASZ, and SPATRUNC. An FP exclusive transaction cannot be defined as conversational.
X'0000000C'	X'00003000'	Command was successful for some resources but failed for others. The command output contains a line for each resource, accompanied by its completion code. See the completion code table for details.
X'0000000C'	X'00003004'	Command was not successful for any of the resources. The command output contains a line for each resource, accompanied by its completion code. See the completion code table for details.
X'00000010'	X'0000400C'	Command is not valid on the XRF alternate.
X'00000010'	X'00004014'	Command is not valid on the RSR tracker.
X'00000010'	X'00004024'	No Fast Path defined, so FP(E), FP(P), or EMHBSZ > 0 is invalid.
X'00000010'	X'00004120'	Online change phase is in progress.
X'00000010'	X'00004204'	Model is quiesced. Cannot quiesce model.
X'00000010'	X'00004300'	Command is not allowed because online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC, or MODBLKS not defined).
X'00000010'	X'00004310'	Storage could not be obtained for the Transaction Input edit routine table. A cold start is required to fix this error.
X'00000010'	X'00004314'	The Transaction Input edit routine could not be loaded.
X'00000010'	X'00004318'	A new Transaction Input edit routine could not be added. The maximum of 255 routines has already been reached.
X'00000014'	X'00005004'	DFSOCMD response buffer could not be obtained.
X'00000014'	X'00005008'	DFSPOOL storage could not be obtained.
X'00000014'	X'0000500C'	AWE could not be obtained.
X'00000014'	X'00005010'	Unable to obtain latch.

The following table includes an explanation of the completion codes.

Table 123. Completion codes for the CREATE TRAN command

Completion code	Completion code text	Meaning
0		Command completed successfully for transaction.
11	RESOURCE ALREADY EXISTS	Transaction already exists.

Table 123. Completion codes for the CREATE TRAN command (continued)

Completion code	Completion code text	Meaning
17	ANOTHER CMD IN PROGRESS	Another command (such as DELETE PGM or UPDATE PGM) is in progress for the program referenced by this transaction.
22	CPIC TRAN ALREADY EXISTS	CPI-C transaction already exists by that name.
36	FP(E)/FP(N) PGM CONFLICT	Transaction to be created as Fast Path exclusive FP(E) conflicts with program already defined as non-Fast Path FP(N).
3E	FP(N)/FP(E) PGM CONFLICT	Transaction to be created as non-Fast Path FP(N) conflicts with program already defined as Fast Path exclusive FP(E).
3F	FP(P)/BMPTYPE(Y) CONFLICT	Transaction to be created as Fast Path potential FP(P) conflicts with the program defined as batch BMPTYPE(Y).
4E	LTERM ALREADY EXISTS	LTERM already exists by that name.
5B	MSNAME ALREADY EXISTS	MSNAME already exists by that name.
5F	INVALID CHARACTERS IN NAME	Name is invalid because it contains an invalid character.
61	DFSBCB STORAGE ERROR	Request to get BCB storage for SMB control block failed.
6A	FP(P)/FP(E) PGM CONFLICT	Transaction to be created as Fast Path potential FP(P) conflicts with program already defined as Fast Path exclusive FP(E).
78	RM CONFLICT	LTERM, CPIC transaction, MSNAME, or descriptor already exists in RM by that name.
8A	WILDCARD PARAMETER NOT SUPPORTED	The CREATE command does not support wildcard parameters. You must explicitly specify the names of the resources you want to create.
90	INTERNAL ERROR	An IMS system service failure.
93	RESERVED NAME	Name is reserved. For example, name starts with DFS (except for DFSSAMxx or DFSIVPxx), or is an IMS reserved name such as BASICEDT or WTOR.
B5	ROUTING CODE ALREADY EXISTS	Transaction creation failed for a Fast Path exclusive FP(E) transaction. The routing code could not be created, because one already exists with the same name as the transaction to be created.
B6	LATCH ERROR	Unable to obtain latch.

Examples

The following are examples of the CREATE TRAN command:

Example 1 for CREATE TRAN command

TSO SPOC input:

```
CREATE TRAN NAME(TRN00001,TRN00002) LIKE(RSC(APOL18))
SET(NPRI(6),LPRI(10),TRANSTAT(Y),CLASS(2))
```

TSO SPOC output:

```
Response for: CREATE TRAN NAME(TRN00001,TRN00002) LIKE(RSC(APO...
Trancode MbrName    CC
TRN00001 IMS1       0
TRN00002 IMS1       0
```

OM API input:

```
CMD(CRE TRAN NAME(TRN00001,TRN00002) LIKE(RSC(APOL18))
SET(NPRI(6),LPRI(10),TRANSTAT(Y),CLASS(2)))
```

OM API output:

```
<imsout>
<ctl>
<omname>OM10M    </omname>
<omvsn>1.3.0</omvsn>
<xmlvsn>20    </xmlvsn>
<statime>2006.307 19:23:15.095304</statime>
<stotime>2006.307 19:23:15.096942</stotime>
<staseq>BFA6CF3A7E308C1C</staseq>
<stoseq>BFA6CF3A7E96EA52</stoseq>
<rqsttkn1>USRT011 10112315</rqsttkn1>
<rc>00000000</rc>
<rsn>00000000</rsn>
</ctl>
<cmd>
<master>IMS1    </master>
<userid>USRT011 </userid>
<verb>CRE </verb>
<kwd>TRAN          </kwd>
<input>CREATE TRAN NAME(TRN00001,TRN00002) LIKE(RSC(APOL18))
      SET(NPRI(6),LPRI(10),TRANSTAT(Y),CLASS(2)) </input>
</cmd>
<cmdrsphdr>
<hdr slbl="TRAN" llbl="Trancode" scope="LCL" sort="a" key="1"
  scroll="no" len="8" dtype="CHAR" align="left" />
<hdr slbl="MBR" llbl="MbrName" scope="LCL" sort="a" key="2" scroll="no"
  len="8" dtype="CHAR" align="left" />
<hdr slbl="CC" llbl="CC" scope="LCL" sort="n" key="0" scroll="yes"
  len="4" dtype="INT" align="right" skipb="no" />
<hdr slbl="CCTXT" llbl="CCText" scope="LCL" sort="n" key="0"
  scroll="yes" len="*" dtype="CHAR" skipb="yes" align="left" />
</cmdrsphdr>
<cmdrspdata>
<rsp>TRAN(TRN00001) MBR(IMS1) CC(  0) </rsp>
<rsp>TRAN(TRN00002) MBR(IMS1) CC(  0) </rsp>
</cmdrspdata>
</imsout>
```

Explanation: Transactions named TRN00001 and TRN00002 are created like transaction APOL18, with several attributes specified with the SET keyword to override those attributes obtained from transaction APOL18.

Related concepts:

➡ How to interpret CSL request return and reason codes (System Programming APIs)

Related reference:

Chapter 2, “Command keywords and their synonyms,” on page 57

➡ Commit Verify exit routine (Exit Routines)

CREATE TRANDESC command

Use the CREATE TRANDESC command to create transaction descriptors. A descriptor is a model that can be used to create descriptors or resources.

A descriptor is created with a value set for every attribute. Attributes not explicitly specified on the CREATE command take the default value. Any transaction descriptor can be created using this descriptor as a model, by specifying the CREATE command with LIKE(DESC(descriptor_name)).

Subsections:

- “Environment”
- “Syntax”
- “Keywords” on page 245
- “Usage notes” on page 259
- “Output fields” on page 259
- “Return, reason, and completion codes” on page 260
- “Examples” on page 264

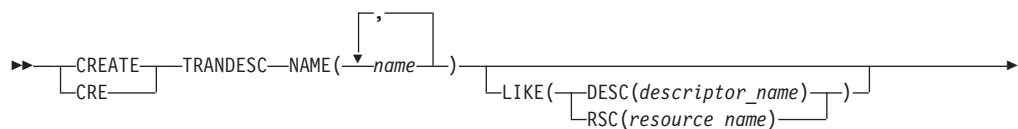
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 124. Valid environments for the CREATE TRANDESC command and keywords

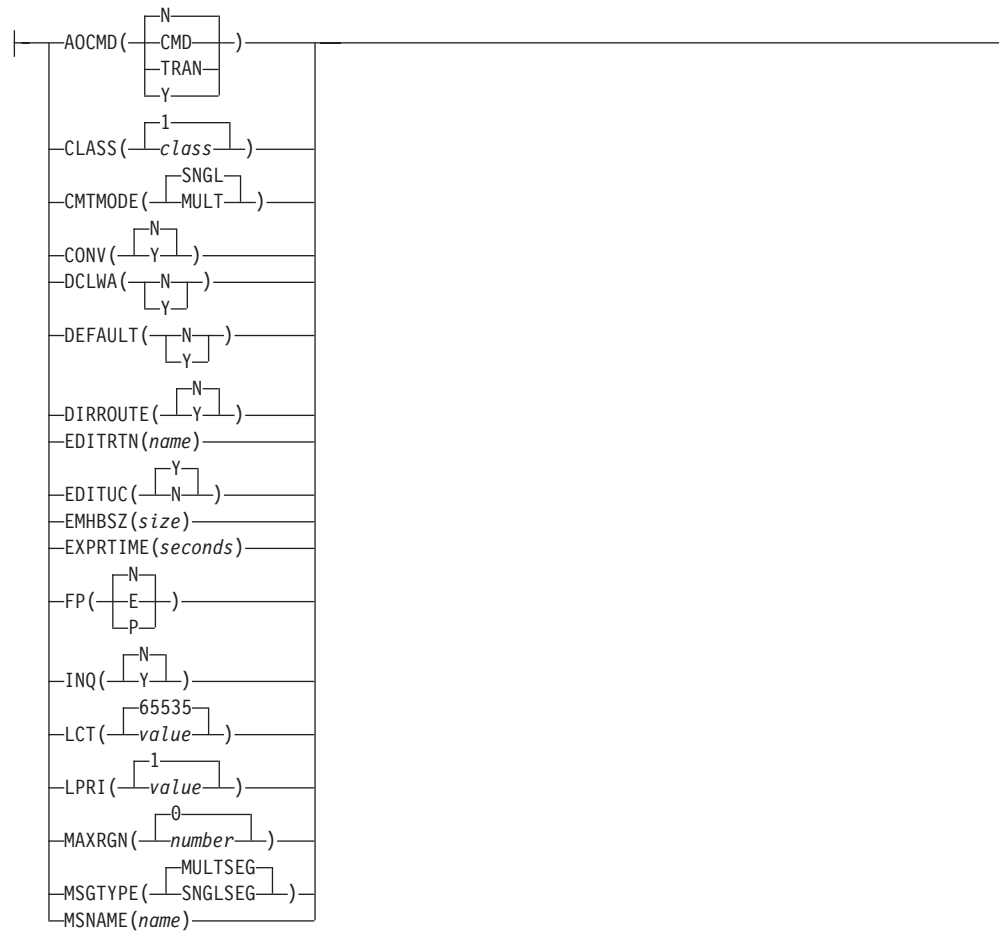
Command / Keywords	DB/DC	DBCTL	DCCTL
CREATE TRANDESC	X		X
LIKE	X		X
NAME	X		X
SET	X		X

Syntax

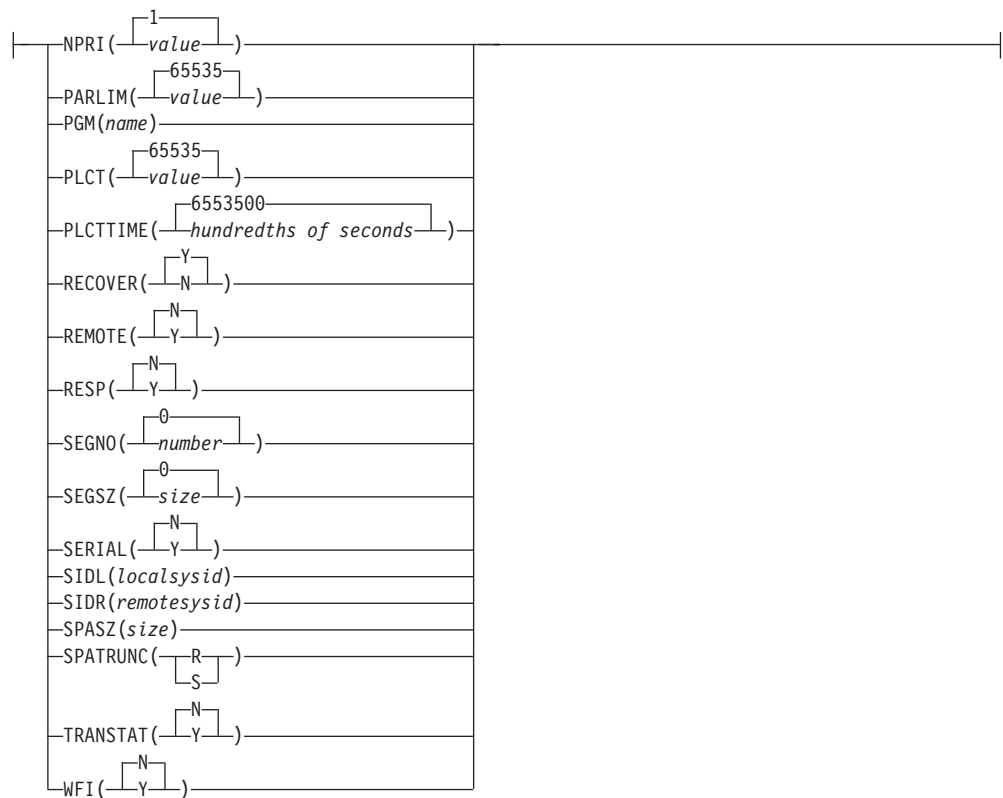




A:



B:



Default values shown in this syntax diagram reflect the default values that are defined in the IMS transaction descriptor, DFSDSTR1. If you define another descriptor as the default with a CREATE or UPDATE TRANDESC command, the default values shown in this syntax diagram might not match the value defined in the current default descriptor.

Keywords

The following keywords are valid for the CREATE TRANDESC command:

LIKE

| Specifies that the descriptor is created using an existing descriptor as a model,
| instead of the default descriptor. The default descriptor is either the IMS
| descriptor DFSDSTR1, or user-defined. The model type can either be a
| descriptor (DESC), or a resource (RSC). The descriptor is created with all the
| same attributes as the model, except for the DEFAULT(Y) value and the CPRI
| value, which is a runtime scheduling value that does not apply to transaction
| descriptors. Attributes set explicitly by the CREATE command override the
| model attributes. DEFAULT(Y) must be specified explicitly to make a
| descriptor the default descriptor. Later changes to the model are not
| propagated to resources or descriptors that were created from it.

The QUERY commands can be used to display the model name and model type used to create the descriptor or resource. The model name and type returned from the QUERY command are provided for informational purposes only. The EXPORT command exports a resource definition including the model name and model type to the definition member. The IMPORT command imports a resource definition including the model name and model type from

the definition member. An IMPORT command that creates a resource saves the model name and model type, but does not use the models attributes.

DESC(descriptor_name)

Specifies the name of the descriptor to use as a model to define this descriptor.

RSC(resource_name)

Specifies the name of the resource to use as a model to define this descriptor.

NAME

Specifies the 1-8 character name of the transaction. Names must be alphanumeric (A through Z, 0 through 9, #, \$, and @). Names cannot include a blank, comma, period, hyphen, or equal sign. Names cannot begin with DFS, except for DFSIVPxx and DFSSAMxx. Names cannot be BASICEDT, DBCDM, DBRC, ISCEDT, MSDB, SDB, or WTOR. A transaction resource and a transaction descriptor can have the same name. A transaction cannot have the same name as a logical terminal.

SET

Specifies the attributes of the transaction to be created. If the LIKE keyword is omitted, attributes not specified take the value defined in the default descriptor, which is either the IMS descriptor DFSDSTR1, or user-defined. If the LIKE keyword is specified, attributes not specified take the value defined in the model. A transaction must have the same characteristics in all systems where it is defined when it is shared. These characteristics include:

- Nonconversational or conversational
- SPA size if conversational
- Single- or multi-segment messages
- Noninquiry or inquiry
- Recoverable or nonrecoverable
- Response mode or non-response mode
- Fast Path exclusive, Fast Path potential, or non-Fast Path

AOCMD

Specifies the AOI option indicating whether the transaction can issue the type-1 AOI CMD call or the type-2 AOI ICMD call. If AOCMD is defined as CMD, TRAN, or Y, and the AOI1 execute parameter is defined as AOI1=N, no authorization checking is done, and the transaction is permitted to issue CMD and ICMD calls.

N Indicates that the transaction is not permitted to issue type-1 AOI CMD calls. The transaction is permitted to issue type-2 AOI ICMD calls.

CMD

Indicates that the transaction is permitted to issue type-1 AOI CMD calls and type-2 AOI ICMD calls. If the AOI1 execute parameter is defined as C, R, or A, authorization checking is based on which transactions can issue a particular command. In this case, the commands (or the first three characters of the commands) need to be defined to RACF or an equivalent product as a user. The type-1 AOI transactions must be defined as profiles under the TIMS class, and for each transaction, the commands it can issue must be specified. Defining AOCMD(CMD) requires you to create fewer

user IDs than you need to create for the AOCMD(TRAN) definition. However, defining AOCMD(CMD) requires you to create or modify a larger number of resource profiles.

TRAN

Indicates that the transaction is permitted to issue type-1 AOI CMD calls and type-2 AOI ICMD calls. If the AOI1 execute parameter is defined as C, R, or A, the transaction code is used for authorization. The first authorization check results in the accessor environment element (ACEE) being built. This environment is kept for use by future authorization checks. The type-1 AOI transaction needs to be defined to RACF or an equivalent product as a user. The transactions will then be specified on RACF PERMIT statements for each command they are allowed to issue from a type-1 AOI transaction. Specifying AOI transactions as users to RACF might conflict with the name of a user already defined to RACF. If this occurs, then either the transaction name or the existing user name needs to be changed.

- Y Indicates that the transaction is permitted to issue type-1 AOI CMD calls and type-2 AOI ICMD calls. If the AOI1 execute parameter is defined as C, R, or A, the user ID or the program name is used for authorization. For some environments, if a Get Unique call has not yet occurred, the program name is used for authorization.

CLASS

Specifies the transaction class, which is an attribute used to select a transaction for scheduling. A transaction can be scheduled if there is a message processing region available for that class. The value can be a number from 1 to 999. The default is 1. This value must not exceed the value given (by specification or default) on the MAXCLAS= keyword of the IMSCTRL macro.

Define CPI-C transactions with a different message class from that used for non-CPI-C transactions. IMS handles all CPI-C transactions as priority zero within the transaction class.

CMTMODE

Specifies when database updates and non-express output messages are committed. This operand affects emergency restart.

MULT

Database updates and non-express output messages are committed only when the application program terminates normally, when the processing limit count has been reached, or, in the case of a pseudo-WFI dependent region, when there are no more messages on the queue. For example, if five transactions are processed during a single schedule of a program, all five are committed only when the fifth one is completed and the program terminates. Until a transaction has been committed, locks for updated database records are not released and non-express output messages are not queued for output. If an application ends abnormally before committing its messages, emergency restart requeues all the messages that were processed within the commit scope and makes them available for reprocessing.

If the transaction results in the application calling an external subsystem, such as DB2, the Commit Verify exit provided by the external subsystem can determine whether CMTMODE(MULT) is supported. See documentation under the Commit Verify exit routine in *IMS Version 11 Exit Routines*.

SNGL

Database updates and non-express output messages are committed when the application program completes processing each transaction. IMS invokes commit processing either when the application program requests the next message (issues a GU to the IO-PCB), or when the application program terminates. If an application ends abnormally before committing its message, emergency restart requeues the message that was in process before the abend and makes it available for reprocessing. This is the default.

The TRANSACT macro MODE keyword uses a default of MULT. The CRE TRAN command CMTMODE keyword uses a default of SNGL.

Keyword combination rules include the following:

- CONV(Y) and CMTMODE(MULT) are mutually exclusive.
- CMTMODE(MULT) and WFI(Y) are mutually exclusive.

CONV

Specifies the conversation option.

N The transaction is not conversational. This is the default.

Y The transaction is conversational. The transaction message is destined for a conversational program. A conversational program processes transactions made up of several steps. A conversational program receives a message from a terminal, replies to the terminal, but saves the data from the transaction in a scratchpad area (SPA). When the person at the terminal enters more data, the program has the data it saved from the last message in the SPA, so it can continue processing the request without the person at the terminal having to enter the data again.

Keyword combination rules include the following:

- CMTMODE(MULT) and CONV(Y) are mutually exclusive.
- CONV(Y) requires SPASZ and SPATRUNC.
- INQ(Y) and CONV(Y) are mutually exclusive.
- RECOVER(N) and CONV(Y) are mutually exclusive.
- SPASZ and CONV(N) are mutually exclusive.
- SPATRUNC and CONV(N) are mutually exclusive.

DCLWA

Specifies the log write-ahead option. If not specified, the value is defined to be the DCLWA parameter in the DFSDFxxx PROCLIB member. If DCLWA is not defined in the DFSDFxxx PROCLIB member, the default is DCLWA=Y.

N IMS should not perform log write-ahead. Specify N if input message integrity and the consistency of output messages with associated database updates is not required. DCLWA does not apply to response mode or Fast Path input processing, and is ignored during IMS execution.

Y

IMS should perform log write-ahead for recoverable, nonresponse input messages and transaction output messages. This ensures the following:

- A nonresponse input transaction is made recoverable across IMS failures before IMS acknowledges receipt of the input.
- Database changes are made recoverable before IMS sends associated output reply messages.

- Information in the log buffers is written to the IMS log, before the associated input acknowledgment or output reply is sent to the terminal.

Define DCLWA(Y) for all VTAM terminal types.

DEFAULT

Specifies whether the descriptor is the default.

- N** The descriptor is not the default.
- Y** The descriptor is the default, which resets the existing default descriptor to DEFAULT(N). When a descriptor or resource is created without the LIKE keyword, any attribute not specified on the CREATE command takes the value defined in the default descriptor. Only one descriptor can be defined as the default for a resource type. IMS defines a default transaction descriptor called DFSDSTR1, where all attributes are defined with the default value. Defining a user-defined descriptor as the default overrides the IMS-defined descriptor. Since only one transaction descriptor can be the default at one time, only one transaction name can be specified with DEFAULT(Y).

DIRROUTE

Specifies the MSC directed routing option.

- N** The application program processing a transaction is not informed of the system which originated the transaction. The name of the originating LTERM is placed in the I/O PCB. This is the default.
- Y** The application program processing a transaction is informed of the system which originated the transaction, if MSC directed routing is used in a multiple IMS system configuration. An MSNAME corresponding to a logical path back to the originating system is placed in the I/O PCB.

EDITRTN

Specifies the one- to eight-character name of your transaction input edit routine that edits messages before the program receives the message. This name must begin with an alphabetic character. The specified edit routine (load module) must reside on the USERLIB data set. This routine cannot be the same as the one defined by the system definition TYPE EDIT= parameter. A maximum of 255 input edit routines are supported.

EDITRTN is used for a Fast Path potential transaction when the transaction is routed to IMS.

For input from LU 6.2 devices, the user edit exit routine DFSLUEE0 is called instead of the transaction input edit routine specified in EDITRTN.

Keyword combination rules include the following:

- FP(E) and EDITRTN are mutually exclusive.

EDITUC

Specifies the edit to uppercase option.

- N** The input data is not translated to uppercase. It can consist of upper and lowercase characters as entered from the terminal.
- Y** The input data is to be translated to uppercase before it is presented to the processing program. If FP(E) or FP(P), the transaction is to be translated to uppercase before being presented to the edit/routing exit routine. This is the default.

Specifying EDITUC(Y) for VTAM terminals prevents the transmission of embedded device control characters.

EMHBSZ

Specifies the EMH buffer size required to run the Fast Path transaction. This overrides the EMHL execution parameter. If EMHBSZ is not specified, the EMHL execution parameter value is used. The value can be a number from 12 to 30720.

Keyword combination rules include the following:

- EMHBSZ>0 requires Fast Path to be defined.
- FP(N) and EMHBSZ>0 are mutually exclusive.

EXPRTIME

Specifies the elapse time in seconds that IMS can use to cancel the input transaction. After a transaction is submitted to IMS, the transaction could be delayed for processing because of a stopped transaction or a potential system slow down. In that case, the user or client application could time out before the transaction is processed. When IMS eventually schedules and processes the transaction, the response message is no longer wanted. With the elapse time specified for the transaction, IMS can flag the input transaction as expired so that the system does not waste CPU cycles to process the unwanted transaction.

The value can be a number, in seconds, which can range from 0 to 65535. The default is 0, which means that no expiration time is set for this transaction. The transaction expiration attribute is supported by all of the IMS TM interfaces.

Restriction: The transaction expiration checking is not performed at the GU time for Fast Path transactions, IMS conversational transactions, and program-to-program switch transactions.

FP Specifies the Fast Path option.

- E** The transaction is processed exclusively as Fast Path. A Fast Path routing code by the same name is created. The program must be defined as Fast Path exclusive.
- N** The transaction is not a candidate for Fast Path processing. The program identified by PGM() must be defined as not Fast Path. This is the default.
- P** The transaction is a potential candidate for Fast Path processing. Fast Path-potential transactions must be able to run under two programs: a Fast Path exclusive program a non-Fast Path program. This CREATE TRAN command defines the non-Fast Path program with PGM(). A Fast Path exclusive program should be defined to which this transaction can be routed. Fast Path-potential transactions must be processed by a user edit/routing exit to determine whether the transaction is actually to be processed by IMS Fast Path. If it is to be processed by IMS Fast Path, the edit/routing exit routine associates the transaction with a routing code. This routing code identifies which Fast Path program is to process the transaction.

The program defined by PGM() must not be defined as Fast Path exclusive.

Keyword combination rules include the following:

- EDITRTN and FP(E) are mutually exclusive.
- FP(P) and FP(E) require Fast Path to be defined.
- MSGTYPE(MULTSEG) and FP(E) are mutually exclusive.
- MSGTYPE(MULTSEG) and FP(P) are mutually exclusive.
- MSNAME and FP(E) are mutually exclusive.

- MSNAME and FP(P) are mutually exclusive.
- RECOVER(N) and FP(E) are mutually exclusive.
- RECOVER(N) and FP(E) are mutually exclusive.
- RESP(N) and FP(E) are mutually exclusive.
- RESP(N) and FP(P) are mutually exclusive.
- SIDL and FP(E) are mutually exclusive.
- SIDL and FP(P) are mutually exclusive.
- SIDR and FP(E) are mutually exclusive.
- SIDR and FP(P) are mutually exclusive.

INQ

Specifies the inquiry option.

N This is not an inquiry transaction. This is the default.

Y This is an inquiry transaction. If INQ(Y) is specified, you can also specify whether this transaction should be recovered during an IMS emergency or normal restart using the RECOVER() parameter.

This should be specified only for those transactions that, when entered, do not cause a change in any database. Programs are prohibited from issuing ISRT, DLET, or REPL calls to a database when scheduled to process a transaction defined as INQ(Y).

An application program cannot do an SQL INSERT, DELETE, or UPDATE when the IMS transaction is defined with INQ(Y).

Keyword combination rules include the following:

- CONV(Y) and INQ(Y) are mutually exclusive.
- RECOVER(N) and INQ(N) are mutually exclusive.

LCT

Specifies the limit count. This is the number that, when compared to the number of input transactions queued and waiting to be processed, determines whether the normal or limit priority value is assigned to this transaction. The value can be a number from 1 to 65535. The default is 65535.

The limit count value is ignored for a transaction processed by a BMP.

The limit count value is ignored in a shared queues environment.

LPRI

Specifies the limit priority. This is the scheduling priority to which this transaction is raised when the number of input transactions enqueued and waiting to be processed is equal to or greater than the limit count value. The scheduling priority is an attribute used to select a transaction for scheduling. A transaction of higher priority is scheduled before a lower priority one, if they are defined with the same class. The value can be a number from 0 through 14. The default is 1.

When the limit priority is used and the scheduling priority is raised to the limit priority, the priority is not reduced to the normal priority until all messages enqueued for this transaction name are processed. If you do not want the limit priority for this transaction, define equal values for the normal priority and limit priority, and a limit count of 65535.

When a transaction is processed exclusively by a batch message program (BMP), define the limit priority as 0. If the program specified by PGM() is

defined with a program type of batch, the current priority is forced to be 0. However, a batch message processing region (BMP) can process transactions with current scheduling priorities other than 0.

This priority also controls the priority of messages created by this transaction and sent to a destination in a remote system. See also the discussion on MSC priorities under the NPRI definition.

The limit priority value is ignored for a transaction processed by a BMP.

The limit priority value is ignored in a shared-queues environment.

MAXRGN

Specifies the maximum region count. This count value limits the number of message processing program (MPP) regions that can be concurrently scheduled to process a transaction. When the number of MPP regions is not limited, one transaction might monopolize all available regions. The value can be a number from 0 to 999. MAXRGN(0) means that no limit is imposed. If you define the program with a scheduling type of SERIAL, omit the MAXRGN parameter or define it as 0.

The following keyword combinations are mutually exclusive:

- PARLIM(65535) and MAXRGN value greater than 0
- SERIAL(Y) and MAXRGN value greater than 0

MSGTYPE

Specifies the message type (single segment or multiple segment). It specifies the time at which an incoming message is considered complete and available to be routed to an application program for subsequent processing.

If MSC-directed routing is used in a multiple IMS system configuration, IMS does not ensure that both the message and the transaction destined to process that message are either single segment or multiple segments.

MULTSEG

The incoming message can be more than one segment in length. It is not eligible for scheduling to an application program until an end-of-message indication is received, or a complete message is created by MFS. This is the default.

SNGLSEG

The incoming message is one segment in length. It becomes eligible for scheduling when the terminal operator indicates end-of-segment.

Keyword combination rules include the following:

- FP(E) and MSGTYPE(MULTSEG) are mutually exclusive.
- FP(P) and MSGTYPE(MULTSEG) are mutually exclusive.

MSNAME

Specifies the one- to eight-character name of the logical link path in a multiple IMS system configuration (MSC). A logical link path is a path between any two IMS systems. The IMS systems are identified by the remote system ID and the local system ID associated with the logical link path. The remote system ID identifies the system in which messages using this path are to be processed. The local system ID identifies this system. If this transaction is exported, the local and remote system IDs are exported, not the msname. For a CREATE TRAN command adding a remote transaction, the MSNAME must already be defined.

Keyword combination rules include the following:

- FP(E) and MSNAME are mutually exclusive.
- FP(P) and MSNAME are mutually exclusive.
- SIDL and MSNAME are mutually exclusive.
- SIDR and MSNAME are mutually exclusive.

NPRI

Specifies the normal scheduling priority. The scheduling priority is an attribute used to select a transaction for scheduling. A transaction of higher priority is scheduled before a lower priority one, if they are defined with the same class. When a transaction resource is created, the current priority (CPRI), or the scheduling priority, is initialized to the normal priority (NPRI). The normal priority is also assigned to a transaction as the current priority when the number of input transactions enqueued and waiting to be processed is less than the limit count value. The value can be a number from 0 through 14. The default is 1.

This priority also controls the priority of messages created by this transaction and sent to a destination in a remote system.

When a transaction is processed exclusively by a batch message program (BMP), code the normal priority as 0.

When a transaction is processed exclusively by a batch message program (BMP), define the limit priority as 0. If the program specified by PGM() is defined with a program type of batch, the current priority is forced to be 0. However, a batch message processing region (BMP) can process transactions with current scheduling priorities other than 0.

For remote transactions, the priority used to send the transaction to the processing system, which is termed the MSC link message priority. The three MSC link message priority groups are:

- Low
- Medium
- High

The low priority group consists of primary requests in the input terminal system. This group is assigned remote transaction priorities from 0 to 6. The medium group consists of secondary requests, responses, primary requests in an intermediate system, and primary requests in the input terminal system. This group is assigned a remote transaction priority of 7. The high group consists of primary requests in the input terminal system. Messages in this group are assigned remote transaction priorities from 8 to 14. Within each group, messages have a priority based on the current priority value of the transaction or remote transaction in the input terminal system for primary requests, and on the latest processing system for secondary requests and responses.

In an MSC configuration, the transaction priority determines the priority used to send messages inserted by this transaction across an MSC link. If the transaction inserts multiple messages to the same destination (for example, pages to a printer) and these messages must be sent in the order inserted, the normal and limit priority values should be the same. If the normal and limit priority values are not identical, messages inserted at a higher priority than previously inserted messages could arrive at their destination first. (This restriction does not apply to multiple segments of the same message.)

The normal priority value is ignored for a transaction processed by a BMP.

PARLIM

Specifies the parallel processing limit count. This is the maximum number of messages that can currently be queued, but not yet processed, by each active message region currently scheduled for this transaction. This is the threshold value to be used when the associated program is defined with a scheduling type of parallel. An additional region is scheduled whenever the current transaction enqueue count exceeds the PARLIM value multiplied by the number of regions currently scheduled for this transaction.

The value can be a number from 0 to 32767 or 65535. PARLIM(0) indicates that any input message can cause a new region to be scheduled because the scheduling condition is always being met (the number of messages are greater than zero). If you specify PARLIM(0), you should specify a MAXRGN value to limit the number of regions that can be scheduled to process a particular transaction. PARLIM(65535) means that parallel processing is disabled and IMS allows the transaction to be scheduled in only one region at a time. PARLIM(65535) is the default.

The value specified for PARLIM applies to message processing programs (MPPs) only; it is not supported for batch message processing programs (BMPs).

If you define the transaction as serial or the program with a scheduling type as SERIAL, define PARLIM(65535).

In a shared-queues environment (when the scheduling type is PARALLEL), any PARLIM value other than 65535 causes a new region to be scheduled whenever the successful consecutive GU count exceeds the PARLIM value multiplied by the number of regions currently scheduled for this transaction. For shared-queues environments, the successful consecutive GU count is used instead of the queue count. New regions continue to be scheduled up to the maximum number of regions specified on MAXRGN.

Keyword combination rules include the following:

- MAXRGN>0 and PARLIM(65535) are mutually exclusive.
- SERIAL(Y) and PARLIM value 0 - 32767 are mutually exclusive.

PGM

Specifies the name of the program associated with the transaction.

For a CREATE TRANDESC command, the program does not need to exist until a CREATE TRAN command creates a transaction using the transaction descriptor.

PLCT

Specifies the processing limit count. This is maximum number of messages sent to the application program by IMS for processing without reloading the application program. The value must be a number from 0 through 65535. PLCT(0) means the maximum number of messages sent to the application is one and the application program is reloaded before receiving a subsequent message. PLCT(65535) means that no limit is to be placed upon the number of messages processed at a single program load. Values 1 through 65535 are eligible for quick reschedule processing. The default is 65535.

The value is used to determine how many messages an application program is allowed to process in a single scheduling cycle. When the application program requests, and receives, the number of messages indicated, any subsequent requests result in one of two actions.

- IMS indicates “no more messages exist” if any of the following conditions is true:
 - The region is not an MPP.
 - The currently scheduled mode is not CMTMODE(SNGL).
 - Equal or higher priority transactions are enqueued for the region.

IMS might have other messages enqueued for the application program. It is the responsibility of the application program to terminate when it receives an indicator that no more messages are available. Termination of the application program makes the region it occupied available for rescheduling. This feature makes it possible for IMS to enable scheduling of higher priority transactions that entered the system while the previous transactions were in process. In addition, if any equal-priority transactions are enqueued, they become eligible for scheduling on a first-in, first-out (FIFO) basis.
- The region goes through quick reschedule and returns the next message to the application if all of the following conditions are true:
 - The region is an MPP.
 - The transaction is CMTMODE(SNGL).
 - No equal or higher transactions are enqueued.
 - Messages are still enqueued for the application program.

PLCTTIME

Specifies the processing limit count time. This is the amount of time (in hundredths of seconds) allowable to process a single transaction (or message). The number specifies the maximum CPU time allowed for each message to be processed in the message processing region.

Batch Message Programs (BMPs) are not affected by this setting.

The value can be a number, in hundredths of seconds, that can range from 1 to 6553500. A value of 6553500 means no time limit is placed on the application program. The default is 6553500.

If Fast Path is used this specifies, for a given transaction name, the amount of time (in hundredths of seconds) the program is allowed to process a single transaction message. The time represents real time that elapses during transaction processing (not accumulated task time). Real time is used because the input terminal is in response mode and cannot enter another transaction until the response is sent. In this case PLCT() is ignored.

The value controls application program looping. You are not required to optimize the value for program-transaction execution time. However, the time value assigned should not be less than the expected per-transaction execution time. If the scheduled application program exceeds the product of PLCTTIME() and PLCT(), the application program ends abnormally. If an IMS STIMER value of 2 is specified on the DFSMPR procedure, the region does not abend until completion of the DL/I call.

Important: The application program must not use STIMER timer services. IMS uses STIMER timer services to time the execution of transactions. If an application program issues an MVS STIMER macro, it cancels the STIMER timer services set by IMS. Use the STIMERM macro instead for application program timer requests.

RECOVER

Specifies the recovery option.

N The transaction should not be recovered.

- Y** The transaction should be recovered during IMS emergency or normal restart. This is the default.

Keyword combination rules include the following:

- CONV(Y) and RECOVER(N) are mutually exclusive.
- FP(E) and RECOVER(N) are mutually exclusive.
- FP(P) and RECOVER(N) are mutually exclusive.
- INQ(N) and RECOVER(N) are mutually exclusive.

REMOTE

Specifies the remote option.

- N** The transaction is not remote. The transaction is local and runs on the local system. This is the default.

- Y** The transaction is remote. The transaction runs on a remote system.

Keyword combination rules include the following:

- REMOTE(Y) requires MSNAME or SIDR and SIDL.

RESP

Specifies the response-mode option.

- N** The transaction is not response mode. For terminals specifying or accepting a default of OPTIONS=TRANRESP, input should not stop after this transaction is entered. This is the default.

- Y** The transaction is response mode. The terminal from which the transaction is entered is held and prevents further input until a response is received. For terminals specifying or accepting a default of OPTIONS=TRANRESP, no additional messages are to be allowed after this transaction is entered until this transaction sends a response message back to the terminal. Response mode can be forced or negated by individual terminal definition. RESP(Y) is ignored during online processing for all terminals that do not operate in response mode.

Keyword combination rules include the following:

- FP(E) and RESP(N) are mutually exclusive.
- FP(P) and RESP(N) are mutually exclusive.

SEGNO

Specifies the segment number. This is the maximum number of application program output segments that are allowed into the message queues per Get Unique (GU) call from the application program. The value can be a number from 0 through 65535. The default is 0. If SEGNO(0) is defined, the number of segments is not checked by the online system at execution time.

SEGSZ

Specifies the segment size. This is the maximum number of bytes allowed in any one output segment. The value can be a number from 0 through 65535. The default is 0. If SEGSZ(0) is defined, the segment size is not checked by the online system at execution time.

The maximum output message segment to an LU 6.2 device is 32767. If a transaction is expected to send output to an LU 6.2 device, the SEGSIZE parameter should be no greater than 32767. However, this is not enforced during processing of the command, because IMS cannot determine the device type for the message destination until output time.

SERIAL

Specifies the serial option.

- N** Messages for the transaction are not processed serially. Message processing can be processed in parallel. Messages are placed on the suspend queue after a U3303 pseudoabend. Scheduling continues until repeated failures result in the transaction being stopped with a USTOP. This is the default.
- Y** Messages for the transaction are processed serially. U3303 pseudoabends do not cause the message to be placed on the suspend queue but rather on the front of the transaction message queue, and the transaction is stopped with a USTOP. The USTOP of the transaction is removed when the transaction or the class is started with a /START or UPD TRAN command.

Keyword combination rules include the following:

- MAXRGN>0 and SERIAL(Y) are mutually exclusive.
- PARLIM value 0 - 32767 and SERIAL(Y) are mutually exclusive.

SIDL

Specifies the system identification (SYSID) of the local system in a multiple-IMS system (MSC) configuration. The local system is the originating system to which responses are returned. The value can be a number from 1 to 2036. The local SYSID can be defined in any or all of the MSNAMEs or transactions.

For a local transaction where SIDL is not specified, SIDL is defined with a value of the lowest system ID when MSC is enabled on this system, or SIDL is defined with a value of 0 when MSC is not enabled on this system. The local system ID and remote system ID are the same for local transactions.

The SIDL parameter is independent of the link type (CTC, MTM, VTAM) specified on the TYPE= keyword of the MSPLINK macro statement.

Keyword combination rules include the following:

- FP(E) and SIDL are mutually exclusive, unless SIDL and SIDR are specified as a pair and are equal to the local system ID of this IMS.
- FP(P) and SIDL are mutually exclusive.
- MSNAME and SIDL are mutually exclusive.
- SIDL value must be defined to this IMS.

SIDR

Specifies the system identification (SYSID) of the remote system in a multiple-IMS system (MSC) configuration. The remote system is the system on which the application program executes. The value can be a number from 1 to 2036. The remote SYSID specified must also be defined for an MSNAME.

For a local transaction where SIDR is not specified, SIDR is defined to be the same value as SIDL.

The SIDR parameter is independent of the link type (CTC, MTM, VTAM) specified on the TYPE= keyword of the MSPLINK macro statement.

Keyword combination rules include the following:

- FP(E) and SIDR are mutually exclusive, unless SIDL and SIDR are specified as a pair and are equal to the local system ID of this IMS.
- FP(P) and SIDR are mutually exclusive.
- MSNAME and SIDR are mutually exclusive.

- SIDR value must be defined to this IMS.

SPASZ

Specifies the scratchpad area (SPA) size, in bytes, for a conversational transaction. The value can be a number from 16 and 32767.

CONV(N) and SPASZ are mutually exclusive.

SPATRUNC

Specifies the scratchpad area (SPA) truncation option of a conversational transaction. This defines whether the SPA data should be truncated or preserved across a program switch to a transaction that is defined with a smaller SPA. If not specified for a conversational transaction, the value is defined to be the TRUNC parameter in DFSDCxxx.

When a conversation initially starts, and when a program is switched, the SPATRUNC option is checked and set or reset as specified. When the option is set, it remains set for the life of the conversation, or until a program switch occurs to a transaction that specifies the option is to be reset.

When a program switch occurs, the truncated data option for the new transaction is first checked, and that specification is set for the conversation and is used for the SPA inserted into the output message. If the option is not specified for the new transaction, the option currently in effect for the conversation is used.

S IMS preserves all of the data in the SPA, even when a program switch is made to a transaction that is defined with a smaller SPA. The transaction with the smaller SPA does not see the truncated data, but when the transaction switches to a transaction with a larger SPA, the truncated data is used.

R The truncated data is not preserved.

Keyword combination rules include the following:

- CONV(N) and SPATRUNC are mutually exclusive.

TRANSTAT

Specifies whether transaction level statistics should be logged for message driven programs. If Y is specified, transaction level statistics are written to the log in a X'56FA' log record.

N Transaction level statistics should not be logged.

Y Transaction level statistics should be logged.

The TRANSTAT keyword is optional. If a value is not specified for the TRANSTAT keyword, the system default is used. The system default for the transaction level statistics parameter is set with the TRANSTAT parameter in the DFSDFxxx PROCLIB member. If a value is not specified for the TRANSTAT parameter, the system default is set to N. The TRANSTAT keyword on the CREATE TRAN or CREATE TRANDESC command gives the user the ability to override the system default when creating a transaction or transaction descriptor.

WFI

Specifies the wait-for input option. This attribute does not apply to Fast Path transactions, which always behave as wait-for-input transactions.

N This is not a wait-for-input transaction. This is the default.

- Y This is a wait-for-input transaction. A message processing or batch processing application program that processes WFI transactions is scheduled and invoked normally. If the transaction to be processed is defined as WFI, the program is allowed to remain in main storage after it has processed the available input messages. The QC status code (no more messages) is returned to the program if the processing limit count (PLCT) is reached; a command is entered to change the status of the scheduled transaction, database, program, or class; commands relating to the databases used by the transaction are entered, or IMS is terminated with a checkpoint shutdown.

CMTMODE(MULT) and WFI(Y) are mutually exclusive.

Usage notes

Descriptors exist for the life of the IMS unless they are deleted using a DELETE command. Descriptors are recoverable across an IMS warm start or emergency restart. Descriptors are lost if IMS is cold started, unless cold start imports definitions that were exported while IMS was up.

The CREATE TRANDESC command is similar to local online change (using a /MODIFY command) or global online change (using an INITIATE OLC command) for transaction resources in the MODBLKS data set, except that transactions are added dynamically.

The CREATE TRANDESC command can be issued only through the Operations Manager API. These commands apply to DB/DC and DCCTL systems. These commands are not valid on the XRF alternate, RSR tracker, or FDBR region. The CREATE command is not valid if online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC or MODBLKS not defined).

Output fields

The following table shows the CREATE TRANDESC output fields. The columns in the table are as follows:

Short label

Contains the short label generated in the XML output.

Keyword

Identifies keyword on the command that caused the field to be generated. N/A appears for output fields that are always returned. The value *error* appears for output fields that are returned only in case of an error.

Meaning

Provides a brief description of the output field.

Table 125. Output fields for the CREATE TRANDESC command

Short label	Keyword	Meaning
CC	N/A	Completion code.
CCTXT	<i>error</i>	Completion code text that briefly explains the meaning of the non-zero completion code.
DESC	TRANDESC	Transaction descriptor name.
MBR	N/A	IMSplex member that built the output line.

Table 125. Output fields for the CREATE TRANDESC command (continued)

Short label	Keyword	Meaning
OLDDEF	TRANDESC	Old default descriptor name, if this descriptor is made the default by specifying DEFAULT(Y). The old default descriptor is no longer the default.

Return, reason, and completion codes

The following table includes the return and reason codes and a brief explanation of the codes. The return or reason code returned for the command might also indicate an error from a CSL request.

Table 126. Return and reason codes for the CREATE TRANDESC command

Return code	Reason code	Meaning
X'00000000'	X'00000000'	Command completed successfully. The command output contains a line for each descriptor, accompanied by its completion code. See the completion code table for details.
X'00000008'	X'0000204C'	The class value is invalid.
X'00000008'	X'00002050'	The current priority CPRI value is invalid.
X'00000008'	X'00002054'	The limit count LCT value is invalid.
X'00000008'	X'00002058'	The limit priority LPRI is invalid.
X'00000008'	X'0000205C'	The maximum region MAXRGN is invalid.
X'00000008'	X'00002060'	The normal priority NPRI value is invalid.
X'00000008'	X'00002064'	The parallel limit count PARLIM value is invalid.
X'00000008'	X'00002068'	The processing limit count PLCT is invalid.
X'00000008'	X'0000206C'	The segment number SEGNO value is invalid.
X'00000008'	X'00002070'	The segment size SEGSZ value is invalid.
X'00000008'	X'00002100'	CMTMODE(MULT) mutually exclusive with WFI(Y). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'00002101'	CONV(Y) mutually exclusive with CMTMODE(MULT). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'00002102'	CONV(Y) mutually exclusive with INQ(Y). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'00002103'	CONV(N) mutually exclusive with SPASZ>0 or SPATRUNC. Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'00002104'	CONV(Y) mutually exclusive with RECOVER(N). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.

Table 126. Return and reason codes for the CREATE TRANDESC command (continued)

Return code	Reason code	Meaning
X'00000008'	X'00002105'	CONV(Y) requires SPASZ and SPATRUNC. Either SPASZ was not explicitly specified or defined in the model, or SPATRUNC was not explicitly specified or defined in the model. CONV(Y) was either explicitly specified or defined in the model.
X'00000008'	X'00002108'	Invalid EDITRTN name. EDITRTN was specified explicitly or obtained from the model.
X'00000008'	X'00002109'	Maximum 255 edit routines exceeded. EDITRTN was specified explicitly or obtained from the model.
X'00000008'	X'0000210C'	FP(E) mutually exclusive with EDITRTN. Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'0000210E'	FP(E) or FP(P) mutually exclusive with MSC keyword, either MSNAME or SIDR and SIDL. Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'0000210F'	FP(E) or FP(P) mutually exclusive with MSGTYPE(MULTSEG). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'00002110'	FP(N) mutually exclusive with EMHBSZ > 0. Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'00002111'	FP(E) or FP(P) mutually exclusive with RECOVER(N). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'00002112'	FP(E) or FP(P) mutually exclusive with RESP(N). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'00002116'	INQ(N) mutually exclusive with RECOVER(N). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'00002117'	Invalid LIKE descriptor name.
X'00000008'	X'00002118'	Invalid LIKE resource name.
X'00000008'	X'00002119'	MSC keyword MSNAME or SIDR and SIDL are mutually exclusive with application program defined as Fast Path exclusive (FP(E)) associated with this transaction.
X'00000008'	X'0000211A'	Invalid MSNAME name.
X'00000008'	X'0000211B'	MSNAME mutually exclusive with SIDR and SIDL.
X'00000008'	X'0000211D'	MAXRGN>0 mutually exclusive with PARLIM(65535). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.

Table 126. Return and reason codes for the CREATE TRANDESC command (continued)

Return code	Reason code	Meaning
X'00000008'	X'0000211E'	MAXRGN>0 mutually exclusive with SERIAL(Y). Either keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'00002120'	PGM() definition missing. PGM must be defined for local transactions either explicitly or in the model.
X'00000008'	X'00002121'	PARLIM value mutually exclusive with SERIAL(Y). Either both keywords were explicitly specified, or one keyword was explicitly specified and the other attribute was obtained from the model.
X'00000008'	X'00002123'	Invalid PGM name. PGM was specified explicitly, or obtained from the model. If the IMS-defined descriptor DFSDSTR1 was used, the command failed because DFSDSTR1 defines no program name.
X'00000008'	X'00002125'	REMOTE(Y) requires MSC keyword MSNAME or SIDR and SIDL. Either MSNAME or SIDR and SIDL were not explicitly specified or defined in the model. REMOTE(Y) was either explicitly specified or defined in the model.
X'00000008'	X'00002126'	Invalid SIDL value.
X'00000008'	X'00002127'	SIDL/SIDR must be specified as a pair. Either SIDL was specified alone or SIDR was specified alone.
X'00000008'	X'00002128'	Invalid SIDR value.
X'00000008'	X'00002133'	Multiple name parameters were specified with DEFAULT(Y). Only one descriptor can be the default at one time.
X'0000000C'	X'00003000'	Command was successful for some descriptors but failed for others. The command output contains a line for each descriptor, accompanied by its completion code. See the completion code table for details.
X'0000000C'	X'00003004'	Command was not successful for any of the descriptors. The command output contains a line for each descriptor, accompanied by its completion code. See the completion code table for details.
X'00000010'	X'0000400C'	Command is not valid on the XRF alternate.
X'00000010'	X'00004014'	Command is not valid on the RSR tracker.
X'00000010'	X'00004024'	No Fast Path defined, so FP(E), FP(P), or EMHBSZ > 0 is invalid.
X'00000010'	X'00004120'	Online change phase is in progress.
X'00000010'	X'00004204'	Model is quiesced. Cannot quiesce model.
X'00000010'	X'00004300'	Command is not allowed because online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC, or MODBLKS not defined).
X'00000010'	X'00004310'	Storage could not be obtained for the Transaction Input edit routine table. A cold start is required to fix this error.

Table 126. Return and reason codes for the CREATE TRANDESC command (continued)

Return code	Reason code	Meaning
X'00000010'	X'00004314'	The Transaction Input edit routine could not be loaded.
X'00000010'	X'00004318'	A new Transaction Input edit routine could not be added. The maximum of 255 routines has already been reached.
X'00000014'	X'00005004'	DFSOCMD response buffer could not be obtained.
X'00000014'	X'00005008'	DFSPOOL storage could not be obtained.
X'00000014'	X'0000500C'	AWE could not be obtained.
X'00000014'	X'00005010'	Unable to obtain latch.

Errors unique to the processing of this command are returned as completion codes. The following table includes an explanation of the completion codes.

Table 127. Completion codes for the CREATE TRANDESC command

Completion code	Completion code text	Meaning
0		Command completed successfully for transaction descriptor.
11	RESOURCE ALREADY EXISTS	Transaction descriptor already exists.
17	ANOTHER CMD IN PROGRESS	Another command (such as DELETE PGM or UPDATE PGM) is in progress for the program referenced by this transaction.
36	FP(E)/FP(N) PGM CONFLICT	Transaction to be created as Fast Path exclusive FP(E) conflicts with program already defined as non-Fast Path FP(N).
3E	FP(N)/FP(E) PGM CONFLICT	Transaction to be created as non-Fast Path FP(N) conflicts with program already defined as Fast Path exclusive FP(E).
3F	FP(P)/BMPTYPE(Y) CONFLICT	Transaction to be created as Fast Path potential FP(P) conflicts with the program defined as batch BMPTYPE(Y).
5F	INVALID CHARACTERS IN NAME	Name is invalid because it contains an invalid character.
61	DFSBCB STORAGE ERROR	Request to get BCB storage for SMB control block failed.
8A	WILDCARD PARAMETER NOT SUPPORTED	The CREATE command does not support wildcard parameters. You must explicitly specify the names of the descriptors you want to create.
93	RESERVED NAME	Name is reserved. For example, name starts with DFS (except for DFSSAMxx or DFSIVPxx), or is an IMS reserved name such as BASICEDT or WTOR.

Examples

The following are examples of the CREATE TRANDESC command:

Example 1 for CREATE TRANDESC command

TSO SPOC input:

```
CRE TRANDESC NAME(CONVDESC) LIKE(RSC(CDEBTRNA))  
SET(CONV(Y),SPASZ(128),SPATRUNC(R),PGM(DFSSAM04),DEFAULT(Y))
```

TSO SPOC output:

```
DescName MbrName      CC OldDefault  
CONVDESC IMS1         0 DFSDSTR1
```

OM API input:

```
CMD(CRE TRANDESC NAME(CONVDESC) LIKE(RSC(CDEBTRNA))  
SET(CONV(Y),SPASZ(128),SPATRUNC(R),PGM(DFSSAM04),DEFAULT(Y)))
```

OM API output:

```
<imsout>  
<ctl>  
<omname>OM10M </omname>  
<omvsr>1.3.0</omvsr>  
<xm1vsn>20 </xm1vsn>  
<stime>2006.307 18:52:58.805900</stime>  
<stotime>2006.307 18:52:58.806677</stotime>  
<staseq>BFA6C8765828C44A</staseq>  
<stoseq>BFA6C8765859584A</stoseq>  
<rqsttkn1>USRT011 10105258</rqsttkn1>  
<rc>00000000</rc>  
<rsn>00000000</rsn>  
</ctl>  
<cmd>  
<master>IMS1 </master>  
<userid>USRT011 </userid>  
<verb>CRE </verb>  
<kwd>TRANDESC </kwd>  
<input>CRE TRANDESC NAME(CONVDESC) LIKE(RSC(CDEBTRNA))  
SET(CONV(Y),SPASZ(128),SPATRUNC(R),PGM(DFSSAM04),DEFAULT(Y)) </input>  
</cmd>  
<cmdrsphdr>  
<hdr slbl="DESC" llbl="DescName" scope="LCL" sort="a" key="1"  
scroll="no" len="8" dtype="CHAR" align="left" />  
<hdr slbl="MBR" llbl="MbrName" scope="LCL" sort="a" key="2" scroll="no"  
len="8" dtype="CHAR" align="left" />  
<hdr slbl="CC" llbl="CC" scope="LCL" sort="n" key="0" scroll="yes"  
len="4" dtype="INT" align="right" skipb="no" />  
<hdr slbl="CCTXT" llbl="CCText" scope="LCL" sort="n" key="0"  
scroll="yes" len="*" dtype="CHAR" skipb="yes" align="left" />  
<hdr slbl="OLDDEF" llbl="OldDefault" scope="LCL" sort="a" key="2"  
scroll="no" len="8" dtype="CHAR" align="left" />  
</cmdrsphdr>  
<cmdrspdata>  
<rsp>DESC(CONVDESC) MBR(IMS1) CC( 0) OLDDEF(DFSDSTR1) </rsp>  
</cmdrspdata>  
</imsout>
```

Explanation: A CREATE TRANDESC command is issued to create a transaction descriptor for conversational transactions. Descriptor CONVDESC takes the same attributes as transaction CDEBTRNA except for the conversation attribute, SPA size, SPA truncate option, and program name. It is also made the default descriptor, so that if no LIKE keyword is specified on a CREATE TRAN or

CREATE TRANDESC command, the transaction or descriptor is defined with the attributes in descriptor CONVDESC.

Related concepts:

 How to interpret CSL request return and reason codes (System Programming APIs)

Related reference:

Chapter 2, “Command keywords and their synonyms,” on page 57

 Commit Verify exit routine (Exit Routines)

Chapter 20. /DBDUMP command

Use the /DBDUMP command to prevent transactions or programs from updating DL/I databases. It also can be used to dump all MSDBs to the MSDB dump data set. /DBDUMP does not apply to DEDBs.

Subsections:

- “Environment”
- “Syntax”
- “Keywords”
- “Usage notes” on page 269
- “Equivalent IMS type-2 commands” on page 270
- “Examples” on page 271

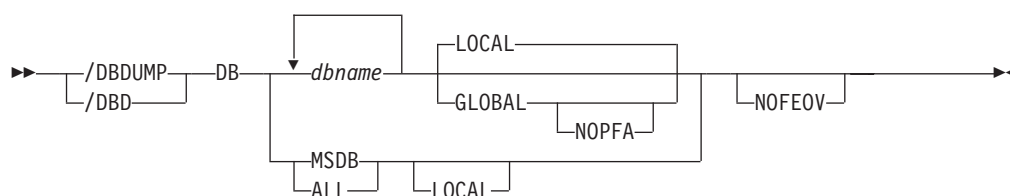
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 128. Valid environments for the /DBDUMP command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DBDUMP	X	X	
DB	X	X	
GLOBAL	X	X	
LOCAL	X	X	
NOFEOV	X	X	
NOPFA	X	X	

Syntax



Keywords

The following keywords are valid for the /DBDUMP command:

- DB** Specifies the databases to which the /DBDUMP command applies. When the /DBDUMP command is entered, the message processing regions using the specified databases are terminated at the conclusion of processing their current transactions, in preparation to close the database and enable it to be opened for input only.

If a DL/I database specified in the command is being used by a batch message processing region, an error message is returned to the master terminal. When this message is issued, the command is ignored for the database named in the message; processing continues for the other databases specified in the command. The master terminal operator must wait until the batch message processing concludes processing before reentering the command.

As the message processing regions terminate programs, the data sets of the named databases in the command are closed. The IMS log switches to the next OLDS. This switch to the next OLDS is marked as a recovery point for log archiving purposes. IMS issues a simple checkpoint. The scheduling of transactions is then resumed, although no transactions will be allowed to update the specified databases. Programs with update intent will be scheduled, but update calls to the database will result in a 3303 pseudoabend or a BA status if the INIT call was issued.

/DBDUMP can be used to dump all the MSDBs to the MSDB dump data set by specifying the reserved parameter MSDB with the DB keyword when entering the /DBDUMP DB command or by entering the /DBDUMP DB ALL command. The MSDBs dumped to the MSDB dump data set can be used as input to the MSDB Dump Recovery utility. A specific MSDB cannot be a parameter of the DB keyword.

The /START DB command resets the effect of the /DBDUMP command. The /START command is not required for MSDBs, because the data for these databases resides in processor storage, and the databases are never closed.

For DBCTL, when CCTL schedules a PSB, the DBCTL thread SCHED request defines the thread as LONG or SHORT. If the database is currently scheduled to a LONG thread, the command is rejected; otherwise, the thread is allowed to "complete" before the database is acted upon. This results in either a commit point or transaction termination.

GLOBAL

Applies when an IRLM is active and specifies that the command applies to all online subsystems sharing the database. The /DBDUMP command with the GLOBAL keyword puts the database in read status and prevents transactions from updating the database in all online subsystems that share the database.

The /DBDUMP GLOBAL command is processed by the IMS system where the command was initiated. The systems will process the command locally and then request IRLM NOTIFY to route and process the command on sharing IMS systems.

If global database status is maintained, the global status maintained in RM is also updated. The global status is set to STOUPDS.

If the command is entered from OM API, the global status is updated by the command master IMS. If the command is not entered from OM API, the IMS that initiated the GLOBAL command updates the global status in RM.

If global status in RM is successfully updated, message DFS0988I for RSRCTYPE=DB is issued. If global status is not successfully updated, message DFS3308I is issued, indicating RM failure, and no command response lines are generated. Any RM error is traced to the OCMD trace table. Users can issue a QRY DB STATUS(GLOBAL) command to set the global status of the resources in RM.

The X'4C' log record for databases is updated to include both the global status and global command time stamp.

The GLOBAL keyword is mutually exclusive with the ALL parameter or the MSDB parameter and causes the command to be rejected if both parameters are specified. The GLOBAL keyword requires that IRLM be active and will cause the command to be rejected if IRLM is not active.

If the command with GLOBAL is entered from OM API, the command master IMS becomes the initiating system. The command IMS will process the command locally first and then make DBRC calls to update the RECON with GLOBAL status. It will also request IRLM NOTIFY to route and process the command on sharing IMS systems.

Messages produced on the NOTIFIED systems will appear only on the system console and will not be routed back to the OM API which originally entered the command.

If the command is routed to multiple IMS systems, the non-master IMS systems to which OM routes the command, will reject the command with the return and reason codes shown in the following table.

Table 129. Return and reason code for the GLOBAL keyword issued from the OM API

Return code	Reason code	Meaning
X'00000004'	X'00001000'	The command contained the GLOBAL keyword and was routed to more than one IMS system in the IMSPLEX. The non-master IMS systems will reject this command when OM routes the command to them. The master IMS system will process this command and use IRLM NOTIFY to route and process the command on the non-master IMS systems. See the discussion under the GLOBAL keyword.

LOCAL

Specifies that the command only applies to the subsystem in which the command is entered. This command does not affect any other subsystem sharing the database. The LOCAL keyword can be used to restrict concurrent updates. LOCAL is the default.

NOFEOV

Specifies that there is no forced end of volume, so that the IMS log does not switch to the next OLDS. If NOFEOV is specified without the MSDB keyword, a simple checkpoint is not taken.

NOPFA

Specifies that the call to DBRC that sets the Read Only flag in the RECON data set for the database or partition is to be skipped. You can use this keyword when you need to authorize the database for update after the command has been processed. By using this keyword, DBRC does not prevent authorizations for update for the database or partition. NOPFA can be specified only with the GLOBAL keyword.

Usage notes

The /DBDUMP command can be used on HALDB databases.

In an IMSplex, the output of the /DBD command is changed when the command is entered through the OM API. In this case, the DFS058I message is not returned to OM. The command response returned to OM contains one or more of the following messages as appropriate to the database type and the command completion.

This command can be issued to an IMSplex using the Batch SPOC utility.

Full Function Database messages: DFS132, DFS160, DFS216, DFS0488I, DFS1407, DFS2026, DFS3318I, DFS3320I, DFS3321I, DFS3325I, DFS3462I, DFS3463I, DFS3466I

When you enter this command, the database name can be an existing non-HALDB, a HALDB master, or a HALDB partition. A command against a HALDB partition operates exactly like a command against a non-HALDB with the exception of the /START DATABASE and the UPDATE DB START(ACCESS) command. A HALDB partition is not allocated during the command unless it was previously authorized but not allocated, the OPEN keyword was specified, or the partition has EEQEs. The partition is allocated at first reference.

The HALDB partition reflects conditions such as STOPPED (shown as STOACC or STOSCHD or STOUPDS on QUERY DB), LOCKED, or NOTOPEN. When a HALDB partition is stopped, it must be explicitly started again. The type-1 commands with the keyword ALL, type-2 commands with NAME(*), and commands against a HALDB master do not change the STOPPED (shown as STOACC, STOSCHD or STOUPDS on QUERY DB) and LOCKED indicators in each HALDB partition.

When the command target is a HALDB master, processing acts on all HALDB partitions. For example, if the IMS command is /DBR on the HALDB master, all of the HALDB partitions are closed, deallocated, and deauthorized. On a /DISPLAY DB command, only the HALDB master displays STOPPED (each HALDB partition does not display STOPPED unless it was itself stopped). If a /DBR command was issued against a HALDB master, the display output of a /DISPLAY DB command shows the HALDB master (as STOPPED), but does not display the status of the partitions.

Each partition inherits the access limitations of its HALDB master. If the /DBD command is issued against a HALDB master, all of its partitions close. A subsequent reference to any of the partitions results in the partition opening for input, although the partition's access might be UPDATE or EXCLUSIVE. The DBRC authorization state reflects the limited access.

Restrictions:

- The /DBDUMP DB command cannot be processed against a HALDB partition on an IMS system while HALDB Online Reorganization (OLR) is running against that partition on the same IMS system.
- The /DBDUMP DB command cannot be issued against a HALDB master while OLR is reorganizing any of its partitions.
- While the database is being quiesced, this command cannot be processed successfully.

Equivalent IMS type-2 commands

The following table shows variations of the /DBDUMP command and the IMS type-2 commands that perform similar functions.

Table 130. Type-2 equivalents for the /DBDUMP command.

Task	/DBDUMP command	Similar IMS type-2 command
Stops updates to a database.	/DBDUMP DB <i>dbname</i>	UPDATE DB NAME(<i>dbname</i>) STOP(UPDATES) OPTION(FEOV) ¹

Table 130. Type-2 equivalents for the /DBDUMP command (continued).

Task	/DBDUMP command	Similar IMS type-2 command
¹ This command does not automatically issue checkpoints unless OPTION(FE0V) is specified.		

Examples

The following are examples of the /DBDUMP command:

Example 1 for /DBDUMP command

Entry ET:

```
/DBDUMP DATABASE PAYROLL
```

Response ET:

```
DFS058I (time stamp) DBDUMP COMMAND IN PROGRESS
```

Explanation: Currently executing application programs are being terminated. When the termination completes, the databases are stopped for update and the output log is switched to the next OLDS.

Response ET:

```
DFS0488I DBD COMMAND COMPLETED.
          DBN=PAYROLL RC=0
DFS3257I ONLINE LOG NOW SWITCHED FROM DFSOLP( ) TO DFSOLP( )
DFS994I *CHKPT 82080/111213**SIMPLE*
```

Explanation: The new OLDS is used to record a simple checkpoint at 111213 (time) on 82080 (Julian date). The checkpoint number is 82080/111213. All /DBDUMP command functions are complete. The /START DATABASE command must be used to start the database after the dump job completes.

Example 2 for /DBDUMP command

Entry ET:

```
/DBDUMP DATABASE MSDB
```

Response ET:

```
DFS058I (time stamp) DBDUMP COMMAND IN PROGRESS
```

Explanation: All MSDBs are dumped to the MSDB dump data set because MSDB was specified as the parameter of the database keyword.

Response ET:

```
DFS994I CHKPT 82069/123624**SIMPLE*
```

Explanation: A simple checkpoint is recorded on the new system log at 123624 (time) on 82069 (Julian date). The checkpoint number is 82069/123624. All MSDBs are dumped.

Related concepts:

 Maintaining global information for databases, DEDB areas, and transactions (System Administration)

Related reference:

 UPDATE DB command (Commands)

Chapter 21. /DBRECOVERY command

Use the /DBRECOVERY command to prevent transactions or programs from accessing DL/I databases, DEDBs, or DEDB areas.

Subsections:

- “Environment”
- “Syntax”
- “Keywords” on page 274
- “Usage notes” on page 277
- “Equivalent IMS type-2 commands” on page 278
- “Examples” on page 279

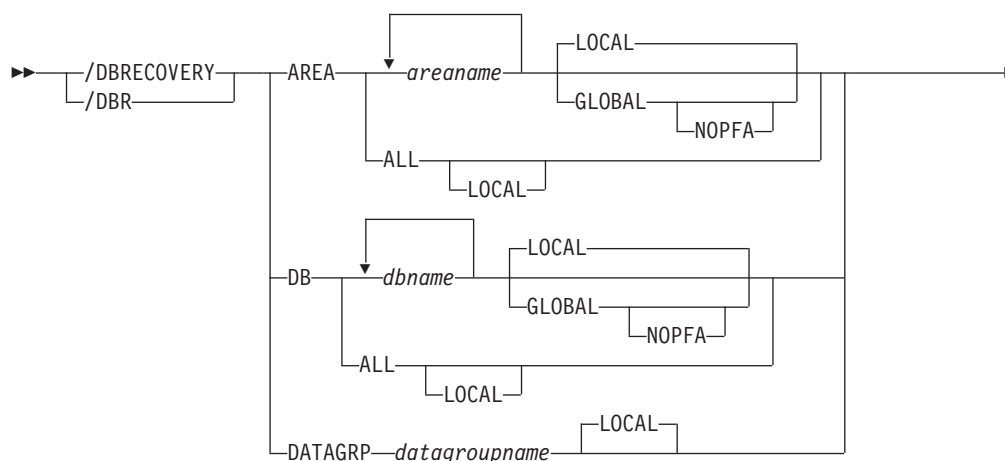
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 131. Valid environments for the /DBRECOVERY command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DBRECOVERY	X	X	
AREA	X	X	
DB	X	X	
DATAGRP	X	X	
GLOBAL	X	X	
LOCAL	X	X	
NOFEOV	X	X	
NOPFA	X	X	

Syntax



Keywords

The following keywords are valid for the /DBRECOVERY command:

AREA

Specifies the DEDB areas (but not DEDBs) to be processed by the /DBRECOVERY command. The /DBRECOVERY AREA command stops the accessing and updating of specified DEDB areas and closes them.

The /START AREA command can be used to reopen and reallocate the areas closed by /DBRECOVERY AREA command.

The /DBRECOVERY command for Fast Path Virtual Storage Option (VSO) areas in a z/OS data space removes the areas from the data space and forces updates to be written back to DASD.

While the database is being quiesced, this command cannot be processed successfully.

DATAGRP

Specifies a group of DL/I databases and Fast Path DEDBs to be processed by the /DBRECOVERY command. Use the INIT.DBDSGRP command with the GRPNAME and DBGRP keywords to define the data group in the RECON data set.

DATAGRP is valid on active and RSR tracking subsystems.

Recommendation: Although you can use DBDS groups as well as database groups for this command, you should use database groups whenever possible to eliminate the overhead of converting the DBDS group to a database group.

DB Specifies the DL/I databases and Fast Path DEDBs (and inclusive areas) to be processed by the /DBRECOVERY command. MSDBs cannot be specified with /DBRECOVERY. The /DBRECOVERY DB command allows scheduling of transactions or programs that use the database to continue after successful completion of the command. However, calls to DEDB databases will receive an FH status code. If the application program is prepared to accept status codes regarding data unavailability through the INIT STATUS GROUPA or GROUPB call, calls to DL/I databases will result in either a 3303 pseudoabend, a BA, or BB status code.

When the /DBRECOVERY DB command is entered, the data sets of the databases named in the command are closed. The /DBRECOVERY DB command dynamically deallocates the IMS databases. For DEDBs, the randomizer is unloaded and removed from storage. You can use the UPD DB STOP(ACCESS) OPTION(NORAND) command to prevent the randomizer from being unloaded.

If a DL/I database is in use by a batch message processing region when the /DBRECOVERY command is issued, a DFS0565I message is returned to the master terminal, the command is ignored for the database named in the message, and processing continues for any other databases specified in the command. The master terminal operator must wait until the BMP ends before reissuing the /DBRECOVERY command to close the databases named in any DFS0565I messages. DEDB databases will accept the /DBRECOVERY command

while actively being used by a batch message processing region. However, all further calls to the database will receive an FH status code.

The region identified in the DFS0565I message can also be an MPP region. The error message can be issued in order to break a potential deadlock condition between Online Change, a /DBR, or /STA command against a database being used by the MPP, and an application running in the MPP issuing an ICMD or CMD call.

The /START DB command is used to reallocate the databases closed by the /DBRECOVERY DB command except for HALDB partitions. A HALDB partition can be reallocated if the partition has EEQEs, the partition was previously authorized but not allocated, or the OPEN keyword on the /START DB command was used. HALDB partitions are allocated at first reference. For DEDBs, a /START DB command also causes a reload of the randomizer.

For DBCTL, when CCTL schedules a PSB, the DBCTL thread SCHED request defines the thread as LONG or SHORT. If the database is currently scheduled to a LONG thread, the command is rejected; otherwise, the thread is allowed to “complete” before the database is acted upon. This results in either a commit point or transaction termination.

On an RSR tracking subsystem, /DBRECOVERY DB for a DEDB is not permitted.

While the database is being quiesced, this command cannot be processed successfully.

GLOBAL

Applies when the database is registered to DBRC and specifies that the command applies to all sharing online subsystems. You can use the /DBRECOVERY GLOBAL command to close the database so that it can be taken offline when this command successfully completes in all online subsystems. If the database is registered in the RECON data set, the prohibit authorization flag will be set (PROHIBIT AUTH = ON), and DBRC will prevent any further authorization of the database. This is equivalent to the CHANGE.DB DBD(xxx) NOAUTH DBRC command.

The /DBRECOVERY GLOBAL command is processed by the IMS system where the command was initiated. This system will process the command locally and then request IRLM NOTIFY to route and process the command on sharing IMS systems.

If global DB or AREA status is maintained, the global status maintained in RM is also updated. The global status is set to STOACC.

If the command is entered from OM API, the global status is updated by the command master IMS. If the command is not entered from OM API, the IMS that initiated the GLOBAL command updates the global status in RM.

If global status in RM is successfully updated, message DFS0988I for RSRCTYPE=DB is issued. If global status is not successfully updated, message DFS3308I is issued, indicating RM failure, and no command response lines are generated. Any RM error is traced to the OCMD trace table. Users can issue a QRY DB STATUS(GLOBAL) or QUERY AREA STATUS(GLOBAL) to obtain the global status of the resources in RM.

The X'4C' log record for databases is updated to include both global status and global command time stamp. A new log record for DEDB areas, X'594C', includes both global status and global command time stamp.

The GLOBAL keyword and the ALL parameter are mutually exclusive. The /DBRECOVERY command will be rejected if both GLOBAL and ALL are specified. The IRLM must be active when the GLOBAL keyword is used. If IRLM is not active, the command is rejected.

If the command with GLOBAL is entered from OM API, the command master IMS becomes the initiating system. The command IMS will process the command locally first and then make DBRC calls to update the RECON with GLOBAL status. It will also request IRLM NOTIFY to route and process the command on sharing IMS systems.

Messages produced on the NOTIFIED systems will appear only on the system console and will not be routed back to the OM API that originally entered the command.

If the command is routed to multiple IMS systems, the non-master IMS systems to which OM routes the command, will reject the command with the return and reason codes shown in the following table.

Table 132. Return and reason code for GLOBAL keyword issued from the OM API

Return code	Reason code	Meaning
X'00000004'	X'00001000'	The command contained the GLOBAL keyword and was routed to more than one IMS system in the IMSplex. The non-master IMS systems will reject this command when OM routes the command to them. The master IMS system will process this command and use IRLM NOTIFY to route and process the command on the non-master IMS systems. See the discussion under the GLOBAL keyword.

Restriction: When the GLOBAL keyword is specified, the command is performed for the named database only. If the command is to be performed for a HIDAM database and its index, both must be named.

The GLOBAL keyword is not supported for an RSR tracking subsystem. The GLOBAL keyword cannot be combined with the DATAGRP keyword.

LOCAL

Specifies that the command applies only to the subsystem in which the command is entered. This command does not affect any other subsystem sharing the database or area. Use the LOCAL keyword to increase usability for the other system sharing the database or area. LOCAL is the default.

NOFEOV

Specifies that there is no forced end of volume, so that the log does not switch to the next OLDS and simple checkpoint is not taken. The NOFEOV keyword is the default for an RSR tracking subsystem so that the OLDS is not switched, nor is a simple checkpoint taken.

NOPFA

Specifies to skip the call to DBRC that sets the Prohibit Authorization flag in the RECON data set for the database or area. You can use this keyword when you need to authorize the database for use after it is offline, for example, for offline utilities. By using this keyword, DBRC does not prevent further authorizations for the database or area.

NOPFA can be specified only with the GLOBAL keyword.

Usage notes

The /DBRECOVERY command can be used on HALDB databases.

Use of the ALL parameter indicates that the command applies to all databases, even those not opened.

The /DBRECOVERY command closes and deallocates the databases, and deauthorizes them with DBRC. Once the database or area referenced by /DBRECOVERY is closed, the IMS log switches to the next OLDS (unless you specify the NOFEOV keyword). This switch to the next OLDS is marked as a recovery point for log archiving purposes. IMS issues a simple checkpoint.

/DBRECOVERY is supported on an RSR tracking subsystem, but only for a database readiness level (DLT) subsystem. The /DBRECOVERY command is used on an RSR tracking subsystem to take shadow areas and databases offline for image copy and recovery. The /DBRECOVERY command also stops online forward recovery (OFR) if it is in progress for the specified database or area.

IMS databases, DEDBs, and DEDB areas closed by the master terminal operator with the /DBRECOVERY command can be used as input to the offline IMS Database Recovery utility. The Database Recovery utility runs in a batch region.

If the /DBRECOVERY command does not deallocate a data set because a VSAM data set hardware error occurred, use the VARY *nnn*,OFFLINE,FORCE command to deallocate the data set (where *nnn* is the number of the device).

In an IMSplex, the output of the /DBR command is different when the command is entered through the OM API. In this case, the DFS058I message is not returned to OM. The command response returned to OM contains one or more of the following messages as appropriate to the database type and the command completion.

- For /DBR AREA commands that specify GLOBAL, only the command master returns the asynchronous messages to OM. When a command is processed with the LOCAL keyword, all IMS systems are able to return the asynchronous messages to OM.
- Full-function database messages for /DBR DB: DFS132, DFS160, DFS216, DFS0488I, DFS0565I, DFS1407, DFS2026, DFS3318I, DFS3320I, DFS3321I, DFS3464I, DFS3466I.
- Fast Path database messages for /DBR DB: DFS140I, DFS0666I, DFS3062I, DFS3320I.
- Fast Path database messages for /DBR AREA: DFS140I, DFS0488I, DFS0666I, DFS1407I, DFS3060I, DFS3062I, DFS3320I, DFS3325I, DFS3342I, DFS3720I.

This command can be issued to an IMSplex using the Batch SPOC utility.

When you enter this command, the database name can be an existing non-HALDB, a HALDB master, or a HALDB partition. A command against a HALDB partition operates exactly like a command against a non-HALDB except for the /START DB and the UPDATE DB START(ACCESS) commands. A HALDB partition is not allocated during the command unless it was previously authorized but not allocated, the OPEN keyword was specified, or the partition has EEQEs. The partition is allocated at first reference.

The HALDB partition reflects conditions such as STOPPED (shown as STOACC or STOSCHD or STOUNDS on QUERY DB), LOCKED, or NOTOPEN. When a HALDB partition is stopped, it must be explicitly started again. The type-1 commands with the keyword ALL, type-2 commands with NAME(*), and commands against a HALDB master do not change the STOPPED (shown as STOACC, STOSCHD or STOUNDS on QUERY DB) and LOCKED indicators in each HALDB partition.

When the command target is a HALDB master, processing acts on all HALDB partitions. For example, if the IMS command is /DBR on the HALDB master, all of the HALDB partitions are closed, deallocated, and deauthorized. On a /DISPLAY DB command, only the HALDB master displays STOPPED (each HALDB partition does not display STOPPED unless it was itself stopped). If a /DBR command was issued against a HALDB master, the display output of a /DISPLAY DB command shows the HALDB master (as STOPPED), but does not display the status of the partitions.

Each partition inherits the access limitations of its HALDB master. If the /DBD command is issued against a HALDB master, all of its partitions close. A subsequent reference to any of the partitions results in the partition opening for input, although the partition's access might be UPDATE or EXCLUSIVE. The DBRC authorization state reflects the limited access.

Restrictions:

- The /DBRECOVERY DB command cannot be processed against a HALDB partition on an IMS system while HALDB Online Reorganization (OLR) is running against that partition on the same IMS system.
- The /DBRECOVERY DB command cannot be issued against a HALDB master while OLR is reorganizing any of its partitions.

The NODBR keyword can be specified in the DFSVSMxx member of the IMS PROCLIB data set to prevent a /DBRECOVERY command from processing against a database that has in-doubt EEQEs. NODBR does not apply to Fast Path databases.

Equivalent IMS type-2 commands

The following table shows variations of the /DBRECOVERY command and the IMS type-2 commands that perform similar functions.

Table 133. Type-2 equivalents for the /DBRECOVERY command.

Task	/DBRECOVERY command	Similar IMS type-2 command
Stops the accessing and updating of an area.	/DBRECOVERY AREA <i>areaname</i>	UPDATE AREA NAME(<i>areaname</i>) STOP(ACCESS)
Stops the accessing and updating of all areas and databases of the data group.	/DBRECOVERY DATAGRP <i>datagrpname</i>	UPDATE DATAGRP NAME(<i>datagrpname</i>) STOP(ACCESS)
Stops access to the database and take it offline.	/DBRECOVERY DB <i>dbname</i>	UPDATE DB NAME(<i>dbname</i>) STOP(ACCESS) OPTION(FEOV) ¹

¹ This command does not automatically issue checkpoints unless OPTION(FEOV) is specified.

Examples

The following are examples of the /DBRECOVERY command:

Example 1 for /DBRECOVERY command

Entry ET:

```
/DBRECOVERY AREA ALL
```

Response ET:

```
DFS058I DBRECOVERY COMMAND IN PROGRESS
DFS0488I DBRECOVERY COMMAND COMPLETED. AREA=DBAREA0
DFS0488I DBRECOVERY COMMAND COMPLETED. AREA=DBAREA1
```

Explanation: DEDB areas are being stopped for inquiry and update, closed, and deallocated; the output log is switched to the next OLDS.

Example 2 for /DBRECOVERY command

Entry ET:

```
/DBRECOVERY DATABASE SKILL
```

Response ET:

```
DFS058I DBRECOVERY COMMAND IN PROGRESS
DFS2500I DATABASE SKILL SUCCESSFULLY DEALLOCATED
DFS0488I DBRECOVERY COMMAND COMPLETED. DBN=SKILL RC=0
DFS3257I ONLINE LOG NOW SWITCHED FROM DFSOLP( ) TO DFSOLP( )
DFS944I *CHKPT 82123/121314**SIMPLE**
```

Explanation: The new OLDS is used to record a simple checkpoint at 121314 (time) on 82123 (Julian date). The checkpoint number is 82123/121314. All /DBRECOVERY command functions are complete. The Database Recovery utility can be executed after archiving. Currently executing application programs are being terminated. When the termination completes, the SKILL database is stopped for inquiry and update, closed, and deallocated; the output log is switched to the next OLDS. The /START DATABASE command must be used to start the database after the recovery job completes.

Example 3 for /DBRECOVERY command

This example shows how to stop an online forward recovery (OFR) at the RSR tracking site with a /DBRECOVERY command.

Entry ET (on tracking subsystem):

```
/DISPLAY DATABASE OFR
```

Response ET (to tracking subsystem):

DATABASE	TYPE	TOTAL UNUSED	TOTAL UNUSED	ACC	CONDITIONS
BE2PCUST	DL/I			EX	ALLOCS OFR
BE3ORDER	DL/I			EX	ALLOCS OFR
BE3ORDRX	DL/I			EX	ALLOCS OFR
BE3PARTS	DL/I			EX	ALLOCS OFR
BE3PSID1	DL/I			EX	ALLOCS OFR
91240/132406	SYS3				

Entry ET (on tracking subsystem):

```
/DBRECOVERY DATABASE BE3ORDER BE3PSID1
```

Response ET (to tracking subsystem):

```
DFS058I DBRECOVERY COMMAND IN PROGRESS
DFS0488I DBR COMMAND COMPLETED. DBN=BE3ORDER. RC=0
DFS0488I DBR COMMAND COMPLETED. DBN=BE3PSID1. RC=0
```

Explanation: Databases BE3ORDER and BE3PSID1 are closed, unallocated, and deauthorized with DBRC. Online forward recovery for the databases is also stopped.

Example 4 for /DBRECOVERY command

This example shows how the /DBRECOVERY command might look when entered from the SPOC.

TSO SPOC input:

```
DBR DB BANKATMS BANKTERM BANKLDGR BE3ORDER
```

TSO SPOC output:

```
SYS3      DFS0488I DBR COMMAND COMPLETED. DBN= BANKATMS RC=04
SYS3      DFS0488I DBR COMMAND COMPLETED. DBN= BANKTERM RC=04
SYS3      DFS0488I DBR COMMAND COMPLETED. DBN= BANKLDGR RC=04
SYS3      DFS0488I DBR COMMAND COMPLETED. DBN= BE3ORDER RC= 0
IMS3      DFS0488I DBR COMMAND COMPLETED. DBN= BANKATMS RC=04
IMS3      DFS0488I DBR COMMAND COMPLETED. DBN= BANKTERM RC=04
IMS3      DFS0488I DBR COMMAND COMPLETED. DBN= BANKLDGR RC=04
IMS3      DFS0488I DBR COMMAND COMPLETED. DBN= BE3ORDER RC= 0
```

OM API input:

```
CMD (DBR DB BANKATMS BANKTERM BANKLDGR BE3ORDER)
```

OM API output:

```
<?xml version="1.0"?>
<!DOCTYPE imsout SYSTEM "imsout.dtd">
<imsout>
<ctl>
<omname>OM10M </omname>
<omvsn>1.1.0</omvsn>
<xmlvsn>1 </xmlvsn>
<statime>2002.197 21:52:02.730359</statime>
<stotime>2002.197 21:52:03.383199</stotime>
<staseq>B7EFBE716A9770A4</staseq>
<stoseq>B7EFBE7209F9FD2F</stoseq>
<rqsttkn1>USRT005 10145202</rqsttkn1>
<rc>0200000C</rc>
<rsn>00003008</rsn>
</ctl>
<cmderr>
<mbr name="SYS3 ">
<typ>IMS </typ>
<styp>DBDC </styp>
<rc>00000014</rc>
<rsn>00005050</rsn>
<rsntext>Command processing error</rsntext>
</mbr>
<mbr name="IMS3 ">
<typ>IMS </typ>
<styp>DBDC </styp>
<rc>00000014</rc>
<rsn>00005050</rsn>
<rsntext>Command processing error</rsntext>
</mbr>
</cmderr>
```

```

<cmd>
<master>SYS3      </master>
<userid>USRT005 </userid>
<verb>DBR </verb>
<kwd>DB          </kwd>
<input>/DBR DB BANKATMS BANKTERM BANKLDGR BE3ORDER </input>
</cmd>
<msgdata>
<mbr name="SYS3  ">
<msg>DFS0488I  DBR COMMAND COMPLETED. DBN= BANKATMS RC=04</msg>
<msg>DFS0488I  DBR COMMAND COMPLETED. DBN= BANKTERM RC=04</msg>
<msg>DFS0488I  DBR COMMAND COMPLETED. DBN= BANKLDGR RC=04</msg>
<msg>DFS0488I  DBR COMMAND COMPLETED. DBN= BE3ORDER RC= 0</msg>
</mbr>
<mbr name="IMS3  ">
<msg>DFS0488I  DBR COMMAND COMPLETED. DBN= BANKATMS RC=04</msg>
<msg>DFS0488I  DBR COMMAND COMPLETED. DBN= BANKTERM RC=04</msg>
<msg>DFS0488I  DBR COMMAND COMPLETED. DBN= BANKLDGR RC=04</msg>
<msg>DFS0488I  DBR COMMAND COMPLETED. DBN= BE3ORDER RC= 0</msg>
</mbr>
</msgdata>
</imsout>

```

Explanation: The DBR command is routed from OM to the two active IMS systems -- SYS3 and IMS3. The response from both IMS systems is returned to OM. The databases BANKATMS, BANKTERM, BANKLDGR, and BE3ORDER are taken offline at both IMS systems.

Related concepts:

 Maintaining global information for databases, DEDB areas, and transactions (System Administration)

Related reference:

“IMS type-1 command format” on page 16

 z/OS: Recovering VSAM data sets

 DFSVSMxx member of the IMS PROCLIB data set (System Definition)

 UPDATE AREA command (Commands)

 UPDATE DATAGRP command (Commands)

 UPDATE DB command (Commands)

Chapter 22. /DELETE command

Use the /DELETE command to delete LU 6.2 descriptors, password security authorizations for a given transaction code, logical terminal, relative physical terminal, database, node, or program, and terminal and logical link security for a given transaction code.

This command can be issued to an IMSplex using the Batch SPOC utility.

Subsections:

- “Environment”
- “Syntax”
- “Keywords”

Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 134. Valid environments for the /DELETE command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DELETE	X	X	X
DESC	X		X

Syntax

►► — /DELETE
/DEL — DESC — *descriptorname* —►►

Keywords

The following keyword is valid for the /DELETE command:

DESC *descriptorname*

Specifies the LU62 descriptor to be deleted. Note that this will not delete the descriptor in the PROCLIB member. It is necessary to remove the descriptor from the PROCLIB member; otherwise, the descriptor will be defined at the next IMS restart.

Chapter 23. DELETE commands

Use the IMS DELETE commands to delete Language Environment (LE) runtime options, resources, and resource descriptors.

These commands can be issued through TSO SPOC or the Manage Resources options in the IMS Applications menu. These commands can also be issued to an IMSplex by using the Batch SPOC utility.

Subsections:

- “DELETE DB command”
- “DELETE DBDESC command” on page 293
- “DELETE LE command” on page 298
- “DELETE OTMADESC command” on page 305
- “DELETE PGM command” on page 308
- “DELETE PGMDESC command” on page 313
- “DELETE RTC command” on page 319
- “DELETE RTCDESC command” on page 323
- “DELETE TRAN command” on page 328
- “DELETE TRANDESC command” on page 335

DELETE DB command

Use the DELETE DB command to delete database resources.

Subsections:

- “Environment”
- “Syntax” on page 286
- “Keywords” on page 286
- “Usage notes” on page 286
- “Output fields” on page 287
- “Return, reason, and completion codes” on page 287
- “Examples” on page 290

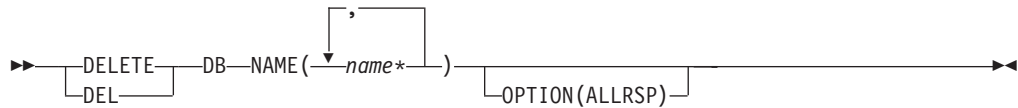
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 135. Valid environments for the DELETE DB command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
DELETE DB	X	X	
NAME	X	X	
OPTION	X	X	

Syntax



Keywords

The following keywords are valid for the DELETE DB command:

NAME

Specifies the 1-8 character name of the database. Wildcards are supported in the name. Examples of valid names are NAME(*) and NAME(abc*). If the NAME parameter specified is a specific or wildcard name, command responses are returned for all the resource names that are processed. For NAME(*), command responses are returned only for the resource names that resulted in an error. For a DEL DB command when the database contains Fast Path areas, if all areas are successfully deleted, no area names are displayed. If the delete fails for any area, then all area names are displayed to show which deletes were successful and which were not.

OPTION

Specifies additional functions to be performed along with the command.

ALLRSP

Indicates that the response lines are to be returned for all resources that are processed on the command. The default action is to return response lines only for the resources that resulted in an error. The ALLRSP keyword is valid only if NAME(*) is specified.

Usage notes

This command can only be issued through the Operations Manager API. This command applies to DB/DC systems, DBCTL systems, and DCCTL systems. The DELETE DB command is not valid on the XRF alternate, RSR tracker, or FDBR region. This command is not valid if online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC or MODBLKS not defined). This command is recoverable.

Each database is deleted individually, unlike the online change process where either all databases are deleted or no databases are deleted. The runtime resource definition for a database can only be deleted if the database is not in use. If the database is in use, the delete fails. In a sysplex environment with multiple IMS subsystems, the delete might succeed on some IMS subsystems and fail on others.

The DELETE DB command removes ACB members from the 31-bit nonresident pool as well as the 64-bit storage pool.

The resources remain deleted across an IMS warm start or emergency restart. To ensure that the resources remain deleted across a cold start, the existing resource definitions must be exported to an RDDS and then imported from the RDDS at cold start. If the resource definitions are to be imported from the MODBLKS data set at cold start instead of from an RDDS, the resource definitions must be deleted from system definition and a new MODBLKS data set must be generated.

The database can be HSAM, HISAM, HDAM, HIDAM, DEDB, or a HALDB master database. The database cannot be a HALDB partition. If a database is logically related to another database, you need to consider whether the logically related databases should also be deleted. For example, if the database is a HIDAM database, both the primary database and the index database must be deleted.

To delete a HALDB master database, a /DBRECOVERY command must be issued. The /DBRECOVERY command removes this IMS subsystem's knowledge of the HALDB partitions and stops the HALDB master database so that it can be deleted.

Output fields

The following table shows the DELETE DB output fields. The columns in the table are as follows:

Short label

Contains the short label generated in the XML output.

Long label

Contains the long label generated in the XML output.

Keyword

Identifies keyword on the command that caused the field to be generated. N/A appears for output fields that are always returned. *error* appears for output fields that are returned only in case of an error.

Meaning

Provides a brief description of the output field.

Table 136. Output fields for the DELETE DB command

Short label	Long label	Keyword	Meaning
CC	CC	N/A	Completion code.
CCTXT	CCText	<i>error</i>	Completion code text that briefly explains the meaning of the nonzero completion code.
DB	DBName	N/A	Database name being deleted.
ERRT	ErrorText	<i>error</i>	Error text that provides diagnostic information. Error text can be returned for a nonzero completion code and further explains the completion code.
MBR	MbrName	N/A	IMSplex member that built the output line.
TYPE	Type	DB	Resource type, which can be AREA, DEDB, DL/I, or blank (unknown). Resource type is returned only if areas are returned.

Return, reason, and completion codes

The following table includes the return and reason codes and a brief explanation of the codes. The return or reason code returned for the command might also indicate an error from a CSL request.

Table 137. Return and reason codes for the DELETE DB command

Return code	Reason code	Meaning
X'00000000'	X'00000000'	Command completed successfully. The command output contains a line for each resource, accompanied by its completion code. If NAME(*) is specified without OPTION(ALLRSP), no output lines are returned. See the completion code table for details.
X'0000000C'	X'00003000'	Command was successful for some resources but failed for others. The command output contains a line for each resource, accompanied by its completion code. If NAME(*) is specified without OPTION(ALLRSP), only resources with nonzero completion codes are returned. See the completion code table for details.
X'0000000C'	X'00003004'	Command was not successful for any of the resources. The command output contains a line for each resource, accompanied by its completion code. See the completion code table for details.
X'00000010'	X'0000400C'	Command is not valid on the XRF alternate.
X'00000010'	X'00004014'	Command is not valid on the RSR tracker.
X'00000010'	X'00004120'	Online change phase is in progress.
X'00000010'	X'00004300'	Command is not allowed because online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC, or MODBLKS not defined).
X'00000010'	X'00004301'	Command is not allowed because the database has a logical relationship with another database.
X'00000014'	X'00005004'	DFSOCMD response buffer could not be obtained.
X'00000014'	X'00005008'	DFSPOOL storage could not be obtained.
X'00000014'	X'0000500C'	AWE could not be obtained.

Errors unique to the processing of this command are returned as completion codes. The following table includes an explanation of the completion codes.

Table 138. Completion codes for the DELETE DB command

Completion code	Completion code text	Meaning	Error text
0		Command completed successfully for database.	
8	COMMAND COMPLETE FOR SOME	Command completed for some of the areas. Area names are returned with a completion code.	
C	COMMAND COMPLETE FOR NONE	Command failed for all of the areas. Area names are returned with completion codes.	

Table 138. Completion codes for the DELETE DB command (continued)

Completion code	Completion code text	Meaning	Error text
10	NO RESOURCES FOUND	Database name is invalid, or the wildcard parameter specified does not match any database names.	
17	ANOTHER CMD IN PROGRESS	Another command (such as DELETE or UPDATE) is in progress for this database. This could also mean this command, if the resource is specified by more than one specific or wildcard parameter.	
23	DB STOP ACCESS IN PROGRESS	A /DBRECOVERY or UPDATE DB STOP(ACCESS) command to stop database access is in progress. This takes the database offline.	
25	DB STOP UPDATES IN PROGRESS	A /DBDUMP or UPDATE DB STOP(UPDATES) command to stop database updates is in progress for the database.	
26	DEDB STOP IN PROGRESS	A /DBRECOVERY, /STOP, or UPDATE DB STOP(SCHD) command to stop database scheduling is in progress for a DEDB.	
27	REJECTED FOR DEFAULT DESCRIPTOR	DELETE command not allowed for user-defined default descriptor. You must issue an UPDATE command to set another descriptor as the default before deleting this descriptor.	
60	GETMAIN STORAGE ERROR	A GETMAIN request for storage was unsuccessful.	
61	DFSBCB STORAGE ERROR	A storage request for a DDIR block failed.	
65	DMB POOL STORAGE ERROR	During a DELETE command for a DB resource, there was an error in the DMB pool processing of a resident DMB.	

Table 138. Completion codes for the DELETE DB command (continued)

Completion code	Completion code text	Meaning	Error text
6C	NOT ALLOWED FOR HALDB PARTITION	DELETE is not allowed for a HALDB partition.	
6F	REFERENCED BY PROGRAM	Program references the database to be deleted. The program name that references this database to be deleted is returned as error text. Suggested actions: Use online change for ACBLIB to change the PSB to no longer reference the database to be deleted or delete the PSB or issue DELETE PGM.	pgmname (8 characters)
76	RECOVER CMD ACTIVE	RECOVER START command is in progress to recover one or more databases with the database recovery services.	
77	DEPENDENT REGIONS ACTIVE	One or more active dependent regions reference the database.	
90	INTERNAL ERROR	An IMS system service failure.	
DE	ACBLIB READ FAILURE	A read request for a member in ACBLIB failed.	
E1	DB MUST BE STOPPED AND OFFLINE	The database must be stopped and taken offline in order for the database to be deleted. You might need to issue a /DBR DB command or an UPDATE DB STOP(ACCESS) command to stop the database and take it offline before issuing the DELETE DB command.	
E2	PARALLEL DB OPEN NOT COMPLETE	The DELETE DB command was rejected because DB parallel open is in progress.	

Examples

The following are examples of the DELETE DB command:

Example 1 for DELETE DB command

TSO SPOC input:

```
DEL DB NAME(DBHID0*,BADNAME,DEDBJ%1,IPODB)
```

TSO SPOC output:

```
Response for: DEL DB NAME(DBHID0*,BADNAME,DEDBJ%1,IPODB)
DBName      MbrName      CC CText      ErrorText
BADNAME     IMS1             10 NO RESOURCES FOUND
DBHIDOK2    IMS1             E1 DATABASE HAS NOT BEEN DBR"D
DBHIDOK8    IMS1             6F REFERENCED BY PROGRAM      PBODSAGM
DBHIDOK8    IMS1             6F REFERENCED BY PROGRAM      PBODSAGR
DBHIDOK8    IMS1             6F REFERENCED BY PROGRAM      PBODSALU
DEDBJN01    IMS1             6F REFERENCED BY PROGRAM      DDLTLM02
DEDBJN21    IMS1             E1 DATABASE HAS NOT BEEN DBR"D
DEDBJ001    IMS1             E1 DATABASE HAS NOT BEEN DBR"D
DEDBJ011    IMS1             E1 DATABASE HAS NOT BEEN DBR"D
DEDBJ021    IMS1             0
DEDBJ031    IMS1             E1 DATABASE HAS NOT BEEN DBR"D
DEDBJ041    IMS1             E1 DATABASE HAS NOT BEEN DBR"D
DEDBJ051    IMS1             E1 DATABASE HAS NOT BEEN DBR"D
DEDBJ061    IMS1             E1 DATABASE HAS NOT BEEN DBR"D
DEDBJ071    IMS1             E1 DATABASE HAS NOT BEEN DBR"D
DEDBJ081    IMS1             E1 DATABASE HAS NOT BEEN DBR"D
DEDBJ091    IMS1             E1 DATABASE HAS NOT BEEN DBR"D
IPODB       IMS1             E1 DATABASE HAS NOT BEEN DBR"D
```

OM API input:

```
CMD(DEL DB NAME(DBHID0*,BADNAME,DEDBJ%1,IPODB))
```

OM API output:

```
<imsout>
<ctl>
<omname>OM10M    </omname>
<omvsn>1.3.0</omvsn>
<xmlvsn>20    </xmlvsn>
<statime>2006.310 23:26:32.420713</statime>
<stotime>2006.310 23:26:32.422399</stotime>
<staseq>BFAACB33F8569D5C</staseq>
<stoseq>BFAACB33F8BFFD5C</stoseq>
<rqsttkn1>USRT011 10152632</rqsttkn1>
<rc>0200000C</rc>
<rsn>00003008</rsn>
<rsnmsg>CSLN054I</rsnmsg>
<rsntxt>None of the clients were successful.</rsntxt>
</ctl>
<cmderr>
<mbr name="IMS1  ">
<typ>IMS    </typ>
<styp>DBDC    </styp>
<rc>0000000C</rc>
<rsn>00003000</rsn>
<rsntxt>At least one request successful</rsntxt>
</mbr>
</cmderr>
<cmd>
<master>IMS1    </master>
<userid>USRT011 </userid>
<verb>DEL </verb>
<kwd>DB          </kwd>
<input>DEL DB NAME(DBHID0*,BADNAME,DEDBJ%1,IPODB) </input>
</cmd>
<cmdrsphdr>
<hdr slbl="DB" llbl="DBName" scope="LCL" sort="a"
  key="1" scroll="no" len="8" dtype="CHAR" align="left" />
<hdr slbl="MBR" llbl="MbrName" scope="LCL" sort="a" key="2" scroll="no"
```

```

len="8" dtype="CHAR" align="left" />
<hdr slbl="CC" llbl="CC" scope="LCL" sort="n" key="0" scroll="yes"
len="4" dtype="INT" align="right" skipb="no" />
<hdr slbl="CCTXT" llbl="CCText" scope="LCL" sort="n" key="0"
scroll="yes" len="*" dtype="CHAR" skipb="yes" align="left" />
<hdr slbl="ERRT" llbl="ErrorText" scope="LCL" sort="n" key="0"
scroll="yes" len="*" dtype="CHAR" skipb="yes" align="left" />
</cmdrsphdr>
<cmdrspdata>
<rsp>DB( DBHIDOK2) MBR(IMS1) CC( E1) CCTXT(DATABASE HAS NOT BEEN
DBR"D) </rsp>
<rsp>DB( BADNAME ) MBR(IMS1) CC( 10) CCTXT(NO RESOURCES FOUND) </rsp>
<rsp>DB( DEDBJN01) MBR(IMS1) CC( 6F) CCTXT(REFERENCED BY PROGRAM)
ERRT(DDLTLMO2) </rsp>
<rsp>DB( IPODB ) MBR(IMS1) CC( E1) CCTXT(DATABASE HAS NOT BEEN
DBR"D) </rsp>
<rsp>DB( DBHIDOK8) MBR(IMS1) CC( 6F) CCTXT(REFERENCED BY PROGRAM)
ERRT(PBODSAGM) </rsp>
<rsp>DB( DEDBJN21) MBR(IMS1) CC( E1) CCTXT(DATABASE HAS NOT BEEN
DBR"D) </rsp>
<rsp>DB( DEDBJ001) MBR(IMS1) CC( E1) CCTXT(DATABASE HAS NOT BEEN
DBR"D) </rsp>
<rsp>DB( DEDBJ011) MBR(IMS1) CC( E1) CCTXT(DATABASE HAS NOT BEEN
DBR"D) </rsp>
<rsp>DB( DEDBJ021) MBR(IMS1) CC( 0) </rsp>
<rsp>DB( DEDBJ031) MBR(IMS1) CC( E1) CCTXT(DATABASE HAS NOT BEEN
DBR"D) </rsp>
<rsp>DB( DEDBJ041) MBR(IMS1) CC( E1) CCTXT(DATABASE HAS NOT BEEN
DBR"D) </rsp>
<rsp>DB( DEDBJ051) MBR(IMS1) CC( E1) CCTXT(DATABASE HAS NOT BEEN
DBR"D) </rsp>
<rsp>DB( DEDBJ061) MBR(IMS1) CC( E1) CCTXT(DATABASE HAS NOT BEEN
DBR"D) </rsp>
<rsp>DB( DEDBJ071) MBR(IMS1) CC( E1) CCTXT(DATABASE HAS NOT BEEN
DBR"D) </rsp>
<rsp>DB( DEDBJ081) MBR(IMS1) CC( E1) CCTXT(DATABASE HAS NOT BEEN
DBR"D) </rsp>
<rsp>DB( DEDBJ091) MBR(IMS1) CC( E1) CCTXT(DATABASE HAS NOT BEEN
DBR"D) </rsp>
<rsp>DB( DBHIDOK8) MBR(IMS1) CC( 6F) CCTXT(REFERENCED BY PROGRAM)
ERRT(PBODSAGR) </rsp>
<rsp>DB( DBHIDOK8) MBR(IMS1) CC( 6F) CCTXT(REFERENCED BY PROGRAM)
ERRT(PBODSALU) </rsp>
</cmdrspdata>
</imsout>

```

Explanation: A DELETE DB command was issued for several databases. The DELETE DB worked for one database, DEDBJ021, as shown by completion code 0. The DELETE DB command failed for several databases with completion code E1, because the databases need to be taken offline by use of the /DBRECOVERY command first. The DELETE DB command failed for databases DBHIDOK8 and DEDBJN01 with completion code 6F, because the databases are referenced by one or more programs. Each program name is displayed as error text.

Related concepts:

 How to interpret CSL request return and reason codes (System Programming APIs)

Related tasks:

 Deleting runtime database resource and descriptor definitions with the DELETE command (System Definition)

Related reference:

Chapter 2, “Command keywords and their synonyms,” on page 57

DELETE DBDESC command

Use the DELETE DBDESC command to delete database descriptors.

Subsections:

- "Environment"
- "Syntax"
- "Keywords"
- "Usage notes" on page 294
- "Output fields" on page 294
- "Return, reason, and completion codes" on page 295
- "Examples" on page 296

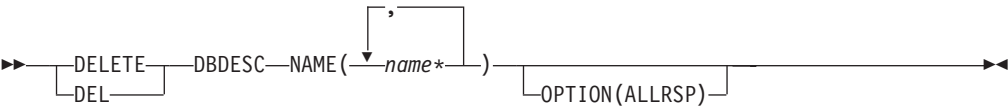
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) from which the command keywords can be issued.

Table 139. Valid environments for the DELETE DBDESC command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
DELETE DBDESC	X	X	
NAME	X	X	
OPTION	X	X	

Syntax



Keywords

The following keywords are valid for the DELETE DBDESC command:

NAME

Specifies the 1-8 character name of the database descriptor. Wildcards are supported in the name. Examples of valid names are NAME(*) and NAME(abc*). If the NAME parameter specified is a specific or wildcard name, command responses are returned for all the descriptor names that are processed. For NAME(*), command responses are returned only for the descriptor names that resulted in an error. OPTION(ALLRSP) can be specified with NAME(*) to obtain the command responses for all the descriptor names that are processed.

OPTION

Specifies additional functions to be performed along with the command.

ALLRSP

Indicates that the response lines are to be returned for all descriptors that are processed on the command. The default action is to return response lines only for the descriptors that resulted in an error. It is valid only with NAME(*). ALLRSP is ignored for other NAME values.

Usage notes

This command can only be issued through the Operations Manager API. This command applies to DB/DC systems, and DBCTL system. The DELETE DBDESC command is not valid on the XRF alternate, RSR tracker, or FDBR region. The DELETE DBDESC command is not valid if online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC or MODBLKS not defined). This command is recoverable.

Each descriptor is deleted individually. Individual deletion does not work like online change where either all descriptors are deleted or no descriptors are deleted. Descriptors can be successfully deleted if they are not currently in use. If a descriptor is in use, the delete fails. In a sysplex environment, the delete might succeed on some IMS systems and fail on others. A descriptor is in use if another command is in progress that references the descriptor.

The descriptors remain deleted across an IMS warm start or emergency restart. To ensure they remain deleted across a cold start, the existing descriptor definitions must be exported to an RDDS and imported from the RDDS during cold start.

The DELETE DBDESC command is not allowed for IMS descriptors that are identified with a definition type of IMS. For DELETE DBDESC commands, this means IMS database descriptor DFSDSDB1.

Output fields

The following table shows the DELETE DBDESC output fields. The columns in the table are as follows:

Short label

Contains the short label generated in the XML output.

Long label

Contains the long label generated in the XML output.

Keyword

Identifies keyword on the command that caused the field to be generated. N/A appears for output fields that are always returned. *error* appears for output fields that are returned only in case of an error.

Meaning

Provides a brief description of the output field.

Table 140. Output fields for the DELETE DBDESC command

Short label	Long label	Keyword	Meaning
CC	CC	N/A	Completion code.
CCTXT	CCText	<i>error</i>	Completion code text that briefly explains the meaning of the non-zero completion code.
DESC	DescName	DBDESC	Database descriptor name.
ERRT	ErrorText	<i>error</i>	Error text that provides diagnostic information. Error text can be returned for a non-zero completion code and further explains the completion code.
MBR	MbrName	N/A	IMSplex member that built the output line.

Return, reason, and completion codes

The following table includes the return and reason codes and a brief explanation of the codes. The return or reason code returned for the command might also indicate an error from a CSL request.

Table 141. Return and reason codes for the DELETE DBDESC command

Return code	Reason code	Meaning
X'00000000'	X'00000000'	Command completed successfully. The command output contains a line for each descriptor, accompanied by its completion code. If NAME(*) is specified without OPTION(ALLRSP), no output lines are returned. See the completion code table for details.
X'0000000C'	X'00003000'	Command was successful for some descriptors but failed for others. The command output contains a line for each descriptor, accompanied by its completion code. If NAME(*) is specified without OPTION(ALLRSP), only descriptors with non-zero completion codes are returned. See the completion code table for details.
X'0000000C'	X'00003004'	Command was not successful for any of the descriptors. The command output contains a line for each descriptor, accompanied by its completion code. See the completion code table for details.
X'00000010'	X'0000400C'	Command is not valid on the XRF alternate.
X'00000010'	X'00004014'	Command is not valid on the RSR tracker.
X'00000010'	X'00004120'	Online change phase is in progress.
X'00000010'	X'00004300'	Command is not allowed because online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC, or MODBLKS not defined).
X'00000014'	X'00005004'	DFSOCMD response buffer could not be obtained.
X'00000014'	X'00005008'	DFSPPOOL storage could not be obtained.
X'00000014'	X'0000500C'	AWE could not be obtained.

Errors unique to the processing of this command are returned as completion codes. The following table includes an explanation of the completion codes.

Table 142. Completion codes for the DELETE DBDESC command

Completion code	Completion code text	Meaning	Error text
0		Command completed successfully for database descriptor.	

Table 142. Completion codes for the DELETE DBDESC command (continued)

Completion code	Completion code text	Meaning	Error text
17	ANOTHER CMD IN PROGRESS	Another command (such as DELETE or UPDATE) is in progress for this database descriptor. This could also mean this command, if the descriptor is specified by more than one specific or wildcard parameter.	
27	REJECTED FOR DEFAULT DESCRIPTOR	DELETE command not allowed for user-defined default descriptor. You must issue an UPDATE command to set another descriptor as the default before deleting this descriptor.	
48	NOT ALLOWED FOR IMS RESOURCE	DELETE command not allowed for IMS defined-descriptor or resource. An IMS descriptor example is DFSDSDB1.	
60	GETMAIN STORAGE ERROR	A GETMAIN request for storage was unsuccessful.	
61	DFSBCB STORAGE ERROR	A storage request for a DDIR block failed.	
90	INTERNAL ERROR	AN IMS system service failure.	

Examples

The following are examples of the DELETE DBDESC command:

Example 1 for DELETE DBDESC command

TSO SPOC input:

```
DEL DBDESC NAME(*) OPTION(ALLRSP)
```

TSO SPOC output:

```
Response for: DEL DBDESC NAME(*) OPTION(ALLRSP)
DescName MbrName CC CText
BRWSDSC IMS1 27 REJECTED FOR DEFAULT DESCRIPTOR
DESC001 IMS1 0
DESC002 IMS1 0
DESC003 IMS1 0
DESC004 IMS1 0
DESC005 IMS1 0
DFSDSDB1 IMS1 48 NOT ALLOWED FOR IMS RESOURCE
EXCLDESC IMS1 0
RESDESC IMS1 0
```

OM API input:

```
CMD(DEL DBDESC NAME(*) OPTION(ALLRSP))
```

OM API output:

```
<imsout>
<ctl>
<omname>OM10M </omname>
<omvsn>1.3.0</omvsn>
<xmlvsn>20 </xmlvsn>
<statime>2006.310 23:15:13.678125</statime>
<stotime>2006.310 23:15:13.679097</stotime>
<staseq>BFAAC8ACABB2D8DC</staseq>
<stoseq>BFAAC8ACABEF9C5C</stoseq>
<rqsttkn1>USRT011 10151513</rqsttkn1>
<rc>0200000C</rc>
<rsn>00003008</rsn>
<rsnmsg>CSLN054I</rsnmsg>
<rsntxt>None of the clients were successful.</rsntxt>
</ctl>
<cmderr>
<mbr name="IMS1 ">
<typ>IMS </typ>
<styp>DBDC </styp>
<rc>0000000C</rc>
<rsn>00003000</rsn>
<rsntxt>At least one request successful</rsntxt>
</mbr>
</cmderr>
<cmd>
<master>IMS1 </master>
<userid>USRT011 </userid>
<verb>DEL </verb>
<kwd>DBDESC </kwd>
<input>DEL DBDESC NAME(*) OPTION(ALLRSP) </input>
</cmd>
<cmdrsphdr>
<hdr slbl="DESC" llbl="DescName" scope="LCL" sort="a" key="1"
  scroll="no" len="8" dtype="CHAR" align="left" />
<hdr slbl="MBR" llbl="MbrName" scope="LCL" sort="a" key="2" scroll="no"
  len="8" dtype="CHAR" align="left" />
<hdr slbl="CC" llbl="CC" scope="LCL" sort="n" key="0" scroll="yes"
  len="4" dtype="INT" align="right" skipb="no" />
<hdr slbl="CCTXT" llbl="CCText" scope="LCL" sort="n" key="0"
  scroll="yes" len="*" dtype="CHAR" skipb="yes" align="left" />
<hdr slbl="ERRT" llbl="ErrorText" scope="LCL" sort="n" key="0"
  scroll="yes" len="*" dtype="CHAR" skipb="yes" align="left" />
</cmdrsphdr>
<cmdrspdata>
<rsp>DESC(EXCLDESC) MBR(IMS1) CC( 0) </rsp>
<rsp>DESC(DESC004 ) MBR(IMS1) CC( 0) </rsp>
<rsp>DESC(DESC005 ) MBR(IMS1) CC( 0) </rsp>
<rsp>DESC(DESC001 ) MBR(IMS1) CC( 0) </rsp>
<rsp>DESC(RESDESC ) MBR(IMS1) CC( 0) </rsp>
<rsp>DESC(BRWSDESC) MBR(IMS1) CC( 27) CCTXT(REJECTED FOR DEFAULT
  DESCRIPTOR) </rsp>
<rsp>DESC(DESC002 ) MBR(IMS1) CC( 0) </rsp>
<rsp>DESC(DESC003 ) MBR(IMS1) CC( 0) </rsp>
<rsp>DESC(DFSDSDB1) MBR(IMS1) CC( 48) CCTXT(NOT ALLOWED FOR IMS
  RESOURCE) </rsp>
</cmdrspdata>
</imsout>
```

Explanation: A DELETE DBDESC command is issued to delete all database descriptors from an active IMS system. Many database descriptors are successfully deleted, as indicated by the completion code 0. Because the DELETE command attempted to delete all of the database descriptors, OPTION(ALLRSP) is specified

to display the successfully deleted database descriptors. Database descriptor BRWSDDESC fails, because it is the default database descriptor. Database descriptor DFSDSDB1 fails, because it is the IMS-defined database descriptor.

Related concepts:

➡ How to interpret CSL request return and reason codes (System Programming APIs)

Related reference:

Chapter 2, “Command keywords and their synonyms,” on page 57

DELETE LE command

Use the DELETE command (with the LE keyword) to delete Language Environment (LE) runtime options that have previously been defined by the UPDATE command (with the LE keyword).

Subsections:

- “Environment”
- “Syntax”
- “Keywords” on page 299
- “Usage notes” on page 299
- “Output fields” on page 300
- “Return, reason, and completion codes” on page 300
- “Examples” on page 301

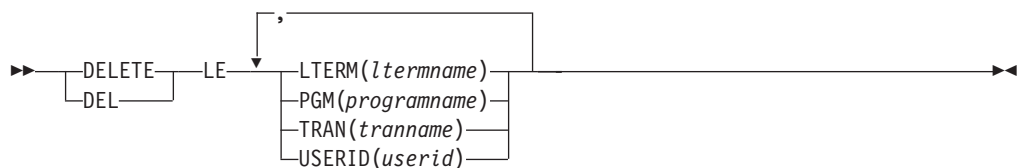
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 143. Valid environments for the DELETE command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
DELETE LE	X	X	X
LTERM	X	X	X
PGM	X	X	X
TRAN	X	X	X
USERID	X	X	X

Syntax



Keywords

LTERM()

Specifies the 1 - 8 character name of the LTERMs that match the generic or wildcard parameter.

PGM()

Specifies the 1 - 8 character name of the programs that match the generic or wildcard parameter.

TRAN()

Specifies the 1 - 8 character name of the transactions that match the generic or wildcard parameter.

USERID()

Specifies the 1 - 8 character name of the user IDs that match the generic or wildcard parameter.

Usage notes

The delete can use filters on transaction code, LTERM name, user ID, or program name. Any combination of parameters can be used to qualify the application instance to which the runtime parameters are deleted. All matches found are deleted. The entry is logically deleted. The entry is then immediately available for reuse by the next UPDATE LE command. There is a small window of time where it is possible for an entry to be deleted and reused before LE uses it, that could cause LE to use the wrong set of parameters.

This command may be specified only through the Operations Manager API. The command syntax for this command is defined in XML and is available to automation programs that communicate with OM.

OM overrides the routing on the command and routes the command to all IMS systems in the IMSplex. The user-specified route list is ignored.

Rules for matching an entry which results in the delete of an entry:

- If a filter is specified in the command for a particular resource it must match the resource filter defined in the entry. The resource in the DELETE LE command can be specified with wildcards as defined previously.
- A resource filter that is not specified on a DELETE LE command will match on any filter for the specific resource defined in the entry. A non-specified filter is treated as a wildcard. For instance if the LTERM filter is not specified on a DELETE LE command it will match on any LTERM resource defined in an entry, as if LTERM(*) was specified on the command.

If an existing set of LE runtime options are found for the specified TRAN, LTERM, USERID, or PGM, the existing parameter string is deleted. The string is deleted only when the specified filters are an exact match for the existing entry. The entry is logically deleted. The entry is available for reuse on the next UPDATE LE command.

The following keywords support a generic or wildcard character. A generic parameter is a 1 - 8 character alphanumeric name that includes one or more special characters and an asterisk or a percent sign. An asterisk can be replaced by a zero or more characters to create a valid resource name. A percent sign can be replaced by exactly one character to create a valid resource name.

Requirement: At least one of the resource filters (LTERM, PGM, TRAN, or USERID) must be specified on the UPDATE LE command.

Output fields

The following table shows the output fields for an DELETE LE command. The columns in the table are as follows:

Short label

Contains the short label generated in the XML output.

Keyword

Identifies the keyword on the command that caused the field to be generated. N/A appears for output fields that are always returned.

Meaning

Provides a brief description of the output field.

Table 144. Output fields for the DELETE LE command

Short label	Keyword	Meaning
CC	N/A	Completion code for the line of output. Completion code is always returned.
LTRM	LTERM	LTERM name affected by the DELETE.
MBR	N/A	IMSpIex member (IMS identifier) that built the output line. Member name is always returned.
PGM	PGM	Program name affected by the DELETE.
TRAN	TRAN	Transaction name affected by the DELETE.
UID	USERID	Userid affected by the DELETE.

Return, reason, and completion codes

The following table includes the return and reason codes and a brief explanation of the codes. The return or reason code returned for the command might also indicate an error from a CSL request.

Table 145. Return and reason codes for the DELETE LE command

Return code	Reason code	Meaning
X'00000000'	X'00000000'	The DELETE LE command completed successfully.
X'00000008'	X'00002008'	No keywords were specified on the command. At least one keyword is required.
X'00000008'	X'0000200C'	No resources found to delete. Either the entry was previously deleted or a keyword filter was typed incorrectly.
X'00000008'	X'00002014'	An invalid character was specified in the filter name.
X'00000010'	X'00004040'	The parameter override header has not been initialized. Retry the command after restart is complete.
X'00000014'	X'00005000'	Unable to get storage from IMODULE GETSTOR.
X'00000014'	X'00005010'	Unable to obtain latch.
X'00000014'	X'00005FFF'	Internal IMS Error - should not occur.

The following table contains the completion code that can be returned on a DELETE LE command and the meaning of the code.

Table 146. Completion code for the DELETE LE command

Completion code	Meaning
0	The DELETE LE command completed successfully for the specified resource.

Examples

The following are examples of the DELETE LE command:

Example 1 for DELETE LE command

For this example, the following table shows the parameter override table entries prior to any DELETE LE commands being processed.

Table 147. Parameter override table entries for DELETE LE example

Entry#	TRAN	LTERM	USERID	PROGRAM	LERUNOPTS
1	PART			DFSSAM02	aaaa
2	PART		BETTY		bbbb
3	PART	TERM1			cccc
4				DFSSAM02	dddd
5	PART	TERM1	BARBARA		eeee
6	PART	TERM1	BOB		ffff
7		TERM2	BETTY		gggg
8	PART	TERM2			iiii

The following table shows the resulting actions when different filters are specified on a DELETE LE command.

Table 148. Example filters and resulting actions for DELETE LE command

Filters active on command	Resulting action
TRAN(PART)	Deletes entries #1, 2, 3, 5, 6, 8
TRAN(PART) LTERM(TERM1)	Deletes entries #3, 5, 6
LTERM(TERM2) USERID(BETTY)	Deletes entry #7
TRAN(PART) LTERM(TERM1) USERID(BETTY)	Does not delete any entries
TRAN(PART) LTERM(TERM*)	Deletes entries #3, 5, 6, 8
USERID(B*)	Deletes entries #2, 5, 6, 7

Example 2 for DELETE LE command

The following TSO SPOC and OM API input and output sets up the scenario for the DELETE LE command examples. The UPDATE commands are used to add entries to the table; the QUERY command shows the resulting entries.

TSO SPOC input:

```

UPD LE TRAN(IAPMDI27) USERID(USRT003) SET(LERUNOPTS(cccc))
UPD LE TRAN(IAPMDI27) USERID(USRT001) SET(LERUNOPTS(bbbb))
UPD LE TRAN(IAPMDI26) USERID(USRT001) SET(LERUNOPTS(aaaa))
QRY LE SHOW(ALL)

```

TSO SPOC output (for QUERY command):

MbrName	CC	Trancode	Lterm	Userid	Program	LERunOpts
SYS3	0	IAPMDI26		USRT001		AAAA
SYS3	0	IAPMDI27		USRT001		BBBB
SYS3	0	IAPMDI27		USRT003		CCCC

OM API input:

```

CMD(UPD LE TRAN(IAPMDI27) USERID(USRT003) SET(LERunOPTS(cccc)))
CMD(UPD LE TRAN(IAPMDI27) USERID(USRT001) SET(LERunOPTS(bbbb)))
CMD(UPD LE TRAN(IAPMDI26) USERID(USRT001) SET(LERunOPTS(aaaa)))
CMD(QRY LE SHOW(ALL))

```

OM API output (for QUERY command):

```

<imsout>
<ctl>
<omname>OM10M </omname>
<omvs>1.1.0</omvs>
<xmlvs>1 </xmlvs>
<statime>2002.163 18:10:14.974557</statime>
<stotime>2002.163 18:10:14.974985</stotime>
<staseq>B7C4CD747AC5DC85</staseq>
<stoseq>B7C4CD747AE0D25</stoseq>
<rqsttkn1>USRT002 10111014</rqsttkn1>
<rc>00000000</rc>
<rsn>00000000</rsn>
</ctl>
<cmd>
<master>SYS3 </master>
<userid>USRT002 </userid>
<verb>QRY </verb>
<kwd>LE </kwd>
<input>QRY LE SHOW(ALL) </input>
</cmd>
<cmdrsphdr>
<hdr s1b1="MBR" l1b1="MbrName" scope="LCL" sort="A" key="1" scroll="NO" len="8"
  dtype="CHAR" align="left" />
<hdr s1b1="CC" l1b1="CC" scope="LCL" sort="N" key="0" scroll="YES" len="4"
  dtype="INT" align="right" />
<hdr s1b1="TRAN" l1b1="Trancode" scope="LCL" sort="N" key="0" scroll="YES" len="8"
  dtype="CHAR" align="left" />
<hdr s1b1="LTRM" l1b1="Lterm" scope="LCL" sort="N" key="0" scroll="YES" len="8"
  dtype="CHAR" align="left" />
<hdr s1b1="UID" l1b1="Userid" scope="LCL" sort="N" key="0" scroll="YES" len="8"
  dtype="CHAR" align="left" />
<hdr s1b1="PGM" l1b1="Program" scope="LCL" sort="N" key="0" scroll="YES" len="8"
  dtype="CHAR" align="left" />
<hdr s1b1="PRM" l1b1="LERunOpts" scope="LCL" sort="N" key="0" scroll="YES" len="*"
  dtype="CHAR" align="left" />
</cmdrsphdr>
<cmdrspdata>
<rsp>MBR(SYS3 ) CC( 0) TRAN(IAPMDI26) LTRM( ) UID(USRT001 ) PGM( )
PRM(AAAA ) </rsp>
<rsp>MBR(SYS3 ) CC( 0) TRAN(IAPMDI27) LTRM( ) UID(USRT001 ) PGM( )
PRM(BBBB ) </rsp>
<rsp>MBR(SYS3 ) CC( 0) TRAN(IAPMDI27) LTRM( ) UID(USRT003 ) PGM( )
PRM(CCCC ) </rsp>
</cmdrspdata>
</imsout>

```

Example 3 for DELETE LE command

TSO SPOC input:

```
DEL LE TRAN(IAPMDI27) USERID(USRT001)
```

TSO SPOC output:

MbrName	CC	Trancode	Lterm	Userid	Program
SYS3	0	IAPMDI27		USRT001	

OM API input:

CMD(DEL LE TRAN(IAPMDI27) USERID(USRT001))

OM API output:

```
<imsout>
<ctl>
<omname>OM10M </omname>
<omvsrn>1.1.0</omvsrn>
<xmrvsn>1 </xmrvsn>
<stime>2002.163 18:12:21.932813</stime>
<stotime>2002.163 18:12:21.933334</stotime>
<staseq>B7C4CED8E70D786</staseq>
<stoseq>B7C4CED8E916246</stoseq>
<rqsttkn1>USRT002 10111221</rqsttkn1>
<rc>00000000</rc>
<rsn>00000000</rsn>
</ctl>
<cmd>
<master>SYS3 </master>
<userid>USRT002 </userid>
<verb>DEL </verb>
<kwd>LE </kwd>
<input>DEL LE TRAN(IAPMDI27) USERID(USRT001) </input>
</cmd>
<cmdrsphdr>
<hdr slbl="MBR" llbl="MbrName" scope="LCL" sort="A" key="1" scroll="NO" len="8"
  dtype="CHAR" align="left" />
<hdr slbl="CC" llbl="CC" scope="LCL" sort="N" key="0" scroll="YES" len="4"
  dtype="INT" align="right" />
<hdr slbl="TRAN" llbl="Trancode" scope="LCL" sort="N" key="0" scroll="YES" len="8"
  dtype="CHAR" align="left" />
<hdr slbl="LTRM" llbl="Lterm" scope="LCL" sort="N" key="0" scroll="YES" len="8"
  dtype="CHAR" align="left" />
<hdr slbl="UID" llbl="Userid" scope="LCL" sort="N" key="0" scroll="YES" len="8"
  dtype="CHAR" align="left" />
<hdr slbl="PGM" llbl="Program" scope="LCL" sort="N" key="0" scroll="YES" len="8"
  dtype="CHAR" align="left" />
</cmdrsphdr>
<cmdrspdata>
<rsp>MBR(SYS3 ) CC( 0) TRAN(IAPMDI27) LTRM( ) UID(USRT001 ) PGM( )
</rsp>
</cmdrspdata>
</imsout>
```

Explanation: This command specifies two filters- transaction and userid. A table entry is deleted if both of these filters are defined and match what was specified in the command. This command deletes one entry from the table. That entry is shown in the command output.

Example 4 for DELETE LE command

TSO SPOC input:

DEL LE USERID(USRT00%)

TSO SPOC output:

MbrName	CC	Trancode	Lterm	Userid	Program
SYS3	0	IAPMDI26		USRT001	
SYS3	0	IAPMDI27		USRT003	

OM API input:

```
CMD(DEL LE USERID(USRT00%))
```

OM API output:

```
<imsout>
<ctl>
<omname>OM10M </omname>
<omvsrn>1.1.0</omvsrn>
<xm1vsrn>1 </xm1vsrn>
<statime>2002.163 18:19:45.616468</statime>
<stotime>2002.163 18:19:45.616972</stotime>
<staseq>B7C4CF94AFA54304</staseq>
<stoseq>B7C4CF94AFC4C704</stoseq>
<rqsttkn1>USRT002 10111945</rqsttkn1>
<rc>00000000</rc>
<rsn>00000000</rsn>
</ctl>
<cmd>
<master>SYS3 </master>
<userid>USRT002 </userid>
<verb>DEL </verb>
<kwd>LE </kwd>
<input>DEL LE USERID(USRT00%) </input>
</cmd>
<cmdrsphdr>
<hdr slbl="MBR" llbl="MbrName" scope="LCL" sort="A" key="1" scroll="NO" len="8"
  dtype="CHAR" align="left" />
<hdr slbl="CC" llbl="CC" scope="LCL" sort="N" key="0" scroll="YES" len="4"
  dtype="INT" align="right" />
<hdr slbl="TRAN" llbl="Trancode" scope="LCL" sort="N" key="0" scroll="YES" len="8"
  dtype="CHAR" align="left" />
<hdr slbl="LTRM" llbl="Lterm" scope="LCL" sort="N" key="0" scroll="YES" len="8"
  dtype="CHAR" align="left" />
<hdr slbl="UID" llbl="Userid" scope="LCL" sort="N" key="0" scroll="YES" len="8"
  dtype="CHAR" align="left" />
<hdr slbl="PGM" llbl="Program" scope="LCL" sort="N" key="0" scroll="YES" len="8"
  dtype="CHAR" align="left" />
</cmdrsphdr>
<cmdrspdata>
<rsp>MBR(SYS3 ) CC( 0) TRAN(IAPMDI26) LTRM( ) UID(USRT001 ) PGM( )
</rsp>
<rsp>MBR(SYS3 ) CC( 0) TRAN(IAPMDI27) LTRM( ) UID(USRT003 ) PGM( )
</rsp>
</cmdrspdata>
</imsout>
```

Explanation: This command specifies only one filter, userid. A wildcard is used, so any table entry where the USERID filter matches the string will be deleted. The command output shows that both of the remaining table entries were deleted.

Related concepts:

 How to interpret CSL request return and reason codes (System Programming APIs)

Related reference:

Chapter 2, "Command keywords and their synonyms," on page 57

DELETE OTMADESC command

Use the DELETE OTMADESC command to delete an existing OTMA destination descriptor without restarting IMS.

Subsections:

- “Environment”
- “Syntax”
- “Keywords”
- “Usage notes” on page 306
- “Output fields” on page 306
- “Return, reason, and completion codes” on page 306
- “Examples” on page 307

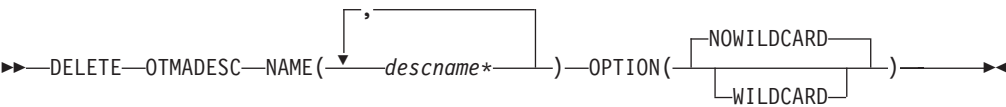
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the commands and keywords.

Table 149. Valid environments for the DELETE OTMADESC command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
DELETE OTMADESC	X		X
NAME	X		X
OPTION	X		X

Syntax



Keywords

The following keywords are valid for the DELETE OTMADESC command:

NAME (descname*)

A required keyword parameter that specifies a 1- to 8-character destination routing descriptor name. The destination routing descriptor name can have an asterisk (*) at the end to mask a group of names. The asterisk can be used by itself to mask all defined descriptor names in the system. Issuing the DELETE command with a name of asterisk only will delete all entries in the destination routing descriptors. If you intend to delete all entries in the table, you must specify DELETE NAME(*) OPTION(WILDCARD). All entries including the entry of asterisk are deleted.

OPTION(NOWILDCARD | WILDCARD)

Specify NOWILDCARD to delete the descriptor having a name with an asterisk as an entry from the table of destination routing descriptors. Specify WILDCARD to delete the groups of names that the asterisk is masking. If the name with the asterisk is also an entry in the table, the name with the asterisk itself is deleted.

Usage notes

The DELETE OTMADESC command requires only the NAME keyword. If the NAME keyword contains the masked character of asterisk, it will not delete the group of names it is masking. It will only delete the name with the asterisk as its own entry in the destination routing descriptors. If the OPTION(WILDCARD) keyword is specified, then the group of names under a masked destination routing descriptor name will also be deleted; the name with the asterisk is also deleted. Log records will be created to track the dynamic changes to destination routing descriptors on restart of IMS.

The DELETE OTMADESC command is not valid in an XRF alternate or an RSR tracking environment.

Output fields

The following table shows the DELETE OTMADESC output fields. The columns in the table are:

- Short label**
Contains the short label generated in the XML output.
- Long label**
Contains the column heading for the output field in the formatted output.
- Keyword**
Identifies the keyword on the command that caused the field to be generated. N/A appears for output fields that are always returned. *error* appears for output fields that are returned only in case of an error.
- Meaning**
Provides a brief description of the output field.

Table 150. Output fields for the DELETE OTMADESC command

Short label	Long label	Keyword	Meaning
CC	CC	N/A	Completion code for the line of output. The completion code indicates whether IMS was able to process the command for the specified resource. See "Return, reason, and completion codes" for more information. The completion code is always returned.
CCTXT	CCText	N/A	Completion code text that briefly explains the meaning of the non-zero completion code. This field is returned only for an error completion code.
DEST	DestName	NAME	Destination name.
MBR	MbrName	N/A	Member name.

Return, reason, and completion codes

An IMS return and reason code is returned to OM by the DELETE OTMADESC command. The OM return and reason codes that may be returned as a result of the DELETE OTMADESC command are standard for all commands entered through the OM API.

The following table includes the return and reason codes and a brief explanation of the codes. The return or reason code returned for the command might also indicate an error from a CSL request.

Table 151. Return and reason codes for the DELETE OTMADESC command

Return code	Reason code	Meaning
X'00000000'	X'00000000'	Command completed successfully. The command output contains a line for each resource, accompanied by its completion code. See Table 152 for details.
X'02000008'	X'00002000'	The command contains an invalid verb or no client is registered for the verb.
X'02000008'	X'00002004'	The command contains an invalid primary keyword or no client is registered for the keyword.
X'02000008'	X'00002028'	The command contains an invalid keyword.
X'02000008'	X'0000202C'	The command contains an unknown positional parameter.
X'02000008'	X'00002034'	The command contains an incomplete keyword parameter.
X'02000008'	X'00002038'	The command is missing a required parameter.
X'02000008'	X'0000203C'	The command contains an invalid keyword parameter value.

The following table includes an explanation of the completion codes. Errors unique to the processing of this command are returned as completion codes. A completion code is returned for each action against an individual resource.

Table 152. Completion codes for the DELETE OTMADESC command

Completion code	Completion code text	Meaning
0	Command completed successfully	The DELETE OTMADESC command completed successfully for the resource.
163	Descriptor not available for del	During delete processing, the entry in the table of destination routing descriptors might have already been deleted by another user.
166	No entries found	Command failed for DELETE OTMADESC, because no entries were found in the table of destination routing descriptors.

Examples

The following are examples of the DELETE OTMADESC command:

Example 1 for DELETE OTMADESC command

TSO SPOC input:

```
DELETE OTMADESC NAME(OTMACL*)
```

TSO SPOC output:

```
DestName  MbrName    CC
OTMACL*   IMSA        0
```

Explanation: The DELETE command will delete only OTMACL* and not delete OTMACL99, because the default for the OPTION keyword is NOWILDCARD. It treats OTMACL* as a standalone entry in the table of destination routing descriptors.

Example 2 for DELETE OTMADESC command

TSO SPOC input:

```
DELETE OTMADESC NAME(OTMACL*) OPTION(WILDCARD)
```

TSO SPOC output:

DestName	MbrName	CC
OTMACL99	IMSA	0
OTMACL*	IMSA	0

Explanation: The DELETE command will delete both OTMACL99 and OTMACL*, because the OPTION keyword is coded with WILDCARD. It treats OTMACL* as a mask for a group of names, so it includes OTMACL99 and OTMACL* as an entry in itself in the table of destination routing descriptors.

Related concepts:

 How to interpret CSL request return and reason codes (System Programming APIs)

Related reference:

Chapter 2, “Command keywords and their synonyms,” on page 57

DELETE PGM command

Use the DELETE PGM command to delete program resources.

Subsections:

- “Environment”
- “Syntax” on page 309
- “Keywords” on page 309
- “Usage notes” on page 309
- “Output fields” on page 310
- “Return, reason, and completion codes” on page 310
- “Examples” on page 312

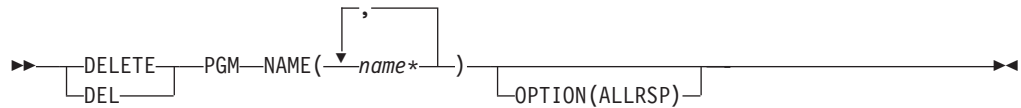
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 153. Valid environments for the DELETE PGM command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
DELETE PGM	X	X	X
NAME	X	X	X
OPTION	X	X	X

Syntax



Keywords

The following keywords are valid for the DELETE PGM command:

NAME

Specifies the 1-8 character name of the program. Wildcards are supported in the name. Examples of valid names are NAME(*) and NAME(abc*). If the NAME parameter specified is a specific or wildcard name, command responses are returned for all the resource names that are processed. For NAME(*), command responses are returned only for the resource names that resulted in an error. OPTION(ALLRSP) can be specified with NAME(*) to obtain the command responses for all the resource names that are processed.

OPTION

Specifies additional functions to be performed along with the command.

ALLRSP

Indicates that the response lines are to be returned for all resources that are processed on the command. The default action is to return response lines only for the resources that resulted in an error. It is valid only with NAME(*). ALLRSP is ignored for other NAME values.

Usage notes

This command can only be issued through the Operations Manager API. This command applies to DB/DC systems, DBCTL systems, and DCCTL systems. The DELETE PGM command is not valid on the XRF alternate, RSR tracker, or FDBR region. The DELETE PGM command is not valid if online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC or MODBLKS not defined). This command is recoverable.

Each program is deleted individually, unlike the online change process where either all programs are deleted or no programs are deleted. The runtime resource definition for a program can be deleted only if the program is not in use. If the program is in use, the delete fails. In a sysplex environment with multiple IMS systems, the delete might succeed on some IMS systems and fail on others.

The DELETE PGM command removes ACB members from the 31-bit nonresident pool as well as the 64-bit storage pool.

The resources remain deleted across an IMS warm start or emergency restart. To ensure that the resources remain deleted across a cold start, the existing resource definitions must be exported to an RDDS and then imported from the RDDS at cold start. If the resource definitions are to be imported from the MODBLKS data set at cold start instead of from an RDDS, the resource definitions must be deleted from system definition and a new MODBLKS data set must be generated.

The DELETE command is not allowed for IMS resources that are identified with a definition type of IMS. For DELETE PGM commands, this means Fast Path utility program DBF#FPU0.

Output fields

The following table shows the DELETE PGM output fields. The columns in the table are as follows:

Short label

Contains the short label generated in the XML output.

Long label

Contains the long label generated in the XML output.

Keyword

Identifies keyword on the command that caused the field to be generated. N/A appears for output fields that are always returned. *error* appears for output fields that are returned only in case of an error.

Meaning

Provides a brief description of the output field.

Table 154. Output fields for the DELETE PGM command

Short label	Long label	Keyword	Meaning
CC	CC	N/A	Completion code.
CCTXT	CCText	<i>error</i>	Completion code text that briefly explains the meaning of the non-zero completion code.
ERRT	ErrorText	<i>error</i>	Error text that provides diagnostic information. Error text can be returned for a non-zero completion code and further explains the completion code.
MBR	MbrName	N/A	IMSpIex member that built the output line.
PGM	PgmName	PGM	Program name.

Return, reason, and completion codes

The following table includes the return and reason codes and a brief explanation of the codes. The return or reason code returned for the command might also indicate an error from a CSL request.

Table 155. Return and reason codes for the DELETE PGM command

Return code	Reason code	Meaning
X'00000000'	X'00000000'	Command completed successfully. The command output contains a line for each resource, accompanied by its completion code. If NAME(*) is specified without OPTION(ALLRSP), no output lines are returned. See the completion code table for details.
X'0000000C'	X'00003000'	Command was successful for some resources but failed for others. The command output contains a line for each resource, accompanied by its completion code. If NAME(*) is specified without OPTION(ALLRSP), only resources with non-zero completion codes are returned. See the completion code table for details.
X'0000000C'	X'00003004'	Command was not successful for any of the resources. The command output contains a line for each resource, accompanied by its completion code. See the completion code table for details.

Table 155. Return and reason codes for the DELETE PGM command (continued)

Return code	Reason code	Meaning
X'00000010'	X'0000400C'	Command is not valid on the XRF alternate.
X'00000010'	X'00004014'	Command is not valid on the RSR tracker.
X'00000010'	X'00004120'	Online change phase is in progress.
X'00000010'	X'00004300'	Command is not allowed because online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC, or MODBLKS not defined).
X'00000014'	X'00005004'	DFSOCMD response buffer could not be obtained.
X'00000014'	X'00005008'	DFSPOOL storage could not be obtained.
X'00000014'	X'0000500C'	AWE could not be obtained.

Errors unique to the processing of this command are returned as completion codes. The following table includes an explanation of the completion codes.

Table 156. Completion codes for the DELETE PGM command

Completion code	Completion code text	Meaning	Error text
0		Command completed successfully for program.	
10	NO RESOURCES FOUND	Program name is invalid, or the wildcard parameter specified does not match any resource names.	
17	ANOTHER CMD IN PROGRESS	Another command (such as DELETE or UPDATE) is in progress for this program. This could also mean this command, if the resource is specified by more than one specific or wildcard parameter.	
48	NOT ALLOWED FOR IMS RESOURCE	DELETE command not allowed for IMS descriptor or resource. An example of an IMS resource include DBF#FPU0.	
73	PROGRAM SCHEDULED	Program is scheduled.	
7B	REFERENCED BY RTCODE	Routing code references the program to be deleted. The routing code name is returned as error text. Suggested actions: - Issue DELETE RTC command to delete the routing code. <i>or</i> - Issue UPDATE RTC command to update the program to another name.	rtcodename (8 chars)
88	REFERENCED BY TRAN	Transaction references the program to be deleted. The transaction name is returned as error text. Suggested actions: - Issue DELETE TRAN command to delete the transaction. <i>or</i> - Issue UPDATE TRAN command to update the program to another name.	trannname (8 char)

Examples

The following are examples of the DELETE PGM command:

Example 1 for DELETE PGM command

TSO SPOC input:

```
DELETE PGM NAME(DFSSAM02,AUTPSB2,BADNAME,DFSSAM04)
```

TSO SPOC output:

```
Response for: DELETE PGM NAME(DFSSAM02,AUTPSB2,BADNAME,DFSSAM04)
PgmName MbrName CC CText      ErrorText
AUTPSB2 IMS1    0
BADNAME IMS1    10 NO RESOURCES FOUND
DFSSAM02 IMS1    88 REFERENCED BY TRAN PART
DFSSAM04 IMS1    88 REFERENCED BY TRAN ADDINV
DFSSAM04 IMS1    88 REFERENCED BY TRAN ADDPART
DFSSAM04 IMS1    88 REFERENCED BY TRAN DLETINV
DFSSAM04 IMS1    88 REFERENCED BY TRAN DLETPART
```

OM API input:

```
CMD(DEL PGM NAME(DFSSAM02,AUTPSB2,BADNAME,DFSSAM04))
```

OM API output:

```
<imsout>
<ctl>
<omname>OM10M </omname>
<omvsn>1.3.0</omvsn>
<xm1vsn>20 </xm1vsn>
<stime>2006.310 23:38:41.930125</stime>
<stotime>2006.310 23:38:41.931770</stotime>
<staseq>BFAACDEBAF38D540</staseq>
<stoseq>BFAACDEBAF9FA480</stoseq>
<rqsttkn1>USRT011 10153841</rqsttkn1>
<rc>02000000C</rc>
<rsn>00003000</rsn>
<rsnmsg>CSLN054I</rsnmsg>
<rsntxt>None of the clients were successful.</rsntxt>
</ctl>
<cmderr>
<mbr name="IMS1 ">
<typ>IMS </typ>
<styp>DBDC </styp>
<rc>00000000C</rc>
<rsn>00003000</rsn>
<rsntxt>At least one request successful</rsntxt>
</mbr>
</cmderr>
<cmd>
<master>IMS1 </master>
<userid>USRT011 </userid>
<verb>DEL </verb>
<kwd>PGM </kwd>
<input>DELETE PGM NAME(DFSSAM02,AUTPSB2,BADNAME,DFSSAM04) </input>
</cmd>
<cmdrsphdr>
<hdr slbl="PGM" llbl="PgmName" scope="LCL" sort="a" key="1" scroll="no"
len="8" dtype="CHAR" align="left" />
<hdr slbl="MBR" llbl="MbrName" scope="LCL" sort="a" key="2" scroll="no"
len="8" dtype="CHAR" align="left" />
<hdr slbl="CC" llbl="CC" scope="LCL" sort="n" key="0" scroll="yes"
```

```

len="4" dtype="INT" align="right" skipb="no" />
<hdr slbl="CCTXT" llbl="CCText" scope="LCL" sort="n" key="0"
  scroll="yes" len="*" dtype="CHAR" skipb="yes" align="left" />
<hdr slbl="ERRT" llbl="ErrorText" scope="LCL" sort="n" key="0"
  scroll="yes" len="*" dtype="CHAR" skipb="yes" align="left" />
</cmdrsphdr>
<cmdrspdata>
<rsp>PGM(DFSSAM02) MBR(IMS1) CC( 88) CCTXT(REFERENCED BY TRAN
  ERRT(PART ) </rsp>
<rsp>PGM(AUTPSB2 ) MBR(IMS1) CC( 0) </rsp>
<rsp>PGM(BADNAME ) MBR(IMS1) CC( 10) CCTXT(NO RESOURCES FOUND) </rsp>
<rsp>PGM(DFSSAM04) MBR(IMS1) CC( 88) CCTXT(REFERENCED BY TRAN
  ERRT(ADDINV ) </rsp>
<rsp>PGM(DFSSAM04) MBR(IMS1) CC( 88) CCTXT(REFERENCED BY TRAN
  ERRT(ADDPART ) </rsp>
<rsp>PGM(DFSSAM04) MBR(IMS1) CC( 88) CCTXT(REFERENCED BY TRAN
  ERRT(DLETINV ) </rsp>
<rsp>PGM(DFSSAM04) MBR(IMS1) CC( 88) CCTXT(REFERENCED BY TRAN
  ERRT(DLETPART) </rsp>
</cmdrspdata>
</imsout>

```

Explanation: Delete programs DFSSAM02, AUTPSB2, BADNAME, and DFSSAM04. The delete is successful for program AUTPSB2, as shown by the completion code 0. The delete is rejected for DFSSAM02, because transaction PART refers to it. The delete fails for program DFSSAM04, because transactions ADDPART, ADDINV, DLETPART, and DLETINV refer to it. Transactions PART, ADDPART, ADDINV, DLETPART, and DLETINV must either be deleted or updated to refer to another program before deleting programs DFSSAM02 and DFSSAM04. The delete fails for BADNAME, because there is no program named BADNAME.

Related concepts:

 How to interpret CSL request return and reason codes (System Programming APIs)

Related tasks:

 Deleting runtime application program resource and descriptor definitions with the DELETE command (System Definition)

Related reference:

Chapter 2, “Command keywords and their synonyms,” on page 57

DELETE PGMDESC command

Use the DELETE PGMDESC command to delete program descriptors.

Subsections:

- “Environment” on page 314
- “Syntax” on page 314
- “Keywords” on page 314
- “Usage notes” on page 314
- “Output fields” on page 315
- “Return, reason, and completion codes” on page 315
- “Examples” on page 317

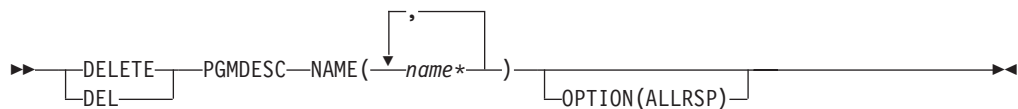
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 157. Valid environments for the DELETE PGMDESC command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
DELETE PGMDESC	X	X	X
NAME	X	X	X
OPTION	X	X	X

Syntax



Keywords

The following keywords are valid for the DELETE PGMDESC command:

NAME

Specifies the 1-8 character name of the program descriptor. Wildcards are supported in the name. Examples of valid names are NAME(*) and NAME(abc*). If the NAME parameter specified is a specific or wildcard name, command responses are returned for all the descriptor names that are processed. For NAME(*), command responses are returned only for the descriptor names that resulted in an error. OPTION(ALLRSP) can be specified with NAME(*) to obtain the command responses for all the descriptor names that are processed.

OPTION

Specifies additional functions to be performed along with the command.

ALLRSP

Indicates that the response lines are to be returned for all descriptors that are processed on the command. The default action is to return response lines only for the descriptors that resulted in an error. It is valid only with NAME(*). ALLRSP is ignored for other NAME values.

Usage notes

This command can only be issued through the Operations Manager API. This command applies to DB/DC systems, DBCTL systems, and DCCTL systems. The DELETE PGMDESC command is not valid on the XRF alternate, RSR tracker, or FDBR region. The DELETE PGMDESC command is not valid if online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC or MODBLKS not defined). This command is recoverable.

Each descriptor is deleted individually. Individual deletion does not work like online change where either all descriptors are deleted or no descriptors are deleted. Descriptors can be successfully deleted if they are not currently in use. If a descriptor is in use, the delete fails. In a sysplex environment, the delete might

succeed on some IMS systems and fail on others. A descriptor is in use if another command is in progress that references the descriptor.

The descriptors remain deleted across an IMS warm start or emergency restart. To ensure they remain deleted across a cold start, the existing descriptor definitions must be exported to an RDDS and imported from the RDDS at cold start.

The DELETE PGMDESC command is not allowed for IMS descriptors that are identified with a definition type of IMS. For DELETE PGMDESC commands, this means IMS-defined program descriptor DFSDSPG1.

Output fields

The following table shows the DELETE PGMDESC output fields. The columns in the table are as follows:

- Short label**
Contains the short label generated in the XML output.
- Long label**
Contains the long label generated in the XML output.
- Keyword**
Identifies keyword on the command that caused the field to be generated. N/A appears for output fields that are always returned. *error* appears for output fields that are returned only in case of an error.
- Meaning**
Provides a brief description of the output field.

Table 158. Output fields for the DELETE PGMDESC command

Short label	Long label	Keyword	Meaning
CC	CC	N/A	Completion code.
CCTXT	CCText	<i>error</i>	Completion code text that briefly explains the meaning of the non-zero completion code.
DESC	DescName	PGMDESC	Program descriptor name.
ERRT	ErrorText	<i>error</i>	Error text that provides diagnostic information. Error text can be returned for a non-zero completion code and further explains the completion code.
MBR	MbrName	N/A	IMSpIex member that built the output line.

Return, reason, and completion codes

The following table includes the return and reason codes and a brief explanation of the codes. The return or reason code returned for the command might also indicate an error from a CSL request.

Table 159. Return and reason codes for the DELETE PGMDESC command

Return code	Reason code	Meaning
X'00000000'	X'00000000'	Command completed successfully. The command output contains a line for each descriptor, accompanied by its completion code. If NAME(*) is specified without OPTION(ALLRSP), no output lines are returned. See the completion code table for details.
X'0000000C'	X'00003000'	Command was successful for some descriptors but failed for others. The command output contains a line for each descriptor, accompanied by its completion code. If NAME(*) is specified without OPTION(ALLRSP), only descriptors with nonzero completion codes are returned. See the completion code table for details.
X'0000000C'	X'00003004'	Command was not successful for any of the descriptors. The command output contains a line for each descriptor, accompanied by its completion code. See the completion code table for details.
X'00000010'	X'0000400C'	Command is not valid on the XRF alternate.
X'00000010'	X'00004014'	Command is not valid on the RSR tracker.
X'00000010'	X'00004120'	Online change phase is in progress.
X'00000010'	X'00004300'	Command is not allowed because online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC, or MODBLKS not defined).
X'00000014'	X'00005004'	DFSOCMD response buffer could not be obtained.
X'00000014'	X'00005008'	DFSPOOL storage could not be obtained.
X'00000014'	X'0000500C'	AWE could not be obtained.

Errors unique to the processing of this command are returned as completion codes. The following table includes an explanation of the completion codes.

Table 160. Completion codes for the DELETE PGMDESC command

Completion code	Completion code text	Meaning
0		Command completed successfully for program descriptor.
10	NO RESOURCES FOUND	Program name is invalid, or the wildcard parameter specified does not match any program descriptor names.
17	ANOTHER CMD IN PROGRESS	Another command (such as DELETE or UPDATE) is in progress for this program descriptor. This could also mean this command, if the descriptor is specified by more than one specific or wildcard parameter.

Table 160. Completion codes for the DELETE PGMDESC command (continued)

Completion code	Completion code text	Meaning
27	REJECTED FOR DEFAULT DESCRIPTOR	DELETE command not allowed for user-defined default descriptor. You must issue an UPDATE command to set another descriptor as the default before deleting this descriptor.
48	NOT ALLOWED FOR IMS RESOURCE	DELETE command not allowed for IMS-defined descriptor. An example of an IMS-defined descriptor is DFSDSPG1.

Examples

The following are examples of the DELETE PGMDESC command:

Example 1 for DELETE PGMDESC command

TSO SPOC input:

```
DEL PGMDESC NAME(*) OPTION(ALLRSP)
```

TSO SPOC output:

```
Response for: DEL PGMDESC NAME(*) OPTION(ALLRSP)
DescName MbrName CC CText
DESC001 IMS1 0
DESC002 IMS1 0
DESC003 IMS1 0
DESC004 IMS1 0
DESC005 IMS1 0
DFSDSPG1 IMS1 48 NOT ALLOWED FOR IMS RESOURCE
DOPTDESC IMS1 0
FPEDESC IMS1 0
GPSBDESC IMS1 0
PARLDESC IMS1 0
RESDESC IMS1 0
TSLDESC IMS1 27 REJECTED FOR DEFAULT DESCRIPTOR
```

OM API input:

```
CMD(DEL PGMDESC NAME(*) OPTION(ALLRSP))
```

OM API output:

```
<imsout>
<ctl>
<omname>OM10M </omname>
<omvsn>1.3.0</omvsn>
<xmivsn>20 </xmivsn>
<statime>2006.310 23:09:24.532552</statime>
<stotime>2006.310 23:09:24.533243</stotime>
<staseq>BFAAC75FB314869E</staseq>
<stoseq>BFAAC75FB33FB7DE</stoseq>
<rqsttkn1>USRT011 10150924</rqsttkn1>
<rc>0200000C</rc>
<rsn>00003008</rsn>
<rsnmsg>CSLN054I</rsnmsg>
<rsntxt>None of the clients were successful.</rsntxt>
</ctl>
<cmderr>
<mbr name="IMS1 ">
```

```

<typ>IMS      </typ>
<styp>DBDC    </styp>
<rc>0000000C</rc>
<rsn>00003000</rsn>
<rsntxt>At least one request successful</rsntxt>
</mbr>
</cmderr>
<cmd>
<master>IMS1  </master>
<userid>USRT011 </userid>
<verb>DEL </verb>
<kwd>PGMDESC      </kwd>
<input>DEL PGMDESC NAME(*) OPTION(ALLRSP) </input>
</cmd>
<cmdrsphdr>
<hdr slbl="DESC" llbl="DescName" scope="LCL" sort="a" key="1"
  scroll="no" len="8" dtype="CHAR" align="left" />
<hdr slbl="MBR" llbl="MbrName" scope="LCL" sort="a" key="2" scroll="no"
  len="8" dtype="CHAR" align="left" />
<hdr slbl="CC" llbl="CC" scope="LCL" sort="n" key="0" scroll="yes"
  len="4" dtype="INT" align="right" skipb="no" />
<hdr slbl="CCTXT" llbl="CCText" scope="LCL" sort="n" key="0"
  scroll="yes" len="*" dtype="CHAR" skipb="yes" align="left" />
<hdr slbl="ERRT" llbl="ErrorText" scope="LCL" sort="n" key="0"
  scroll="yes" len="*" dtype="CHAR" skipb="yes" align="left" />
</cmdrsphdr>
<cmdrspdata>
<rsp>DESC(DESC004 ) MBR(IMS1) CC( 0) </rsp>
<rsp>DESC(DESC005 ) MBR(IMS1) CC( 0) </rsp>
<rsp>DESC(DESC001 ) MBR(IMS1) CC( 0) </rsp>
<rsp>DESC(DOPTDESC) MBR(IMS1) CC( 0) </rsp>
<rsp>DESC(RESDESC ) MBR(IMS1) CC( 0) </rsp>
<rsp>DESC(DFSDSPG1) MBR(IMS1) CC( 48) CCTXT(NOT ALLOWED FOR IMS
  RESOURCE) </rsp>
<rsp>DESC(TLSDESC ) MBR(IMS1) CC( 27) CCTXT(REJECTED FOR DEFAULT
  DESCRIPTOR) </rsp>
<rsp>DESC(DESC002 ) MBR(IMS1) CC( 0) </rsp>
<rsp>DESC(PARLDESC) MBR(IMS1) CC( 0) </rsp>
<rsp>DESC(DESC003 ) MBR(IMS1) CC( 0) </rsp>
<rsp>DESC(FPEDESC ) MBR(IMS1) CC( 0) </rsp>
<rsp>DESC(GPSBDESC) MBR(IMS1) CC( 0) </rsp>
</cmdrspdata>
</imsout>

```

Explanation: A DELETE PGMDESC command is issued to delete all program descriptors from an active IMS system. Many program descriptors are successfully deleted, as indicated by the completion code 0. Because the DELETE command attempted to delete all of the program descriptors, OPTION(ALLRSP) is specified to display the successfully deleted program descriptors. Program descriptor TLSDESC fails, because it is the default program descriptor. Program descriptor DFSDSPG1 fails, because it is the IMS-defined program descriptor.

Related concepts:

 How to interpret CSL request return and reason codes (System Programming APIs)

Related reference:

Chapter 2, “Command keywords and their synonyms,” on page 57

DELETE RTC command

Use the DELETE RTC command to delete Fast Path routing codes.

Subsections:

- “Environment”
- “Syntax”
- “Keywords”
- “Usage notes” on page 320
- “Output fields” on page 320
- “Return, reason, and completion codes” on page 321
- “Examples” on page 322

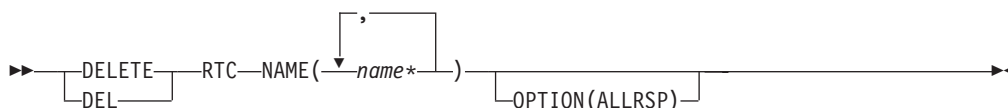
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 161. Valid environments for the DELETE RTC command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
DELETE RTC	X		X
NAME	X		X
OPTION	X		X

Syntax



Keywords

The following keywords are valid for the DELETE RTC command:

NAME

Specifies the 1-8 character name of the routing code. Wildcards are supported in the name. Examples of valid names are NAME(*) and NAME(abc*). If the NAME parameter specified is a specific or wildcard name, command responses are returned for all the resource names that are processed. For NAME(*), command responses are returned only for the resource names that resulted in an error. OPTION(ALLRSP) can be specified with NAME(*) to obtain the command responses for all the resource names that are processed.

OPTION

Specifies additional functions to be performed along with the command.

ALLRSP

Indicates that the response lines are to be returned for all resources that are processed on the command. The default action is to return response lines only for the resources that resulted in an error. It is valid only with NAME(*). ALLRSP is ignored for other NAME values.

Usage notes

This command can only be issued through the Operations Manager API. This command applies to DB/DC systems and DCCTL systems. The DELETE RTC command applies if Fast Path is installed. The DELETE RTC command is not valid on the XRF alternate, RSR tracker, or FDBR region. The DELETE RTC command is not valid if online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC or MODBLKS not defined). This command is recoverable.

Each routing code is deleted individually, unlike the online change process where either all routing codes are deleted or no routing codes are deleted. The runtime resource definition for a routing code can only be deleted if the routing code is not in use. If the routing code is in use, the delete fails. In a sysplex environment with multiple IMSs, the delete might succeed on some IMSs and fail on others.

The resources remain deleted across an IMS warm start or emergency restart. To ensure that the resources remain deleted across a cold start, the existing resource definitions must be exported to an RDDS and then imported from the RDDS at cold start. If the resource definitions are to be imported from the MODBLKS data set at cold start instead of from an RDDS, the resource definitions must be deleted from system definition and a new MODBLKS data set must be generated.

Output fields

The following table shows the DELETE RTC output fields. The columns in the table are as follows:

Short label

Contains the short label generated in the XML output.

Long label

Contains the long label generated in the XML output.

Keyword

Identifies keyword on the command that caused the field to be generated. N/A appears for output fields that are always returned. *error* appears for output fields that are returned only in case of an error.

Meaning

Provides a brief description of the output field.

Table 162. Output fields for the DELETE RTC command

Short label	Long label	Keyword	Meaning
CC	CC	N/A	Completion code.
CCTXT	CCText	<i>error</i>	Completion code text that briefly explains the meaning of the non-zero completion code.
ERRT	ErrorText	<i>error</i>	Error text that provides diagnostic information. Error text can be returned for a non-zero completion code and further explains the completion code.
MBR	MbrName	N/A	IMSplex member that built the output line.
RTC	RtcName	RTC	Routing code name.

Return, reason, and completion codes

The following table includes the return and reason codes and a brief explanation of the codes. The return or reason code returned for the command might also indicate an error from a CSL request.

Table 163. Return and reason codes for the DELETE RTC command

Return code	Reason code	Meaning
X'00000000'	X'00000000'	Command completed successfully. The command output contains a line for each resource, accompanied by its completion code. If NAME(*) is specified without OPTION(ALLRSP), no output lines are returned. See the completion code table for details.
X'0000000C'	X'00003000'	Command was successful for some resources but failed for others. The command output contains a line for each resource, accompanied by its completion code. If NAME(*) is specified without OPTION(ALLRSP), only resources with non-zero completion codes are returned. See the completion code table for details.
X'0000000C'	X'00003004'	Command was not successful for any of the resources. The command output contains a line for each resource, accompanied by its completion code. See the completion code table for details.
X'00000010'	X'0000400C'	Command is not valid on the XRF alternate.
X'00000010'	X'00004014'	Command is not valid on the RSR tracker.
X'00000010'	X'00004024'	No Fast Path defined.
X'00000010'	X'00004120'	Online change phase is in progress.
X'00000010'	X'00004300'	Command is not allowed because online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC, or MODBLKS not defined).
X'00000014'	X'00005004'	DFSOCMD response buffer could not be obtained.
X'00000014'	X'00005008'	DFSPOOL storage could not be obtained.
X'00000014'	X'0000500C'	AWE could not be obtained.

Errors unique to the processing of this command are returned as completion codes. The following table includes an explanation of the completion codes.

Table 164. Completion codes for the DELETE RTC command

Completion code	Completion code text	Meaning
0		Command completed successfully for routing code.
10	NO RESOURCES FOUND	Routing code name is invalid, or the wildcard parameter specified does not match any routing code names.

Table 164. Completion codes for the DELETE RTC command (continued)

Completion code	Completion code text	Meaning
17	ANOTHER CMD IN PROGRESS	Another command (such as DELETE or UPDATE) is in progress for this routing code. This could also mean this command, if the resource is specified by more than one specific or wildcard parameter.
39	FP(E) TRAN FOR RTC EXISTS	Routing code was created by IMS for a Fast Path exclusive transaction and cannot be deleted by a DELETE RTC command. The routing code can only be deleted by a DELETE TRAN command for the Fast Path exclusive transaction.
73	PROGRAM SCHEDULED	Program is scheduled.

Examples

The following are examples of the DELETE RTC command:

Example 1 for DELETE RTC command

TSO SPOC input:

```
DEL RTC NAME(OLCFR102,GFP1,BADNAME,EMHTX32,EMHTX32)
```

TSO SPOC output:

```
Response for: DEL RTC NAME(OLCFR102,GFP1,BADNAME,EMHTX32,EMHTX32)
RtcName MbrName CC CText
BADNAME IMS1 10 NO RESOURCES FOUND
EMHTX32 IMS1 0
EMHTX32 IMS1 17 ANOTHER CMD IN PROGRESS
GFP1 IMS1 39 FP(E) TRAN FOR RTC EXISTS
OLCFR102 IMS1 0
```

OM API input:

```
CMD(DEL RTC NAME(OLCFR102,GFP1,BADNAME,EMHTX32,EMHTX32))
```

OM API output:

```
<imsout>
<ctl>
<omname>OM10M </omname>
<omvsn>1.3.0</omvsn>
<xmlvsn>20 </xmlvsn>
<statime>2006.310 23:55:52.034690</statime>
<stotime>2006.310 23:55:52.035318</stotime>
<staseq>BFAAD1C2119824D2</staseq>
<stoseq>BFAAD1C211BF6E52</stoseq>
<rqsttkn1>USRT011 10155552</rqsttkn1>
<rc>0200000C</rc>
<rsn>00003008</rsn>
<rsnmsg>CSLN054I</rsnmsg>
<rsntxt>None of the clients were successful.</rsntxt>
</ctl>
<cmderr>
<mbr name="IMS1 ">
<typ>IMS </typ>
```



```

<styp>DBDC      </styp>
<rc>0000000C</rc>
<rsn>00003000</rsn>
<rsntxt>At least one request successful</rsntxt>
</mbr>
</cmderr>
<cmd>
<master>IMS1      </master>
<userid>USRT011 </userid>
<verb>DEL </verb>
<kwd>RTC          </kwd>
<input>DEL RTC NAME(OLCFR102,GFP1,BADNAME,EMHTX32,EMHTX32) </input>
</cmd>
<cmdrsphdr>
<hdr slbl="RTC" llbl="RtcName" scope="LCL" sort="a" key="1" scroll="no"
  len="8" dtype="CHAR" align="left" />
<hdr slbl="MBR" llbl="MbrName" scope="LCL" sort="a" key="2" scroll="no"
  len="8" dtype="CHAR" align="left" />
<hdr slbl="CC" llbl="CC" scope="LCL" sort="n" key="0" scroll="yes"
  len="4" dtype="INT" align="right" />
<hdr slbl="CCTXT" llbl="CCText" scope="LCL" sort="n" key="0"
  scroll="yes" len="32" dtype="CHAR" align="left" skipb="yes" />
</cmdrsphdr>
<cmdrspdata>
<rsp>RTC(OLCFR102) MBR(IMS1) CC( 0) </rsp>
<rsp>RTC(GFP1 ) MBR(IMS1) CC( 39) CCTXT(FP(E) TRAN FOR RTC EXISTS)
</rsp>
<rsp>RTC(BADNAME ) MBR(IMS1) CC( 10) CCTXT(NO RESOURCES FOUND) </rsp>
<rsp>RTC(EMHTX32 ) MBR(IMS1) CC( 0) </rsp>
<rsp>RTC(EMHTX32 ) MBR(IMS1) CC( 17) CCTXT(ANOTHER CMD IN PROGRESS)
</rsp>
</cmdrspdata>
</imsout>

```

Explanation: A DELETE RTC command is issued to delete several Fast Path routing codes from a running IMS system. The delete succeeds for some routing codes, as shown by completion code 0. The delete fails for routing code BADNAME, because no such routing code exists. The delete fails for routing code GFP1, because it was created for a Fast Path exclusive transaction called GFP1 and can only be deleted by a DELETE TRAN NAME(GFP1) command. Routing code EMHTX32 is successfully deleted, but routing code EMHTX32 is specified again, which fails because the DELETE RTC command is already in progress for EMHTX32.

Related concepts:

 How to interpret CSL request return and reason codes (System Programming APIs)

Related tasks:

 Deleting runtime Fast Path routing code resource and descriptor definitions with the DELETE command (System Definition)

Related reference:

Chapter 2, “Command keywords and their synonyms,” on page 57

DELETE RTCDESC command

Use the DELETE RTCDESC command to delete Fast Path routing code descriptors.

Subsections:

- “Environment” on page 324
- “Syntax” on page 324

- “Keywords”
- “Usage notes”
- “Output fields” on page 325
- “Return, reason, and completion codes” on page 325
- “Examples” on page 327

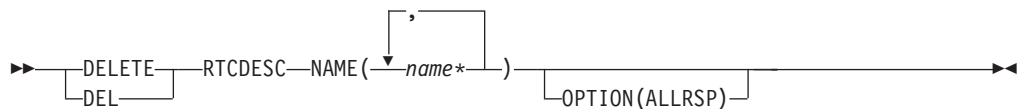
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 165. Valid environments for the DELETE RTCDESC command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
DELETE RTCDESC	X		X
NAME	X		X
OPTION	X		X

Syntax



Keywords

The following keywords are valid for the DELETE RTCDESC command:

NAME

Specifies the 1-8 character name of the routing code descriptor. Wildcards are supported in the name. Examples of valid names are NAME(*) and NAME(abc*). If the NAME parameter specified is a specific or wildcard name, command responses are returned for all the descriptor names that are processed. For NAME(*), command responses are returned only for the descriptor names that resulted in an error. OPTION(ALLRSP) can be specified with NAME(*) to obtain the command responses for all the descriptor names that are processed.

OPTION

Specifies additional functions to be performed along with the command.

ALLRSP

Indicates that the response lines are to be returned for all descriptors that are processed on the command. The default action is to return response lines only for the descriptors that resulted in an error. It is valid only with NAME(*). ALLRSP is ignored for other NAME values.

Usage notes

This command can only be issued through the Operations Manager API. This command applies to DB/DC systems and DCCTL systems. The DELETE RTCDESC command applies if Fast Path is installed. The DELETE RTCDESC command is not valid on the XRF alternate, RSR tracker, or FDBR region. The DELETE RTCDESC

command is not valid if online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC or MODBLKS not defined). This command is recoverable.

Each descriptor is deleted individually. Individual deletion does not work like online change where either all descriptors are deleted or no descriptors are deleted. Descriptors can be successfully deleted if they are not currently in use. If a descriptor is in use, the delete fails. In a sysplex environment, the delete might succeed on some IMS systems and fail on others. A descriptor is in use if another command is in progress that references the descriptor.

The descriptors remain deleted across an IMS warm start or emergency restart. To ensure they remain deleted across a cold start, the existing descriptor definitions must be exported to an RDDS and then imported from the RDDS at cold start.

The IMS-defined routing code descriptor (DBFDSRT1) cannot be deleted with the DELETE RTCDESC command.

Output fields

The following table shows the DELETE RTCDESC output fields. The columns in the table are as follows:

- Short label**
Contains the short label generated in the XML output.
- Long label**
Contains the long label generated in the XML output.
- Keyword**
Identifies keyword on the command that caused the field to be generated. N/A appears for output fields that are always returned. *error* appears for output fields that are returned only in case of an error.
- Meaning**
Provides a brief description of the output field.

Table 166. Output fields for the DELETE RTCDESC command

Short label	Long label	Keyword	Meaning
CC	CC	N/A	Completion code.
CCTXT	CCText	<i>error</i>	Completion code text that briefly explains the meaning of the non-zero completion code.
DESC	DescName	RTCDESC	Routing code descriptor name.
ERRT	ErrorText	<i>error</i>	Error text that provides diagnostic information. Error text can be returned for a non-zero completion code and further explains the completion code.
MBR	MbrName	N/A	IMSplex member that built the output line.

Return, reason, and completion codes

The following table includes the return and reason codes and a brief explanation of the codes. The return or reason code returned for the command might also indicate an error from a CSL request.

Table 167. Return and reason codes for the DELETE RTCDESC command

Return code	Reason code	Meaning
X'00000000'	X'00000000'	Command completed successfully. The command output contains a line for each descriptor, accompanied by its completion code. If NAME(*) is specified without OPTION(ALLRSP), no output lines are returned. See the completion code table for details.
X'0000000C'	X'00003000'	Command was successful for some descriptors but failed for others. The command output contains a line for each descriptor, accompanied by its completion code. If NAME(*) is specified without OPTION(ALLRSP), only descriptors with non-zero completion codes are returned. See the completion code table for details.
X'0000000C'	X'00003004'	Command was not successful for any of the descriptors. The command output contains a line for each descriptor, accompanied by its completion code. See the completion code table for details.
X'00000010'	X'0000400C'	Command is not valid on the XRF alternate.
X'00000010'	X'00004014'	Command is not valid on the RSR tracker.
X'00000010'	X'00004024'	No Fast Path defined.
X'00000010'	X'00004120'	Online change phase is in progress.
X'00000010'	X'00004300'	Command is not allowed because online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC, or MODBLKS not defined).
X'00000014'	X'00005004'	DFSOCMD response buffer could not be obtained.
X'00000014'	X'00005008'	DFSPPOOL storage could not be obtained.
X'00000014'	X'0000500C'	AWE could not be obtained.

Errors unique to the processing of this command are returned as completion codes. The following table includes an explanation of the completion codes.

Table 168. Completion codes for the DELETE RTCDESC command

Completion code	Completion code text	Meaning
0		Command completed successfully for routing code descriptor.
10	NO RESOURCES FOUND	Routing code descriptor name is invalid, or the wildcard parameter specified does not match any routing code descriptor names.
17	ANOTHER CMD IN PROGRESS	Another command (such as DELETE or UPDATE) is in progress for this routing code descriptor. This could also mean this command, if the descriptor is specified by more than one specific or wildcard parameter.

Table 168. Completion codes for the DELETE RTCDESC command (continued)

Completion code	Completion code text	Meaning
27	REJECTED FOR DEFAULT DESCRIPTOR	DELETE command not allowed for user-defined default descriptor. You must issue an UPDATE command to set another descriptor as the default before deleting this descriptor.
48	NOT ALLOWED FOR IMS RESOURCE	DELETE command not allowed for IMS descriptor. An example of an IMS descriptor is DBFDSRT1.

Examples

The following are examples of the DELETE RTCDESC command:

Example 1 for DELETE RTCDESC command

TSO SPOC input:

```
DEL RTCDESC NAME(*) OPTION(ALLRSP)
```

TSO SPOC output:

```
Response for: DEL RTCDESC NAME(*) OPTION(ALLRSP)
DescName MbrName CC CText
DBFDSRT1 IMS1 48 NOT ALLOWED FOR IMS RESOURCE
DESC001 IMS1 0
DESC002 IMS1 0
DESC003 IMS1 0
DESC004 IMS1 0
DESC005 IMS1 0
RTCDESC1 IMS1 27 REJECTED FOR DEFAULT DESCRIPTOR
```

OM API input:

```
CMD(DEL RTCDESC NAME(*) OPTION(ALLRSP))
```

OM API output:

```
<imsout>
<ctl>
<omname>OM10M </omname>
<omvsn>1.3.0</omvsn>
<xm1vsn>20 </xm1vsn>
<stime>2006.310 22:57:13.782312</stime>
<stotime>2006.310 22:57:13.783073</stotime>
<staseq>BFAAC4A6CD428992</staseq>
<stoseq>BFAAC4A6CD721DC0</stoseq>
<rqsttkn1>USRT011 10145713</rqsttkn1>
<rc>0200000C</rc>
<rsn>00003008</rsn>
<rsnmsg>CSLN054I</rsnmsg>
<rsntxt>None of the clients were successful.</rsntxt>
</ctl>
<cmderr>
<mbr name="IMS1 ">
<typ>IMS </typ>
<styp>DBDC </styp>
<rc>0000000C</rc>
<rsn>00003000</rsn>
<rsntxt>At least one request successful</rsntxt>
</mbr>
```

```

</cmderr>
<cmd>
<master>IMS1 </master>
<userid>USRT011 </userid>
<verb>DEL </verb>
<kwd>RTDESC </kwd>
<input>DEL RTDESC NAME(*) OPTION(ALLRSP) </input>
</cmd>
<cmdrsphdr>
<hdr s1b1="DESC" l1b1="DescName" scope="LCL" sort="a" key="1"
  scroll="no" len="8" dtype="CHAR" align="left" />
<hdr s1b1="MBR" l1b1="MbrName" scope="LCL" sort="a" key="2" scroll="no"
  len="8" dtype="CHAR" align="left" />
<hdr s1b1="CC" l1b1="CC" scope="LCL" sort="n" key="0" scroll="yes"
  len="4" dtype="INT" align="right" />
<hdr s1b1="CCTXT" l1b1="CCText" scope="LCL" sort="n" key="0"
  scroll="yes" len="32" dtype="CHAR" align="left" skipb="yes" />
</cmdrsphdr>
<cmdrspdata>
<rsp>DESC(DESC004 ) MBR(IMS1) CC( 0) </rsp>
<rsp>DESC(DESC005 ) MBR(IMS1) CC( 0) </rsp>
<rsp>DESC(DESC001 ) MBR(IMS1) CC( 0) </rsp>
<rsp>DESC(RTDESC1) MBR(IMS1) CC( 27) CCTXT(REJECTED FOR DEFAULT
  DESCRIPTOR) </rsp>
<rsp>DESC(DBFDSRT1) MBR(IMS1) CC( 48) CCTXT(NOT ALLOWED FOR IMS
  RESOURCE) </rsp>
<rsp>DESC(DESC002 ) MBR(IMS1) CC( 0) </rsp>
<rsp>DESC(DESC003 ) MBR(IMS1) CC( 0) </rsp>
</cmdrspdata>
</imsout>

```

Explanation: A DELETE RTDESC command is issued to delete all routing code descriptors from an active IMS system. Many routing code descriptors are successfully deleted, as indicated by the completion code 0. Because the DELETE command attempted to delete all of the routing code descriptors, OPTION(ALLRSP) is specified to display the successfully deleted routing code descriptors. Routing code descriptor RTDESC1 fails, because it is the default routing code descriptor. Routing code descriptor DBFDSRT1 fails, because it is the IMS-defined routing code descriptor.

Related concepts:

 How to interpret CSL request return and reason codes (System Programming APIs)

Related reference:

Chapter 2, “Command keywords and their synonyms,” on page 57

DELETE TRAN command

Use the DELETE TRAN command to delete transactions.

Subsections:

- “Environment” on page 329
- “Syntax” on page 329
- “Keywords” on page 329
- “Usage notes” on page 329
- “Output fields” on page 330
- “Return, reason, and completion codes” on page 331
- “Examples” on page 333

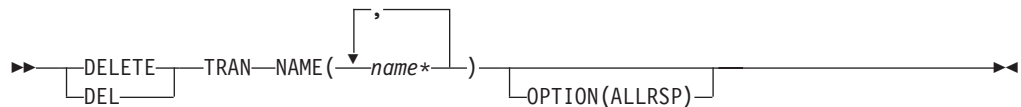
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 169. Valid environments for the DELETE TRAN command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
DELETE TRAN	X		X
NAME	X		X
OPTION	X		X

Syntax



Keywords

The following keywords are valid for the DELETE TRAN command:

NAME

Specifies the 1-8 character name of the transaction. Wildcards are supported in the name. Examples of valid names are NAME(*) and NAME(abc*). If the NAME parameter specified is a specific or wildcard name, command responses are returned for all the resource names that are processed. For NAME(*), command responses are returned only for the resource names that resulted in an error. OPTION(ALLRSP) can be specified with NAME(*) to obtain the command responses for all the resource names that are processed.

OPTION

Specifies additional functions to be performed along with the command.

ALLRSP

Indicates that the response lines are to be returned for all resources that are processed on the command. The default action is to return response lines only for the resources that resulted in an error. It is valid only with NAME(*). ALLRSP is ignored for other NAME values.

Usage notes

This command can only be issued through the OM API. This command applies to DB/DC systems and DCCTL systems. The DELETE TRAN command is not valid on the XRF alternate, RSR tracker, or FDBR region. The DELETE TRAN command is not valid if online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC or MODBLKS not defined). This command is recoverable.

Each transaction is deleted individually, unlike the online change process where either all transactions are deleted or no transactions are deleted. The runtime resource definition for a transaction can only be deleted if the transaction is not in use. If the transaction is in use, the delete fails. In a sysplex environment with multiple IMS systems, the delete might succeed on some IMS systems and fail on others.

The resources remain deleted across an IMS warm start or emergency restart. To ensure that the resources remain deleted across a cold start, the existing resource definitions must be exported to an RDDS and then imported from the RDDS at cold start. If the resource definitions are to be imported from the MODBLKS data set at cold start instead of from an RDDS, the resource definitions must be deleted from system definition and a new MODBLKS data set must be generated.

The DELETE TRAN command stops all queuing and scheduling of the transaction.

If the transaction is a Fast Path exclusive transaction, the routing code by the same name is deleted as well.

Output fields

The following table shows the DELETE TRAN output fields. The columns in the table are as follows:

- Short label**
Contains the short label generated in the XML output.
- Long label**
Contains the long label generated in the XML output.
- Keyword**
Identifies keyword on the command that caused the field to be generated. N/A appears for output fields that are always returned. *error* appears for output fields that are returned only in case of an error.
- Meaning**
Provides a brief description of the output field.

Table 170. Output fields for the DELETE TRAN command

Short label	Long label	Keyword	Meaning
CC	CC	N/A	Completion code.
CCTXT	CCText	<i>error</i>	Completion code text that briefly explains the nonzero completion code.
CONVID	ConvID	TRAN	Conversation id of conversation associated with transaction that caused the delete to fail with a completion code of C'1A'. This information may be used to exit the conversation, before attempting the delete again.
ERRT	ErrorText	<i>error</i>	Error text that provides diagnostic information. Error text can be returned for a nonzero completion code and further explains the completion code.
MBR	MbrName	N/A	IMSplex member that built the output line.
LU	LUName	TRAN	APPC LU name associated with the transaction conversation that caused the delete to fail with a completion code of C'1A'. This information may be used to exit the conversation, before attempting the delete again.

Table 170. Output fields for the DELETE TRAN command (continued)

Short label	Long label	Keyword	Meaning
NODE	NodeName	TRAN	Node name of static node associated with transaction conversation that caused the delete to fail with a completion code of C'1A'. This information may be used to exit the conversation, before attempting the delete again.
TMEM	TMember	TRAN	OTMA tmember name associated with transaction conversation that caused the delete to fail with a completion code of C'1A'. This information may be used to exit the conversation, before attempting the delete again.
TPIP	TPipe	TRAN	OTMA tpipe name associated with the transaction conversation that caused the delete to fail with a completion code of C'1A'. This information may be used to exit the conversation, before attempting the delete again.
TRAN	Trancode	TRAN	Transaction name.
USER	UserName	TRAN	User name of dynamic user associated with the transaction conversation that caused the delete to fail with a completion code of C'1A'. This information may be used to exit the conversation, before attempting the delete again.

Return, reason, and completion codes

The following table includes the return and reason codes and a brief explanation of the codes. The return or reason code returned for the command might also indicate an error from a CSL request.

Table 171. Return and reason codes for the DELETE TRAN command

Return code	Reason code	Meaning
X'00000000'	X'00000000'	Command completed successfully. The command output contains a line for each resource, accompanied by its completion code. If NAME(*) is specified without OPTION(ALLRSP), no output lines are returned. See the completion code table for details.
X'0000000C'	X'00003000'	Command was successful for some resources but failed for others. The command output contains a line for each resource, accompanied by its completion code. If NAME(*) is specified without OPTION(ALLRSP), only resources with nonzero completion codes are returned. See the completion code table for details.
X'0000000C'	X'00003004'	Command was not successful for any of the resources. The command output contains a line for each resource, accompanied by its completion code. See the completion code table for details.
X'00000010'	X'0000400C'	Command is not valid on the XRF alternate.
X'00000010'	X'00004014'	Command is not valid on the RSR tracker.

Table 171. Return and reason codes for the DELETE TRAN command (continued)

Return code	Reason code	Meaning
X'00000010'	X'00004120'	Online change phase is in progress.
X'00000010'	X'00004300'	Command is not allowed because online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC, or MODBLKS not defined).
X'00000014'	X'00005004'	DFSOCMD response buffer could not be obtained.
X'00000014'	X'00005008'	DFSPOOL storage could not be obtained.
X'00000014'	X'0000500C'	AWE could not be obtained.

Errors unique to the processing of this command are returned as completion codes. The following table includes an explanation of the completion codes.

Table 172. Completion codes for the DELETE TRAN command

Completion code	Completion code text	Meaning
0		Command completed successfully for transaction.
10	NO RESOURCES FOUND	Transaction name is invalid, or the wildcard parameter specified does not match any transaction names.
17	ANOTHER CMD IN PROGRESS	Another command (such as DELETE or UPDATE) is in progress for this transaction or routing code associated with this transaction, if it is Fast Path exclusive. This could also mean this command, if the resource is specified by more than one specific or wildcard parameter.
1A	IN CONVERSATION	Transaction is in conversation. The conversation ID and terminal in conversation are returned separately. The terminal can be a static node, node and user, dynamic user, APPC luname, or OTMA tmember and tpipe. Suggested actions: Terminate the conversation.
4A	IN USE	Transaction is in use. Queuing is in progress, either terminal input or a program-to-program switch.
73	PROGRAM SCHEDULED	Program is scheduled.
85	SUSPENDED	Transaction is on the suspend queue.
87	TRAN QUEUEING	Transaction has messages queued (non-shared-queues environment).
89	TRAN SCHEDULED	Transaction is scheduled.

Table 172. Completion codes for the DELETE TRAN command (continued)

Completion code	Completion code text	Meaning
B3	ELIGIBLE FOR SCHEDULING	Transaction is eligible for scheduling and cannot be deleted. You may need to stop the transaction with an UPDATE TRAN STOP(Q,SCHD) command before attempting the DELETE again.

Examples

The following are examples of the DELETE TRAN command:

Example 1 for DELETE TRAN command

TSO SPOC input:

```
DEL TRAN NAME(AOP,BADNAME,APOL*,BAD*,AOP)
```

TSO SPOC output:

```
Response for: DEL TRAN NAME(AOP,BADNAME,APOL*,BAD*,AOP)
Trancode MbrName CC CText
AOP IMS1 0
AOP IMS1 17 ANOTHER CMD IN PROGRESS
APOL11 IMS1 0
APOL12 IMS1 0
APOL13 IMS1 0
APOL14 IMS1 0
APOL15 IMS1 0
APOL16 IMS1 0
APOL17 IMS1 0
APOL18 IMS1 0
BAD* IMS1 10 NO RESOURCES FOUND
BADNAME IMS1 10 NO RESOURCES FOUND
```

OM API input:

```
CMD(DEL TRAN NAME(AOP,BADNAME,APOL*,BAD*,AOP))
```

OM API output:

```
<imsout>
<ctl>
<omname>OM10M </omname>
<omvsrn>1.3.0</omvsrn>
<xm1vsrn>20 </xm1vsrn>
<statime>2006.311 00:04:00.354581</statime>
<stotime>2006.311 00:04:00.35454</stotime>
<staseq>BFAAD393C4515645</staseq>
<stoseq>BFAAD393C487EF05</stoseq>
<rqsttkn1>USRT011 10160400</rqsttkn1>
<rc>0200000C</rc>
<rsn>00003008</rsn>
<rsnmsg>CSLN054I</rsnmsg>
<rsntxt>None of the clients were successful.</rsntxt>
</ctl>
<cmderr>
<mbr name="IMS1 ">
<typ>IMS </typ>
<styp>DBDC </styp>
<rc>0000000C</rc>
<rsn>00003004</rsn>
<rsntxt>No requests were successful</rsntxt>
```

```

</mbr>
</cmderr>
<cmd>
<master>IMS1 </master>
<userid>USRT011 </userid>
<verb>DEL </verb>
<kwd>TRAN </kwd>
<input>DEL TRAN NAME(AOP,BADNAME,APOL*,BAD*,AOP) </input>
</cmd>
<cmdrsphdr>
<hdr slbl="TRAN" llbl="Trancode" scope="LCL" sort="a" key="1"
  scroll="no" len="8" dtype="CHAR" align="left" />
<hdr slbl="MBR" llbl="MbrName" scope="LCL" sort="a" key="2" scroll="no"
  len="8" dtype="CHAR" align="left" />
<hdr slbl="CC" llbl="CC" scope="LCL" sort="n" key="0" scroll="yes"
  len="4" dtype="INT" align="right" skipb="no" />
<hdr slbl="CCTXT" llbl="CCText" scope="LCL" sort="n" key="0"
  scroll="yes" len="*" dtype="CHAR" skipb="yes" align="left" />
<hdr slbl="ERRT" llbl="ErrorText" scope="LCL" sort="n" key="0"
  scroll="yes" len="*" dtype="CHAR" skipb="yes" align="left" />
<hdr slbl="CONVID" llbl="ConvID" scope="LCL" sort="n" key="0"
  scroll="yes" len="4" dtype="CHAR" skipb="yes" align="left" />
<hdr slbl="NODE" llbl="NodeName" scope="LCL" sort="n" key="0"
  scroll="yes" len="8" dtype="CHAR" skipb="yes" align="left" />
<hdr slbl="USER" llbl="UserName" scope="LCL" sort="n" key="0"
  scroll="yes" len="8" dtype="CHAR" skipb="yes" align="left" />
<hdr slbl="LU" llbl="LUName" scope="LCL" sort="n" key="0"
  scroll="yes" len="24" dtype="CHAR" skipb="yes" align="left" />
<hdr slbl="TMEM" llbl="TMember" scope="LCL" sort="n" key="0"
  scroll="yes" len="16" dtype="CHAR" skipb="yes" align="left" />
<hdr slbl="TPIP" llbl="TPipe" scope="LCL" sort="n" key="0" scroll="yes"
  len="8" dtype="CHAR" skipb="yes" align="left" />
</cmdrsphdr>
<cmdrspdata>
<rsp>TRAN(AOP ) MBR(IMS1) CC( 0) </rsp>
<rsp>TRAN(BADNAME ) MBR(IMS1) CC( 10) CCTXT(NO RESOURCES FOUND) </rsp>
<rsp>TRAN(APOL11 ) MBR(IMS1) CC( 0) </rsp>
<rsp>TRAN(BAD* ) MBR(IMS1) CC( 10) CCTXT(NO RESOURCES FOUND) </rsp>
<rsp>TRAN(AOP ) MBR(IMS1) CC( 17) CCTXT(ANOTHER CMD IN PROGRESS)
</rsp>
<rsp>TRAN(APOL12 ) MBR(IMS1) CC( 0) </rsp>
<rsp>TRAN(APOL13 ) MBR(IMS1) CC( 0) </rsp>
<rsp>TRAN(APOL14 ) MBR(IMS1) CC( 0) </rsp>
<rsp>TRAN(APOL15 ) MBR(IMS1) CC( 0) </rsp>
<rsp>TRAN(APOL16 ) MBR(IMS1) CC( 0) </rsp>
<rsp>TRAN(APOL17 ) MBR(IMS1) CC( 0) </rsp>
<rsp>TRAN(APOL18 ) MBR(IMS1) CC( 0) </rsp>
</cmdrspdata>
</imsout>

```

Explanation: A DELETE TRAN command is issued to delete several transactions from a running IMS system. The delete succeeds for some transactions, as shown by completion code 0. The delete fails for transaction BADNAME, because no such transaction exists. The delete fails for transaction name BAD*, because no transactions start with BAD. Transaction AOP is successfully deleted, but transaction AOP is specified again, which fails because the DELETE TRAN command is already in progress for transaction AOP.

Related concepts:

 How to interpret CSL request return and reason codes (System Programming APIs)

Related tasks:

✚ Deleting runtime transaction resource and descriptor definitions with the DELETE command (System Definition)

Related reference:

Chapter 2, “Command keywords and their synonyms,” on page 57

DELETE TRANDESC command

Use the DELETE TRANDESC command to delete transaction descriptors.

Subsections:

- “Environment”
- “Syntax”
- “Keywords”
- “Usage notes” on page 336
- “Output fields” on page 336
- “Return, reason, and completion codes” on page 337
- “Examples” on page 338

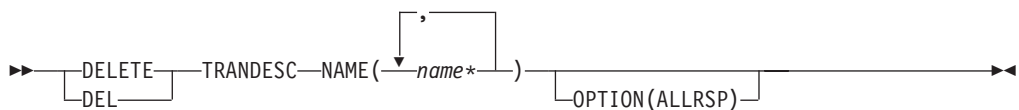
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 173. Valid environments for the DELETE TRANDESC command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
DELETE TRANDESC	X		X
NAME	X		X
OPTION	X		X

Syntax



Keywords

The following keywords are valid for the DELETE TRANDESC command:

NAME

Specifies the 1-8 character name of the transaction descriptor. Wildcards are supported in the name. Examples of valid names are NAME(*) and NAME(abc*). If the NAME parameter specified is a specific or wildcard name, command responses are returned for all the descriptor names that are processed. For NAME(*), command responses are returned only for the descriptor names that resulted in an error. OPTION(ALLRSP) can be specified with NAME(*) to obtain the command responses for all the descriptor names that are processed.

OPTION

Specifies additional functions to be performed along with the command.

ALLRSP

Indicates that the response lines are to be returned for all descriptors that are processed on the command. The default action is to return response lines only for the descriptors that resulted in an error. It is valid only with NAME(*). ALLRSP is ignored for other NAME values.

Usage notes

This command can only be issued through the Operations Manager API. This command applies to DB/DC systems and DCCTL systems. The DELETE TRANDESC command is not valid on the XRF alternate, RSR tracker, or FDBR region. The DELETE TRANDESC command is not valid if online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC or MODBLKS not defined). This command is recoverable.

Each descriptor is deleted individually. Individual deletion does not work like online change where either all descriptors are deleted or no descriptors are deleted. Descriptors can be successfully deleted if they are not currently in use. If a descriptor is in use, the delete fails. In a sysplex environment, the delete might succeed on some IMS systems and fail on others. A descriptor is in use if another command is in progress that references the command.

The descriptors remain deleted across an IMS warm start or emergency restart. To ensure they remain deleted across a cold start, the existing descriptor definitions must be exported to an RDDS and then imported from the RDDS at cold start.

The DELETE TRANDESC command is not allowed for IMS descriptors that are identified with a definition type of IMS. For DELETE TRANDESC commands, this means IMS transaction descriptor DFSSTR1.

Output fields

The following table shows the DELETE TRANDESC output fields. The columns in the table are as follows:

Short label

Contains the short label generated in the XML output.

Long label

Contains the long label generated in the XML output.

Keyword

Identifies keyword on the command that caused the field to be generated. N/A appears for output fields that are always returned. *error* appears for output fields that are returned only in case of an error.

Meaning

Provides a brief description of the output field.

Table 174. Output fields for the DELETE TRANDESC command

Short label	Long label	Keyword	Meaning
CC	CC	N/A	Completion code.
CCTXT	CCText	<i>error</i>	Completion code text that briefly explains the nonzero completion code.
DESC	DescName	TRANDESC	Transaction descriptor name.

Table 174. Output fields for the DELETE TRANDESC command (continued)

Short label	Long label	Keyword	Meaning
ERRT	ErrorText	<i>error</i>	Error text that provides diagnostic information. Error text can be returned for a nonzero completion code and further explains the completion code.
MBR	MbrName	N/A	IMSpIex member that built the output line.

Return, reason, and completion codes

The following table includes the return and reason codes and a brief explanation of the codes. The return or reason code returned for the command might also indicate an error from a CSL request.

Table 175. Return and reason codes for the DELETE TRANDESC command

Return code	Reason code	Meaning
X'00000000'	X'00000000'	Command completed successfully. The command output contains a line for each descriptor, accompanied by its completion code. If NAME(*) is specified without OPTION(ALLRSP), no output lines are returned. See the completion code table for details.
X'0000000C'	X'00003000'	Command was successful for some descriptors but failed for others. The command output contains a line for each descriptor, accompanied by its completion code. If NAME(*) is specified without OPTION(ALLRSP), only descriptors with nonzero completion codes are returned. See the completion code table for details.
X'0000000C'	X'00003004'	Command was not successful for any of the descriptors. The command output contains a line for each descriptor, accompanied by its completion code. See the completion code table for details.
X'00000010'	X'0000400C'	Command is not valid on the XRF alternate.
X'00000010'	X'00004014'	Command is not valid on the RSR tracker.
X'00000010'	X'00004120'	Online change phase is in progress.
X'00000010'	X'00004300'	Command is not allowed because online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC, or MODBLKS not defined).
X'00000014'	X'00005004'	DFSOCMD response buffer could not be obtained.
X'00000014'	X'00005008'	DFSPPOOL storage could not be obtained.
X'00000014'	X'0000500C'	AWE could not be obtained.

Errors unique to the processing of this command are returned as completion codes. The following table includes an explanation of the completion codes.

Table 176. Completion codes for the DELETE TRANDESC command

Completion code	Completion code text	Meaning
0		Command completed successfully for transaction descriptor.
10	NO RESOURCES FOUND	Transaction descriptor name is invalid, or the wildcard parameter specified does not match any transaction descriptor names.
17	ANOTHER CMD IN PROGRESS	Another command (such as DELETE or UPDATE) is in progress for this transaction descriptor. This could also mean this command, if the descriptor is specified by more than one specific or wildcard parameter.
27	REJECTED FOR DEFAULT DESCRIPTOR	DELETE command not allowed for user-defined default descriptor. You must issue an UPDATE command to set another descriptor as the default before deleting this descriptor.
48	NOT ALLOWED FOR IMS RESOURCE	DELETE command not allowed for IMS descriptor. An example of an IMS descriptor is DFSDSTR1.

Examples

The following are examples of the DELETE TRANDESC command:

Example 1 for DELETE TRANDESC command

TSO SPOC input:

```
DEL TRANDESC NAME(*) OPTION(ALLRSP)
```

TSO SPOC output:

```
Response for: DEL TRANDESC NAME(*) OPTION(ALLRSP)
DescName MbrName CC CText
CONVDESC IMS1 0
DESC001 IMS1 0
DESC002 IMS1 0
DESC003 IMS1 0
DESC004 IMS1 0
DESC005 IMS1 0
DESC101 IMS1 0
DESC102 IMS1 0
DESC103 IMS1 0
DESC104 IMS1 0
DESC105 IMS1 0
DESC201 IMS1 0
DESC202 IMS1 0
DESC203 IMS1 0
DESC204 IMS1 0
DESC205 IMS1 0
DFSDSTR1 IMS1 48 NOT ALLOWED FOR IMS RESOURCE
FPEDESC IMS1 27 REJECTED FOR DEFAULT DESCRIPTOR
FPPDESC IMS1 0
MSCDESC IMS1 0
```


OM API input:

```
CMD(DEL TRANDESC NAME(*) OPTION(ALLRSP))
```

OM API output:

```
<imsout>
<ctl>
<omname>OM10M </omname>
<omvsn>1.3.0</omvsn>
<xmlvsn>20 </xmlvsn>
<statime>2006.310 22:43:49.648480</statime>
<stotime>2006.310 22:43:49.650611</stotime>
<staseq>BFAAC1A7EB860302</staseq>
<stoseq>BFAAC1A7EC0B37D2</stoseq>
<rqsttkn1>USRT011 10144349</rqsttkn1>
<rc>0200000C</rc>
<rsn>00003008</rsn>
<rsnmsg>CSLN054I</rsnmsg>
<rsntxt>None of the clients were successful.</rsntxt>
</ctl>
<cmderr>
<mbr name="IMS1 ">
<typ>IMS </typ>
<styp>DBDC </styp>
<rc>0000000C</rc>
<rsn>00003004</rsn>
<rsntxt>No requests were successful</rsntxt>
</mbr>
</cmderr>
<cmd>
<master>IMS1 </master>
<userid>USRT011 </userid>
<verb>DEL </verb>
<kwd>TRANDESC </kwd>
<input>DEL TRANDESC NAME(*) OPTION(ALLRSP) </input>
</cmd>
<cmdrsphdr>
<hdr slbl="DESC" llbl="DescName" scope="LCL" sort="a" key="1"
  scroll="no" len="8" dtype="CHAR" align="left" />
<hdr slbl="MBR" llbl="MbrName" scope="LCL" sort="a" key="2" scroll="no"
  len="8" dtype="CHAR" align="left" />
<hdr slbl="CC" llbl="CC" scope="LCL" sort="n" key="0" scroll="yes"
  len="4" dtype="INT" align="right" skipb="no" />
<hdr slbl="CCTXT" llbl="CCText" scope="LCL" sort="n" key="0"
  scroll="yes" len="*" dtype="CHAR" skipb="yes" align="left" />
<hdr slbl="ERRT" llbl="ErrorText" scope="LCL" sort="n" key="0"
  scroll="yes" len="*" dtype="CHAR" skipb="yes" align="left" />
<hdr slbl="CONVID" llbl="ConvID" scope="LCL" sort="n" key="0"
  scroll="yes" len="4" dtype="CHAR" skipb="yes" align="left" />
<hdr slbl="NODE" llbl="NodeName" scope="LCL" sort="n" key="0"
  scroll="yes" len="8" dtype="CHAR" skipb="yes" align="left" />
<hdr slbl="USER" llbl="UserName" scope="LCL" sort="n" key="0"
  scroll="yes" len="8" dtype="CHAR" skipb="yes" align="left" />
<hdr slbl="LU" llbl="LUName" scope="LCL" sort="n" key="0"
  scroll="yes" len="24" dtype="CHAR" skipb="yes" align="left" />
<hdr slbl="TMEM" llbl="TMember" scope="LCL" sort="n" key="0"
  scroll="yes" len="16" dtype="CHAR" skipb="yes" align="left" />
<hdr slbl="TPIP" llbl="TPipe" scope="LCL" sort="n" key="0" scroll="yes"
  len="8" dtype="CHAR" skipb="yes" align="left" />
</cmdrsphdr>
<cmdrspdata>
<rsp>DESC(DESC102 ) MBR(IMS1) CC( 0) </rsp>
<rsp>DESC(DESC004 ) MBR(IMS1) CC( 0) </rsp>
<rsp>DESC(DESC205 ) MBR(IMS1) CC( 0) </rsp>
<rsp>DESC(DFSDSTR1) MBR(IMS1) CC( 48) CCTXT(NOT ALLOWED FOR IMS
  RESOURCE) </rsp>
<rsp>DESC(DESC201 ) MBR(IMS1) CC( 0) </rsp>
```

```

| <rsp>DESC(FPPDESC ) MBR(IMS1) CC( 0) </rsp>
| <rsp>DESC(DESC103 ) MBR(IMS1) CC( 0) </rsp>
| <rsp>DESC(DESC005 ) MBR(IMS1) CC( 0) </rsp>
| <rsp>DESC(DESC001 ) MBR(IMS1) CC( 0) </rsp>
| <rsp>DESC(DESC202 ) MBR(IMS1) CC( 0) </rsp>
| <rsp>DESC(DESC104 ) MBR(IMS1) CC( 0) </rsp>
| <rsp>DESC(CONVDESC) MBR(IMS1) CC( 0) </rsp>
| <rsp>DESC(DESC002 ) MBR(IMS1) CC( 0) </rsp>
| <rsp>DESC(DESC203 ) MBR(IMS1) CC( 0) </rsp>
| <rsp>DESC(MSCDESC ) MBR(IMS1) CC( 0) </rsp>
| <rsp>DESC(DESC105 ) MBR(IMS1) CC( 0) </rsp>
| <rsp>DESC(DESC101 ) MBR(IMS1) CC( 0) </rsp>
| <rsp>DESC(FPEDESC ) MBR(IMS1) CC( 27) CCTXT(REJECTED FOR DEFAULT
|   DESCRIPTOR) </rsp>
| <rsp>DESC(DESC003 ) MBR(IMS1) CC( 0) </rsp>
| <rsp>DESC(DESC204 ) MBR(IMS1) CC( 0) </rsp>
| </cmdrspdata>
| </imsout>

```

Explanation: A DELETE TRANDESC command is issued to delete all transaction descriptors from an active IMS system. Many transaction descriptors are successfully deleted, as indicated by the completion code 0. Because the DELETE command attempted to delete all of the transaction descriptors, OPTION(ALLRSP) is specified to display the successfully deleted transaction descriptors. The delete for transaction descriptor FPEDESC fails, because it is the default transaction descriptor. The delete for transaction descriptor DFSDSTR1 fails, because it is the IMS-defined transaction descriptor.

Related concepts:

 How to interpret CSL request return and reason codes (System Programming APIs)

Related reference:

Chapter 2, “Command keywords and their synonyms,” on page 57

Chapter 24. /DEQUEUE command

The /DEQUEUE command with any of the following keywords is used to cancel a message that is being processed: LINE, LTERM, LUNAME, MSNAME, NODE, TRAN, or USER.

Also, a /DEQUEUE command dequeues messages from either the local queues, or in a shared-queues environment, the shared queues. An output message displays the total count of all messages dequeued.

Subsections:

- “Environment”
- “Syntax”
- “Keywords” on page 342
- “Usage notes” on page 346
- “Examples” on page 347

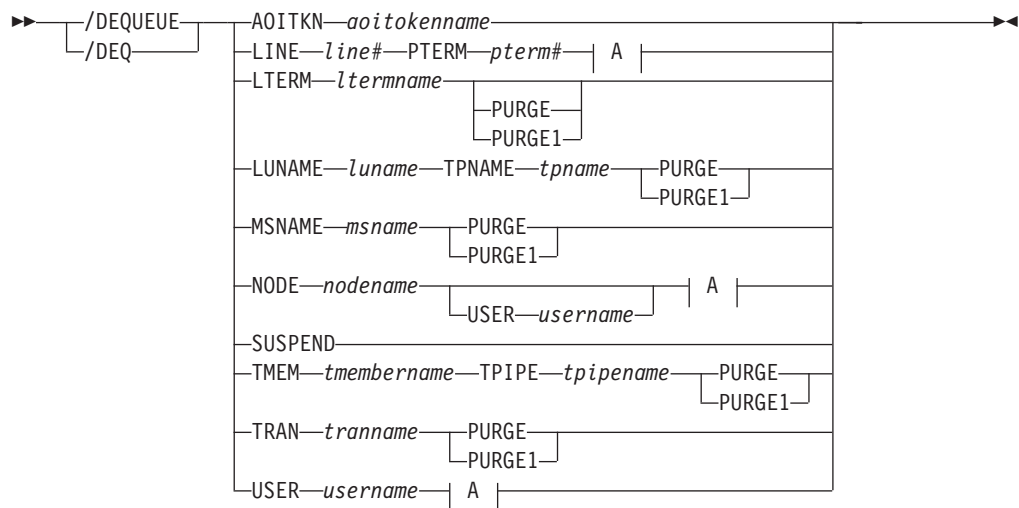
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

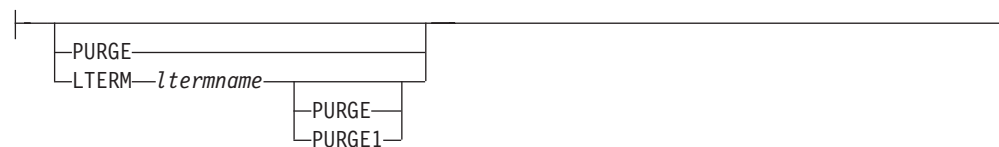
Table 177. Valid environments for the /DEQUEUE command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DEQUEUE	X	X	X
AOITKN	X	X	X
LINE	X		X
LTERM	X		X
LUNAME	X		X
MSNAME	X		X
NODE	X		X
PTERM	X		X
PURGE	X		X
PURGE1	X		X
SUSPEND	X		X
TMEM	X		X
TPIPE	X		X
TPNAME	X		X
TRAN	X		X
USER	X		X

Syntax



A:



Keywords

The following keywords are valid for the /DEQUEUE command:

AOITOKEN

Dequeues and discards all messages associated with the specified AOI token name.

LINE PTERM

Cancels the output message currently being sent to the specified physical terminal on the specified communication line.

LTERM

Cancels the output message currently being sent to the specified logical terminal.

/DEQUEUE NODE nodename LTERM is not valid for nodes with users. The user that contains the LTERM must be allocated and the session must be active.

If the PURGE or PURGE1 keyword is specified and the LTERM is associated with a user with DEADQ status, the DEADQ status will be reset.

If the DEADQ status is on, the following command turns it off for the user associated with LTERM ltermname:

```
/DEQUEUE LTERM ltermname (PURGE/PURGE1)
```

The DEADQ status is removed by signing the user on or by issuing the /DEQUEUE command to dequeue one or more messages.

LUNAME TPNAME

Specifies the LU name and TP name of the LU 6.2 destination from which messages are discarded. A normal (non-qualified) or fully network qualified LUNAME is required for the LUNAME keyword.

Note: A fully qualified LU name must be specified in single quotation marks.

Either the PURGE or PURGE1 option must be specified, and the LU 6.2 destination must be stopped and not active; if both actions are not taken, error messages are issued.

In a shared-queues environment, only messages that are owned by the command processing IMS are dequeued. Inflight synchronous output messages are not dequeued. Any stranded synchronous output messages with affinity to the command processing IMS are dequeued.

If you used a side information entry name to place messages on the queues, to dequeue those messages, specify the side information entry name for the LU name and the character string DFSSIDE for the TP name.

MSNAME

Cancels the output message currently being sent to the specified MSC link. Either PURGE or PURGE1 is required for this link. The MSC link must be stopped by the /PSTOP LINK command before issuing the /DEQUEUE MSNAME command.

NODE

Cancels the output message currently being sent to the specified VTAM node.

The following command is not valid for nodes with users:

```
/DEQUEUE NODE nodename  
/DEQUEUE NODE nodename LTERM ltermname
```

The following command cancels the output message currently being sent to the specified ISC session, and the user must be allocated to the node and the session must be active:

```
/DEQUEUE NODE nodename USER username
```

Restrictions for using NODE and USER parameters together:

- Commands with the NODE USER keyword pair are valid only if:
 - The USER is signed on to the NODE
 - In an ISC environment, the USER is allocated to the NODE
 - The nodes and users already exist
- /DEQUEUE NODE USER LTERM commands are valid for ISC and non-ISC nodes and users.
- /DEQUEUE NODE USER PURGE commands and /DEQUEUE NODE USER LTERM PURGE1 commands are valid for ISC, LUP, and 3600 nodes only.

If PURGE or PURGE1 is specified, the node must be stopped and idle. Without PURGE and PURGE1, if an ETO node or an ISC static parallel session, the USER keyword is required.

If the PURGE keyword is specified, and the NODE is associated with a user with DEADQ status, the DEADQ status will be reset.

PURGE

Cancels all output messages enqueued to the specified LINE, LTERM, LUNAME, MSNAME, NODE, TMEM, TPIPE, or USER. The PURGE keyword allows cancellation of all output messages enqueued to an LTERM, or to a PTERM without regard to the LTERM. A /DEQUEUE command without PURGE cancels an in-progress output message on the specified terminal and,

optionally, LTERM. If the NODE and LTERM keywords have both been supplied, the LTERM must be a valid LTERM of the user currently associated with the node.

Messages cannot be canceled with PURGE if they are destined for the MTO or for terminals or users in response mode or conversation mode. The /DEQUEUE PURGE command does not cancel messages destined for the master terminal operator because the master terminal cannot be stopped, disconnected, or idled. The /EXIT command should be used for a terminal in conversation mode.

If the terminal is a dynamic 3600/FINANCE, SLU P, or ISC terminal, the NODE keyword is valid only if the session is stopped and idle, and the LTERMs are still allocated to the terminal pending message resynchronization. For example, the following command is valid for the allocated user only if the specified ISC session is stopped and idled.

```
/DEQUEUE NODE nodename USER username (LTERM ltermname) PURGE
```

Messages queued to LTERMs associated with users that are not signed on can be purged by specifying the LTERM keyword without the NODE keyword. NODE with the USER keyword applies to ISC sessions and dynamic terminals and is valid only if the user is still allocated to the node. However, the line or node must be stopped and idled.

If USER is specified and the user had DEADQ status, the DEADQ status is removed. If LTERM or NODE is specified and the LTERM or node is associated with a user with DEADQ status, the DEADQ status is removed.

PURGE1

Cancels the first message queued to the specified LTERM. The PURGE1 and PURGE keywords are mutually exclusive.

The /DEQUEUE LTERM PURGE1 command removes the first message from the queue. The order of search for messages to be removed is:

1. Fast Path
2. Response mode
3. Exclusive mode messages
4. System messages
5. All other messages

Using a synonym for PURGE1 avoids the potential danger of omitting the trailing digit on PURGE1 and canceling all the messages enqueued. Synonyms for PURGE1 are SINGLE, SNGL, and FIRST.

When PURGE1 is specified, the terminal must be stopped and idle and not in conversation mode. If the message is in the process of being actively sent, The /DEQUEUE command without PURGE1 cancels the message.

SUSPEND

Reschedules transactions that have been suspended by IMS. SUSPEND applies to IMS systems sharing data at the block level and to connected external subsystems (not CCTL subsystems). The /DEQUEUE SUSPEND command causes all message-driven transactions that have been suspended to be rescheduled. When a failed IMS system is restarted, the /DEQUEUE SUSPEND command informs the currently running IMS system to reschedule any message-driven transactions on its SUSPEND queue. However, when the failed subsystem has global locks retained and cannot communicate the release of

those locks to the other subsystems, the /DEQUEUE SUSPEND command is used to reschedule these message-driven transactions in the other subsystems. This can occur when:

- The still-running IMS has transactions on its SUSPEND queue and the failed IMS has been restarted using the /ERESTART COLD SYS command.
- The still-running IMS terminates before the failed IMS is restarted. Thus, when the failed system is restarted, the other system, which has now terminated, is unable to receive the message to reschedule the transactions on its SUSPEND queue. The operator must issue the /DEQUEUE SUSPEND command to reschedule them.

Another use for the /DEQUEUE SUSPEND command is to release those transactions queued because the installation specified the requeue region error option in the external subsystem PROCLIB member for a particular subsystem. Transactions will be queued if the subsystem connection terminates in an abnormal fashion (for example, dependent region abend, subsystem abnormal termination).

In a shared-queues environment, a /DEQUEUE SUSPEND command moves all transactions on the Transaction Suspend queue to the Transaction Ready queue and makes them eligible for rescheduling. The “suspend” status for the transactions is also reset locally (on the IMS subsystem that entered the command), but is not reset across the sysplex. To reset the “suspend” status across a sysplex, use the /START TRAN command on each IMS subsystem.

You can also use the /START TRAN command to reschedule a specific transaction that has been suspended.

The /DISPLAY TRAN and /DISPLAY STATUS commands can be used to determine whether a transaction has messages on its suspend queue.

TMEM TPIPE

Dequeues messages from the specified IMS Open Transaction Manager Access (OTMA) member and transaction pipe. Using the /DEQ command can make OTMA message resynchronization impossible. If resynchronization is in progress for the specified transaction pipe, IMS rejects the command and issues message DFS2392I.

In a shared-queues environment, only messages that are owned by the command processing IMS are dequeued. Inflight synchronous output messages are not dequeued. Any stranded synchronous output messages with affinity to the command processing IMS are dequeued.

TRAN

Dequeues one or more messages from the transaction specified. The transaction name is a 1- to 8-byte name. The transaction must be stopped for messages to be dequeued.

Restriction: This keyword is valid only in a shared-queues environment.

Recommendation: Stop the transaction on all IMS subsystems in the shared queues group before issuing the /DEQUEUE TRAN command. If you do not, the IMS subsystem that processes the /DEQUEUE could dequeue a message it does not own and that another IMS subsystem might need.

A /DEQUEUE TRAN command does not dequeue messages enqueued for suspended transactions.

In a shared-queues environment, a /DEQUEUE TRAN command can dequeue transaction messages queued to the transaction from APPC or OTMA Clients.

The command only dequeues the transaction messages. The APPC or OTMA transaction instance blocks (TIB) created at the IMS system are not deleted and the storage may remain allocated until the next IMS restart. For APPC, the TIB is not released and the APPC conversation (the client) hangs if there is no timeout value specified. The APPCIOT=(x,Y) timeout value for APPC would deallocate the APPC conversation and release the TIB after the timeout limit has been reached.

USER (LTERM)

Dequeues all messages associated with all LTERMs (or a specific) LTERM assigned to that USER. The user must be stopped and not in conversation in order to enter /DEQUEUE USER with PURGE and PURGE1. The /DEQUEUE USER command with PURGE1 or the /DEQUEUE USER LTERM command without PURGE or PURGE1 requires the LTERM keyword. If a user is signed on, the /DEQUEUE USER LTERM command can be used to cancel an output message that is currently being processed. When the purge options are used, messages destined for the MTO and users in response mode, Fast Path, and conversation cannot be canceled. If the USER and LTERM keywords have both been supplied, the LTERM must be a valid LTERM of the specified USER.

If the user has DEADQ status, the DEADQ status is removed.

Usage notes

The DEQUEUE command dequeues messages from an OTMA transaction pipe. CM0 output messages can be placed on the OTMA tpipe using multiple output queue names. A different queue name is used to queue I/O PCB output messages than is used to queue hold queue messages. In the non-super member environment, a CM0 output message could be on the I/O PCB output queue or the member's tpipe hold queue. In the super member environment, a CM0 output message could be on I/O PCB output queue or the super member hold queue.

If the member specified is a regular member, CM0 output messages are dequeued from the member's tpipe hold queue and the member's I/O PCB output queue. If the member specified is a super member, CM0 output messages are dequeued from the super member's output hold queue. The number of messages dequeued depends on whether PURGE or PURGE1 is specified. In the non-shared-queues environment, if the member specified is a regular member, messages are dequeued from the regular member's hold queue first, then from the regular member's I/O PCB output queue. In the shared-queues environment the order in which messages for the same destination are dequeued is not guaranteed. Hold queue messages may be dequeued before I/O PCB output messages one time and I/O PCB output messages may be dequeued before hold queue messages the next.

If IMS cold starts and messages are queued to the same tpipe destination following the cold start, a new set of queue names is used to queue I/O PCB output messages and hold queue messages. In the shared-queues environment with super member enabled, all messages queued to a super member, are placed on the shared queues using the same queue name, even after a cold start of IMS. Messages on the super member's output queue do not have affinity to any IMS. They can be dequeued from any IMS in the IMSplex.

This command can be issued to an IMSplex using the Batch SPOC utility.

A /DEQUEUE command with any of the following keywords activates the Message Control Error exit routine, DFSCMUX0, before processing each message: LTERM, LUNAME TPNAME, NODE, or MSNAME. The user exit routine can request IMS to:

- Proceed with the command and purge the message. This is the default action for the Message Control Error exit routine.
- Suppress the command.
- Suppress the command and send an informational message to the entering terminal.
- Route the message to a different destination.

The /DEQUEUE NODE command dequeues messages from the local or shared queues for statically defined terminals. Without PURGE or PURGE1, the message actively being sent is dequeued.

The /DEQUEUE LTERM command dequeues messages from the local or shared queues. The user must be stopped (by a /STOP USER command), and not in conversation, in order to enter /DEQUEUE USER or /DEQUEUE LTERM with PURGE or PURGE1. In a shared queues and ETO environment where the user does not exist, /DEQUEUE LTERM with PURGE or PURGE1 creates a user structure in order to dequeue messages from the shared queues.

Examples

The following are examples of the /DEQUEUE command:

Example 1 for /DEQUEUE command

Entry ET:

```
/DEQUEUE AOITOKEN ABCDE
```

Response ET:

```
DFS058I DEQUEUE COMMAND COMPLETED
```

Explanation: The messages on AOITOKEN ABCDE are dequeued and discarded.

Example 2 for /DEQUEUE command

Entry ET:

```
/DEQUEUE LINE 5 PTERM 2
```

Response ET:

```
DFS058I DEQUEUE COMMAND COMPLETED
```

Explanation: The message is terminated on successful completion of the current transmission.

Example 3 for /DEQUEUE command

Entry ET:

```
/DEQUEUE LTERM ABCDE PURGE
```

Response ET:

```
DFS976I 2 MESSAGE(S) PURGED
```

Explanation: Two messages are dequeued for LTERM ABCDE (the line is stopped and idle as required).

Example 4 for /DEQUEUE command

Entry ET:

```
/DEQUEUE LTERM ABCDE PURGE1
```

Response ET:

```
DFS058I DEQUEUE COMMAND COMPLETED
```

Explanation: The message is dequeued for LTERM ABCDE.

Example 5 for /DEQUEUE command

Entry ET:

```
/DEQ LUNAME 'NETWORK1.LUNAME1' TPNAME TPNAME1 PURGE
```

Response ET:

```
DFS1952 10:51:35 DESTINATION NOT FOUND
```

Explanation: An invalid APPC destination was entered.

Example 6 for /DEQUEUE command

Entry ET:

```
/DEQ LUNAME 'CICSNET.SERVER1' TPNAME DFSASYNC PURGE1
```

Response ET:

```
DFS976I 14:10:25      1 MESSAGE(S) PURGED
```

Explanation: The message was dequeued from the APPC destination LUNAME CICSNET.SERVER, TPNAME DFSASYNC.

Related reference:

Chapter 2, “Command keywords and their synonyms,” on page 57

Chapter 25. /DIAGNOSE command

Use the /DIAGNOSE command to retrieve diagnostic information for system resources such as IMS control blocks, user-defined nodes, or user-defined transactions at any time without creating a console dump.

Subsections:

- “Environment”
- “Syntax”
- “Keywords” on page 350
- “Usage notes” on page 354
- “Examples” on page 354

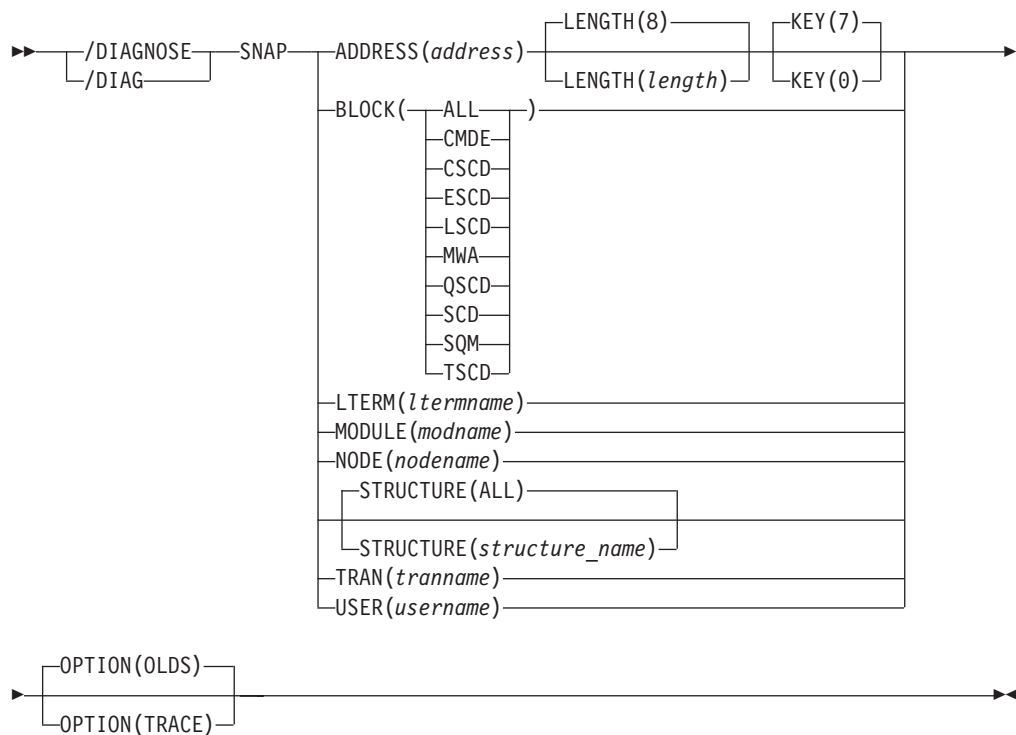
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) from which the command can be issued.

Table 178. Valid environments for the /DIAGNOSE command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DIAGNOSE	X	X	X
ADDRESS	X	X	X
BLOCK	X	X	X
LTERM	X		X
MODULE	X	X	X
NODE	X		X
OPTION	X	X	X
SNAP	X	X	X
STRUCTURE	X		X
TRAN	X		X
USER	X		X

Syntax



Keywords

The following keywords are valid for the /DIAGNOSE SNAP command:

ADDRESS

Captures information about a specific area of storage. The *address* value identifies the area and must specify a hexadecimal value between 0 and 7FFFFFFF.

LENGTH

Specifies the length of the area of storage to capture. The LENGTH parameter is optional and has a default value of 8. If the LENGTH parameter is specified, the *length* value must be a numeric value from 1 to 65536.

KEY

Specifies the key of the storage to capture. If the KEY parameter is included, the PSW key is changed to the value specified before accessing the storage. The KEY parameter is optional. Valid values for the KEY parameter are 0 and 7.

BLOCK

Captures information for a specific IMS control block. A control block name or ALL is required.

Valid control block names include:

ALL

Captures information for all valid control blocks currently available.

CMDE

Captures information for the Commands SCD Extension control block.

|
|
|

CSCD

Captures storage information for the APPC/OTMA SMQ SCD Extension control block.

ESCD

Captures information for the Extended System Contents Directory control block.

LSCD

Captures information for the LU 6.2 Extension to the SCD control block.

MWA

Captures information for the Modify Work Area control block.

QSCD

Captures information for the Queue Manager Extension to the SCD control block.

SCD

Captures information for the System Contents Directory control block.

SQM

Captures information for the Shared Queues Master control block.

TSCD

Captures information for the OTMA Extension to the SCD control block.

LTERM

Captures information about the logical terminal specified in the *ltermname* parameter. If an LTERM is locally defined, the local control block information is captured. In a shared-queues environment, if an LTERM is not defined on the local system issuing the command, global information for that LTERM is gathered from an available resource structure. If a control block is available, information associated with the specified LTERM is captured.

The following list is a list of the control blocks captured for the LTERM:

CLB

Communication Line Block

CTB

Communication Terminal Block

CTT

Communication Translate Table

CRB

Communications Restart Block

SPQB

Subpool Queue Block

CNT

Communication Name Table (maximum of five)

CCB

Conversational Control Block

CIB

Communication Interface Block

INBUF

Input Line Buffer

OUTBF

Output Line Buffer

MODULE

Returns the entry point address and captures in-storage prolog information about the IMS module specified in the *modname* parameter. The standard IMS module in-storage prolog information contains the module name, product level, assembly date and time, last APAR ID, module maintenance level, BPE version, and release (for BPE-based modules), and copyright statement.

Note: The name of the IMS module that appears in the in-storage prolog information might not be the same as the loaded module name if binder options were used to declare a different name for the loaded module.

MODULE(*modname*) enables IBM Software Support representatives to see the maintenance level of the installed software.

NODE

Captures information about the node specified in the *nodename* parameter. If a NODE is locally defined, the local NODE information is captured. In a shared-queues environment, if a NODE is not defined on the local system issuing the command, global information for that NODE is gathered from an available resource structure. If a control block is available, information associated with the specified NODE is captured.

The following is a list of the control blocks captured for the NODE:

CLB

Communication Line Block

CTB

Communication Terminal Block

CTT

Communication Translate Table

CRB

Communications Restart Block

SPQB

Subpool Queue Block

CNT

Communication Name Table (maximum of five)

CCB

Conversational Control Block

CIB

Communication Interface Block

INBUF

Input Line Buffer

OUTBF

Output Line Buffer

OPTION

Specifies the destination for the resource information captured by the SNAP function. The OPTION parameter is optional.

OLDS

SNAP data is written to the OLDS. OLDS is the default value.

TRACE

If TRACE is specified, SNAP data is written to the trace data sets.

Important: If you do not issue the /TRACE SET ON TABLE DIAG OPTION LOG command before issuing the /DIAGNOSE command with the TRACE option, the /DIAGNOSE command automatically turns on the DIAG trace tables, writes the output to the trace tables, and then turns off the DIAG trace tables. One disadvantage of this method is that the output from only one /DIAGNOSE command can be written to the trace data sets; that is, each new command overwrites the data from the last command. To capture data from a series of /DIAGNOSE commands in a trace data set, issue the commands in this order:

1. /TRACE SET ON TABLE DIAG OPTION LOG command
2. /DIAGNOSE commands
3. /TRACE SET OFF TABLE DIAG command

STRUCTURE

Captures information about the DFSSQS control block storage for the specified shared queues structure. STRUCTURE(ALL) is the default.

TRAN Captures information about the transaction specified in the *tranname* parameter. This keyword captures the SMB data for a specified transaction.

USER Captures information about the user specified in the *username* parameter. If a USER is locally defined, the local USER information is captured. In a shared-queues environment, if a USER is not defined on the local system issuing the command, global information for that USER is gathered from an available resource structure. If a control block is available, information associated with the specified USER is captured.

The following list is a list of the control blocks captured for the USER:

CLB

Communication Line Block

CTB

Communication Terminal Block

CTT

Communication Translate Table

CRB

Communications Restart Block

SPQB

Subpool Queue Block

CNT

Communication Name Table (maximum of five)

CCB

Conversational Control Block

CIB

Communication Interface Block

INBUF

Input Line Buffer

OUTBF

Output Line Buffer

Usage notes

One of the key uses for the /DIAGNOSE SNAP MODULE(*modname*) command is to return the entry point address of a module. With the /DIAGNOSE SNAP MODULE(*modname*) command, users can determine the entry point address of the target module without having to create a console dump to set an MVS SLIP trap.

Another important use for the /DIAGNOSE SNAP MODULE(*modname*) command is to extract the prolog information for a module. The prolog information for a module contains information about the current maintenance level of the module on your system. This can be useful to find out if there is any missing maintenance on your module. Establishing a common, or baseline, maintenance level can be useful in diagnosing difficult or complex problems.

Examples

Example 1 for /DIAGNOSE command

Entry ET:

```
/DIAGNOSE SNAP TRAN(tranname)
```

Response ET:

```
DFS058I DIAGNOSE COMMAND COMPLETED
```

Explanation: Diagnostic information about transaction *tranname* is captured and written to the IMS log.

Example 2 for /DIAGNOSE command

Entry ET:

```
/DIAGNOSE SNAP BLOCK(ALL) OPTION(TRACE)
```

Response ET:

```
DFS058I DIAGNOSE COMMAND COMPLETED
```

Explanation: Diagnostic information about IMS control blocks is captured and written to the trace data sets.

Example 3 for /DIAGNOSE command

Entry ET:

```
/DIAGNOSE SNAP BLOCK(CSCD)OPTION(OLDS)
```

Response ET:

```
DFS058I DIAGNOSE COMMAND COMPLETED
```

Explanation: Diagnostic information about APPC/OTMA SMQ SCD Extension control block is captured and written to the IMS log.

Related concepts:

 /DIAGNOSE command SNAP function (Diagnosis)

Chapter 26. /DISPLAY commands

Use the IMS /DISPLAY commands to display the processing status of IMS message queues and processing resources.

The /DISPLAY commands can provide helpful information for controlling IMS operations.

These commands can be issued to an IMSplex using the Batch SPOC utility.

The output from a /DISPLAY command consists of headings that describe the display, the information requested, and a time stamp showing Julian date and time, in one of the following two formats:

yyddd/hhmmss
yyyyddd/hhmmss

You control the time stamp format by specifying the YEAR4= execution parameter.

The value shown in the QCNT column of the command output has different meanings for different commands, as described in individual /DISPLAY command topics.

If the command includes a generic parameter that does not match any existing resource, an error message results.

In an IMSplex, when status is copied to RM at signoff/logoff time, the status (and control blocks if the resource is dynamic) is deleted from the local system. An Automated Operator Interface (AOI) application program that issues a /DISPLAY command will not see some status information that is kept in RM if the IMS system on which the AOI program runs is not using RM services. When a /DISPLAY command is issued for NODE, USER, and LTERM resources from the command master, global status from RM might be displayed. The output of the display command will be dependent on the following guidelines:

Command master IMS system

- Displays information from the local system
- Displays information from RM that is not owned, or is owned by a failed system

Other IMS systems

Displays information from the local system

Attention: Using ALL, generic parameters, the /DISPLAY STATUS command, and the /DISPLAY CONVERSATION command without a specific resource name will result in extensive accesses to the Resource Manager for global information, and their use should be carefully considered.

Subsections:

- “Status and attributes for the /DISPLAY command” on page 357
- “/DISPLAY ACT command” on page 370
- “/DISPLAY AFFIN command” on page 382
- “/DISPLAY AOITKN command” on page 384

- “/DISPLAY APPC command” on page 385
- “/DISPLAY AREA command” on page 387
- “/DISPLAY ASMT command” on page 393
- “/DISPLAY CCTL command” on page 401
- “/DISPLAY CONV command” on page 404
- “/DISPLAY CPLOG command” on page 408
- “/DISPLAY CQS command” on page 409
- “/DISPLAY DB command” on page 409
- “/DISPLAY DBD command” on page 419
- “/DISPLAY DESC command” on page 420
- “/DISPLAY FDR command” on page 421
- “/DISPLAY FPV command” on page 422
- “/DISPLAY HSB command” on page 425
- “/DISPLAY HSSP command” on page 428
- “/DISPLAY LINE command” on page 429
- “/DISPLAY LINK command” on page 433
- “/DISPLAY LTERM command” on page 436
- “/DISPLAY LUNAME command” on page 440
- “/DISPLAY MASTER command” on page 445
- “/DISPLAY MODIFY command” on page 446
- “/DISPLAY MSNAME command” on page 460
- “/DISPLAY NODE command” on page 462
- “/DISPLAY OASN SUBSYS command” on page 473
- “/DISPLAY OLDS command” on page 473
- “/DISPLAY OTMA command” on page 476
- “/DISPLAY OVERFLOWQ command” on page 480
- “/DISPLAY PGM command” on page 483
- “/DISPLAY POOL command” on page 486
- “/DISPLAY PSB command” on page 504
- “/DISPLAY PTERM command” on page 505
- “/DISPLAY Q command” on page 507
- “/DISPLAY QCNT command” on page 510
- “/DISPLAY RECOVERY command” on page 515
- “/DISPLAY RTCODE command” on page 521
- “/DISPLAY SHUTDOWN STATUS command” on page 522
- “/DISPLAY STATUS command” on page 528
- “/DISPLAY STRUCTURE command” on page 535
- “/DISPLAY SUBSYS command” on page 536
- “/DISPLAY SYSID TRANSACTION command” on page 539
- “/DISPLAY TIMEOVER command” on page 540
- “/DISPLAY TMEMBER command” on page 541
- “/DISPLAY TRACE command” on page 552
- “/DISPLAY TRACKING STATUS command” on page 562
- “/DISPLAY TRAN command” on page 571
- “/DISPLAY UOR command” on page 575

- “/DISPLAY USER command” on page 578

Related concepts:

 Displaying components and resources (System Administration)

Status and attributes for the /DISPLAY command

A list of the attributes and status shown in the /DISPLAY command are described in the following table.

Table 179. Attributes and status in the /DISPLAY command

Status or attribute	Meaning
	Indicates no status for the resource.
ACCEPT TRAFFIC	OTMA is ready to accept messages from this member.
ACT MODETBL	Indicates the mode table name actually used to initiate mode.
ACTIV	Indicates that this node is in an XRF session, on the active system.
ACTIVE, A	Indicates one of the following: • Conversation in progress. • For /DISPLAY MODIFY, the routing code (RTCODE) named is active or that the library is active. • The IMS subsystem is the active subsystem. • The current XRF surveillance mechanism is active. • The OTMA member is in an active z/OS cross-system coupling facility (XCF) group. • The secondary master terminal is active.
ACTIVE-DBCMD	Indicates an /DBD or /DBR command is in progress and waiting for the region to terminate before the /DBD or /DBR can complete.
ACTV	Indicates, for a logical link, that link startup processing is complete and the line is available for message transfer.
ALLOC	Indicates that an ISC user is allocated. The node name to which the user is allocated or signed on follows in parentheses.
ALLOCATION IN PROGRESS	Indicates that a conversation is in the process of being allocated.
ALLOCF	Indicates that database allocation failed.
ALLOCS	Indicates that database allocation was successful.
AREA	The subset of a DEDB.
AUTOSR	Indicates a session initiation option of ASR.
AVAILABLE	Indicates one of the following: • The OLDS can be reused. • A region is available to schedule an application. • A coupling facility structure is available for use by IMS.
AWAITING RESPONSE	Indicates that an active terminal is waiting for a response.
AWAITING SNAPQ	Indicates that the alternate subsystem is waiting for /CHE SNAPQ from the active subsystem.

Table 179. Attributes and status in the /DISPLAY command (continued)

Status or attribute	Meaning
BACKOUT	Indicates that the OLDS is potentially required for backout or, in the case of a database, there are incomplete backouts that prevent the use of the database.
BACKUP	Indicates that the IMS subsystem is the alternate subsystem.
BAL	Identifies a transaction eligible for load balancing (for example, with parallel limits specified). The current maximum number of regions that can be simultaneously scheduled to process the transaction follows in parentheses.
BCKUP	Indicates that this node is in an XRF session, on the alternate system.
C1INOP, C2INOP, C3INOP, C4INOP	Indicates the inoperable node or terminal component, where C1, C2, C3, and C4 refer to different components as defined by system definition. (See the /COMPT and /RCOMPT commands for details on how to ready inoperable components.)
CANCEL	Indicates that an APPC connection was stopped by the /STOP APPC CANCEL command.
CHECK	Indicates that the OTMA client is using RACF for security verification.
CLSER	Indicates that an error occurred while closing the OLDS.
CLSDST	Indicates that a /CLSDST or /STOP command has been entered for a VTAM node but has not yet taken effect. This condition can occur because of an outstanding input or output operation that has not completed. The VTAM network operator can issue a z/OS VARY command to clear the condition.
COLD	For an MSC logical link, indicates that link startup processing is not complete. For a SLUP or FINANCE terminal, indicates that the next session initiation is cold (message sequence numbers are initialized to 0.)
COMPINOP	Indicates an inoperable terminal component. For 3270 terminals, this is an indication that either the display or the printer is not ready.
CON	Indicates that a node is connected, or in session, with IMS.
CONN	Subsystem connection.
CONN, ACTIVE	Indicates that an application program has established communication with a subsystem.
CONNECTED	Indicates that IMS is connected to a coupling facility structure.
CONN IN PROGRESS	Subsystem connection in progress.
CONVACT, CONV-ACT	Indicates an active conversation on this terminal, node, or user.

Table 179. Attributes and status in the /DISPLAY command (continued)

Status or attribute	Meaning
CONVERSATION TERM/USER	Indicates for /DISPLAY MODIFY that the transaction to be changed or deleted or the transaction that references a program or database to be changed or deleted is in conversation. The terminal originating the conversational transaction and the conversation ID are also displayed. The terminal displayed is: • nodename for VTAM terminals • nodename and username if an ETO user is signed on to the node • username for ETO users who signed off while in conversation • lin#-pte# (line and pterm number) for non-VTAM terminals • 1- SC for the system console
CONVHLD, CONV-HLD	Indicates a held conversation on this terminal, node, or user.
COPY-PHASE	Indicates that the CREATE utility is currently in COPY-PHASE for an ADS.
CREATED	Indicates the XCF group has been created, but the OTMA member has not yet connected to it.
DB-STOPD	Indicates that a database used by this program is stopped.
/DBD ACTIVE	A /DBDUMP command is in progress for a database to be changed or deleted.
/DBR ACTIVE	A /DBRECOVERY command is in progress for a database to be changed or deleted.
DEACT (DEACTIVATED)	Indicates a physical terminal/node or line has been permanently deactivated. Restart of non-VTAM node requires /STOP DC and /START DC commands. Message DFS2473 in the system console log might contain information regarding the reason this status was set. DFS2473 can occur more than once in the system console log.
DEADQ	Indicates a user with dead letter queues or whose last access time was outside the limit set by the DLQT JCL parameter. The DEADQ status can be removed by signing on the user or entering the /DEQUEUE or /ASSIGN command.
DEALLOCATION IN PROGRESS	Indicates that a conversation is in the process of being deallocated.
DEQCT	Number of local message dequeues since the last IMS cold start or, in a shared-queue environment, since the last IMS restart. DEQCT is reset to zero when ENQCT reaches 32768. A DEQCT count can equal the sum of the DEQCTs of multiple destinations (logical terminals or transactions).
DISABLED	Indicates APPC/IMS is not known to APPC/z/OS.
DISCONNECTED	Indicates one of the following: • A node is not in session. • The OTMA client has disconnected from the XCF group. • IMS is not connected to a coupling facility structure.
DQF	Indicates a dequeue request for OTMA REPresynch command failed.

Table 179. Attributes and status in the /DISPLAY command (continued)

Status or attribute	Meaning
DYNAMIC	A transaction was built in a shared-queues environment to enable transaction messages to be enqueued, but the transaction cannot run on the current IMS subsystem.
EEQE	Extended error queue element, indicates that one or more error queue elements are associated with the database.
ELIGIBLE FOR SCHEDULING	Indicates that the transaction is eligible for scheduling and cannot be deleted by online change. Stop the transaction before attempting another online change commit.
ENABLED	Indicates that APPC is started.
ENQCT	Number of local message enqueues since the last IMS cold start, or in a shared-queue environment, since the last IMS restart. ENQCT is reset to the number of messages on queue (QCT) when the counter reaches 32768 (QCT = ENQCT - DEQCT). The ENQCT can exceed 32768 if the DEQCT remains zero. The ENQCT will be reset to zero if the counter exceeds 65535. An ENQCT count can equal the sum of the ENQCTs of multiple destinations (logical terminals or transactions).
ERE	Indicates, for a logical link, that link startup processing is not complete. When the link is started, emergency restart synchronization will be performed, because the previous link shutdown was either not normal or an IMS emergency restart was performed.
EXCL	Indicates a node, terminal, or user is in exclusive mode.
FAILED	Indicates one of the following: • APPC failed to start. • OTMA failed to join the XCF group or the XCF group failed initialization. Check the DFSPBxxx PROCLIB member for the OTMA group name and member name definition. You might have defined an incorrect or duplicate XCF member name for IMS OTMA.
FILLING	Indicates that a log gap is currently being filled.
FLOOD	Indicates that input from the tmember is suppressed because of a message flood condition. Check if the flood was caused by stopped IMS programs or hung regions. Sometimes it could be caused by bad I/O response time.
FORCE, FORCES	Indicates a session initiation option of FORCE.
FORMAT-PHASE	Indicates that the CREATE utility is currently in FORMAT-PHASE for an ADS.
FULL	Indicates that the OTMA client is using RACF for security verification, including for dependent regions.
GLOBAL QUEUE COUNT INTERNAL ERROR, GLOBAL QUEUE COUNT STORAGE ERROR	Indicates that IMS is unable to access global queue counts or obtain storage to query the queue counts.
IC	Indicates that image copy is in progress for that area or database by an HSSP region.

Table 179. Attributes and status in the /DISPLAY command (continued)

Status or attribute	Meaning
IDENTIFICATION IN PROGRESS	Indicates that the IMS logger is in the process of identifying to the Transport Manager Subsystem (TMS) but has not yet completed.
IDENTIFIED	Indicates that an IMS logger has identified to the TMS.
IDLE	Indicates that no activity of any kind is in progress for a line, node, or logical link. This is a common condition for VTAM node channel-to-channel links, and processor storage-to-processor storage links.
INACTIVE, I	Indicates that the current XRF surveillance mechanism is inactive. For the /DISPLAY MODIFY command, indicates that the library is inactive. The RSR tracking subsystem is idle.
INOP	Indicates that a terminal or node is inoperable.
IN-OVERFLOW	Indicates that a coupling facility structure is in overflow mode.
INPUT IN PROGRESS	Indicates input in progress for an active terminal.
INQONLY	Indicates a /DBDUMP command was issued for the database.
IN SLOWDOWN	Indicates that the OTMA member is experiencing a slowdown because of excessive message traffic or resource constraints. Check the XCF configuration in your environment.
INUSE, IN USE	Indicates that queuing is in process for this transaction. (either terminal input or program-to-program switch). Also indicates this is the OLDS currently being used.
INVALID SUBSYSTEM NAME = XXXX	Indicates that a subsystem name was not defined to IMS.
I/O PREVEN, I/O PREVENT, I/O PREV	Indicates a BMP program that contains GSAM cannot complete scheduling because I/O prevention has not completed. Indicates further I/O requests to data sets are inhibited.
I/O TOLERATION	Takeover process by which an alternate IMS subsystem ensures database integrity and enables new transaction processing as soon as possible.
LOCK	Indicates a node, terminal, transaction, program, or database is locked.
LOOPTEST	Indicates a line or terminal in looptest mode.
LOST	Indicates that the VTAM LOSTERM EXIT has been scheduled for this node but has not yet been recognized by IMS. At the next interrupt for this node, IMS will interrogate the LOSTERM value. All values, with one exception, result in an immediate CLSDST, or disconnection, from IMS. For the LOSTERM exception, IMS must wait for VTAM to notify IMS (by another LOSTERM) of completion of recovery operation. Indicates an IMS logger's connection to the TMS is gone as a result of TMS or VTAM failure.

Table 179. Attributes and status in the /DISPLAY command (continued)

Status or attribute	Meaning
MAX TPIPE	The total number of tpipes reaches the maximum number. To resolve this flood condition for TPIPE limit, issue the IMS /CHECKPOINT command three times to clear the unused OTMA TPIPE, or restart IMS. Also, examine your TPIPE limit in the OTMA member descriptor in the DFSYDTx PROCLIB member.
MESSAGES WAITING	Indicates that there are system messages waiting to be sent, which prevents shutdown from completing.
MFSTEST, MFST	Indicates a terminal, node, or user in MFSTEST mode.
MSG IN QUEUE	Indicates that there are messages in the queue for an active terminal.
MSG CT	Number of messages on the queue for this destination (calculated by subtracting the DEQCT from ENQCT).
N/A	Indicates that a link is not assigned or a user is signed on to a static terminal, in which case queues are not applicable.
NEEDED	Indicates the OLDS that needs to be archived.
NO ACTIVE CONVERSATION	Indicates that there is no active conversation between a logger and a log router.
NODE-USR	Node name and user identifier.
NOIN	Indicates a line or terminal stopped for input.
NO INPUTTING LINES	Indicates no terminal activity.
NO LOG ROUTER SG DEFINED	Indicates that there is no Log Router Service Group defined to DBRC.
NONE	Indicates that the OTMA client is not using RACF for security verification.
NOOUT	Indicates a line or terminal stopped for output.
NO OUTPUTTING LINES	Indicates no terminal activity.
NOQUEUE	Indicates a line or terminal that has had message queuing stopped for message switching.
NOT CONN	No subsystem connection.
NOT DEFINED	Indicates the OTMA member has left the XCF group (for example, because of a /STOP OTMA command). Restart the OTMA client to join the XCF group.
NOT IDENTIFIED	Indicates that an IMS logger is not identified to the TMS.
NOTIDLE s	Indicates that a logical link is waiting for the completion of a synchronous event. The s represents the following subcodes: A Indicates a status of NOTIDLE-POST, which means that an event has completed but the link has not been dispatched to process it. B Indicates a status of NOTIDLE-IWAIT, which means the link is waiting for completion of internal I/O. Cxx Indicates a status of NOTIDLE-TP WAIT, which means the link is waiting for completion of a TP access method request. The two characters xx indicate the value of the access method operation code. Blanks are displayed if the link is VTAM.

Table 179. Attributes and status in the /DISPLAY command (continued)

Status or attribute	Meaning
NOTINIT	Indicates a database or program for which directory initialization failed or indicates DMB or PSB pool space not large enough to accommodate blocks. Indicates a TRAN that could not be initialized.
NOTOPEN, NOT-OPEN	Indicates a database, area, line, terminal, or physical link that is not in open status. This status is not applicable to MSDBs.
NOT USABLE	Indicates a log data set (OLDS) is unusable because of previous error.
NRE	Indicates, for a logical link, that link startup processing is not complete. When the link is started, normal restart synchronization will be performed, because the previous link shutdown or IMS restart was normal.
OFR	Indicates that the database or area is being brought up to the current tracking level with online forward recovery.
OLR	Indicates that the database has online reorganization in progress
OPEN	Indicates that the VTAM ACB is open. Indicates an area to be changed or deleted is open.
OPNDST	Indicates that an OPNDST is in process for this node.
OUTBOUND	Indicates that the alternate subsystem is APPC-enabled. Also shown on active subsystem when APPC processing cannot start.
OUTPUT IN PROGRESS	Indicates output in progress for an active terminal.
PAGE	Indicates an MFS paged message.
PERMNT ERR	Indicates that there is a permanent error, such as a read error, that prevents a log gap from being filled.
PLANNED TAKEOVER IN PROGRESS	Indicates all active subsystems being tracked have successfully shut down and the tracker is now in the process of shutting down.
PRE-OPEN FAILED	Pre-open for ADS failed.
PREV CLSER	Indicates that the previous OLDS could not be closed because of an I/O error; therefore, this OLDS is required by the Log Recovery utility to correct the condition.
PRI	Indicates that this node is the primary partner of an ISC session; or, for a link, indicates that it is the primary partner of an MSC-VTAM session.
PRIMARY MSTR	Indicates that the terminal is the primary master terminal.
PROFILE	Indicates that the OTMA client is using values in the Security Data section of the message prefix for a transaction.
PRST	Indicates that a terminal or user is in preset destination mode. The destination trancode or logical terminal name follows in parentheses.
PSB SCHEDULED	A program that references a database to be changed or deleted is scheduled.

Table 179. Attributes and status in the /DISPLAY command (continued)

Status or attribute	Meaning
PSTOPPED (PSTO, PSTOP)	Indicates a line, terminal, transaction, or logical link that has been pstopped. This status can indicate that a different, necessary resource is unavailable. For example, a transaction could show a status of PSTOP because the associated program is not initialized.
PUR, PURGING	Indicates a transaction, line, or terminal that is purging all of its output.
QCT	Number of messages on the queue for this destination (calculated by subtracting the DEQCT from ENQCT).
QERR, QERROR	Indicates that an I/O error occurred on the queue for this LTERM, or remote transaction (MSC).
QLOCK	Indicates that the LTERM is locked from sending any further output or from receiving input which could create additional output for the same LTERM until the state is reset by a specific request received on the session.
QSTP	Indicates that transaction queuing is stopped by online change because the transaction is affected by the online change. Online change might be changing or deleting the transaction, or changing or deleting a program, PSB, database, or DMB referenced by the transaction. Transaction queuing is stopped until the online change is committed or aborted.
QUEUING <i>nn</i>	Indicates that messages are queued to the transaction to be changed or deleted, and <i>nn</i> is the number of messages queued.
QUI	Indicates that a VTAM node has sent a VTAM Quiesce-End-of-Chain indicator to suspend IMS output.
QUIESCED	Indicates one of the following: • The OTMA member is temporarily quiesced. Restart the member or OTMA. • The node is stopped. • The database is currently quiesced by a previous UPDATE DB START(QUIESCE) or UPDATE AREA START(QUIESCE) command.
QUIESCING	Indicates that the database is undergoing quiesce by a previous UPDATE DB START(QUIESCE) or UPDATE AREA START(QUIESCE) command.
REBLD-INPROG	Indicates that a CQS structure rebuild is in progress for a structure.
RECALL	Indicates that database or area is in recall.

Table 179. Attributes and status in the /DISPLAY command (continued)

Status or attribute	Meaning
RECD	The number of messages that are received from the specified node. For static terminals, this is the number of messages that are received since the last IMS cold start, warm start, or emergency restart. The count is not reset when a static terminal logs off or logs on. For dynamic terminals, this is the number of messages that are received since the current user signed on to the dynamic terminal. The count is reset when a user signs off from the dynamic terminal, and following a cold start, warm start, or emergency restart.
RECOVERY	Requests the display of recovery values that pertain to the node or user. For the /DISPLAY DB command, indicates that DRF recovery is in progress for that database.
RECOVERY-NEEDED, RECOVERN	Indicates areas that need recovery.
RELREQ (NODE)	Indicates that the VTAM RELREQ exit routine has been driven but IMS is waiting for an operation in progress to complete before releasing the node.
REP	Indicates that IMS is waiting for an OTMA REPresynch command from the client.
REQ	Indicates that IMS is sending an OTMA REQresynch command to the client.
RESP	Indicates that the node, line, terminal, or user is in input response mode and the response reply message is available for output or in the process of being sent.
RESPINP, RESP-INP	Indicates the terminal, line, node, or user is in full-function input response mode and the response mode input is still in-doubt; for example, the response reply message is not available for output.
RESP-INP-FP	Indicates the terminal, line, node, or user is in Fast-Path input response mode and the response mode input is still in-doubt; for example, the response reply message is not available for output.
RESYNC	Indicates that the positive acknowledgment for an IMS recoverable output message was not received when the connection with the VTAM node was terminated. This message will be subject to resynchronization when the next connection for this node is attempted.
RNL	Randomizer is not loaded for a DEDB database.
RSF	Indicates that a reset request failed for an OTMA REPresynch command.

Table 179. Attributes and status in the /DISPLAY command (continued)

Status or attribute	Meaning
SCHEDULED	Indicates that a conversation, transaction, or program has been received and queued. For a conversation, this status will be displayed from the time an input message is entered until the output message is dequeued. With /DISPLAY MODIFY, indicates that the named resource (a transaction or program to be changed or deleted, or a program referencing a database to be changed or deleted) is scheduled. With /DISPLAY OLDS, indicates that an archive job had been generated.
SEC	Indicates that this node is the secondary partner of an ISC session; or, for a link, indicates that it is the secondary partner of an MSC-VTAM session.
SECOND MSTR	Indicates that the terminal is the secondary master terminal.
SENDING LOGS	Indicates that a logger has an active conversation with a log router and is sending logs to the tracking site.
SENT	The number of messages that are sent from the specified node. For static terminals, this is the number of messages sent since the last IMS cold start, warm start, or emergency restart. The count is not reset when a static terminal logs off or logs on. For dynamic terminals, this is the number of messages sent since the current user signed on to the dynamic terminal. The count is reset when a user signs off from the dynamic terminal, and following a cold start, warm start, or emergency restart.
SERVER	Indicates that the OTMA client is acting as the server.
SEVERE-ERROR	Indicates that ADS encountered a severe error.
SHUT	Indicates that normal processing has completed for the node and a VTAM shutdown-complete indicator was returned to IMS. The node can receive IMS output but cannot enter data while in this state.
SHUTDOWN-STRCHKPT	Indicates that CQS will take a structure checkpoint during normal shutdown.
SIGN	Indicates that a terminal or user is signed on to a node under enhanced security. The user signed on to the node is shown in parentheses following SIGN.
SIMLOGON	Indicates that a logon to IMS has been simulated.
SMQ BACKEND	Indicates that this OTMA member has been created at the shared queues back-end IMS to process transaction messages. However, this member has no XCF connection to this IMS.
SPND	Indicates that a transaction had messages on the suspend queue.
/STA ACTIVE	A /START DB command is in progress for a database to be changed or deleted.

Table 179. Attributes and status in the /DISPLAY command (continued)

Status or attribute	Meaning
STARTING	Shown after /DIS CONV is issued and before the status is set to SCHEDULED. Indicates that a conversation has been received but is not eligible for scheduling to an application program until an end-of-message indication is received. Also shown after /START APPC is issued and before the status is set to ENABLED or FAILED.
STATIC	Indicates that the node, LTERM, or user was defined during system definition.
STOP IN PROGRESS	Indicates a /STOP SUBSYS command is in progress.
STOPPED, STO, STOP	Indicates an area, line, LTERM, LU name, node, terminal, user, OLDS, subsystem, transaction, routing code (RTCODE), OTMA client, program, or database that is stopped. Indicates that a subsystem connection is stopped. Indicates a /STOP SERVGRP command was issued. Indicates that a transaction pipe is stopped.
STO-INPUT	Indicates one of the following: - The terminal is stopped with input messages enqueued to the LU name. - The OTMA member has been stopped by the IMS command /STOP TMEMBER <i>member-name</i>. No new input from this member will be accepted.
STO-OUTP	Indicates that the terminal is stopped with output message enqueued to the LU name.
STRCHKPT-INPROG	Indicates that a CQS structure checkpoint is in progress for a structure.
SUBSYSTEM XXXX NOT DEFINED BUT RECOVERY OUTSTANDING	Indicates that the subsystem was not defined but IMS has outstanding recovery elements.
SUSPENDED	Indicates that the transaction has been suspended. For /DISPLAY MODIFY, indicates that the transaction to be changed or deleted is on the suspend queue.
SUSPENDED LOGS	Indicates that a logger has an active conversation with a log router but has suspended sending logs to the tracking site because of resource shortage. The conversation is still intact.
SYNCHRONIZING, SYN	Indicates that the alternate subsystem is processing a /CHE SNAPQ command from the active subsystem. Indicates that a transaction pipe is being synchronized.
SYS CONSOLE	Indicates that the terminal is the system console.
TAKEOVER IN PROGRESS	Indicates that the alternate subsystem is taking over workload from the active subsystem.
TAKEOVER REQUESTED	Indicates that the active subsystem has requested a takeover by the alternate subsystem.
TBR	Indicates that IMS is waiting for an OTMA TBResynch command from the client.
TERM IN PROGRESS	Indicates an internal termination of the subsystem.
TERMINATING	Indicates that the application program is being terminated.
TEST	Indicates a line, node, terminal, or user in test mode.

Table 179. Attributes and status in the /DISPLAY command (continued)

Status or attribute	Meaning
TKOTRA	Indicates that a node, line, link, or terminal in an XRF session is to be traced only during takeover, to help diagnose XRF terminal switch problems.
TMP	Indicates that a transaction pipe is temporary.
TRA	Indicates that the physical terminal, node, logical link, LU name, transaction, program, or transaction pipe is being traced.
TRACKING	Indicates that the XRF alternate subsystem is tracking the active subsystem or an RSR tracking subsystem is tracking one or more active subsystems.
UNAVAILABLE, UNAVAIL	Indicates an ADS that is unavailable. Indicates that a region is unavailable because an application is using it, even though the application is not currently scheduled. The region is not available to any other application for use. Indicates that there are no records of a log gap at the active site; these records may have been deleted. Indicates that a coupling facility structure is not available for use by IMS.
UNKNOWN	Indicates that the XCF member has an unknown status. Restart OTMA or the OTMA client to join the XCF group.
UNPLANNED TAKEOVER IN PROGRESS	Indicates an /RTAKEOVER command was entered on the tracking subsystem and an unplanned takeover is in progress.
USTOP, USTOPPED	Indicates that scheduling of transactions has been stopped because of unavailable data.
VIR	Indicates that the DEDB area has the VSO option.

Table 179. Attributes and status in the /DISPLAY command (continued)

Status or attribute	Meaning
WAIT <i>cond</i>	Indicates that the application program is waiting for the completion of an event. The <i>cond</i> represents the reason for waiting. The <i>cond</i> can be: AOI indicates that an AO application issued a GMSG call with the wait option specified, but there are no messages for the application to retrieve. BLOCKMOVER or BLKMVR indicates that an application control block cannot be loaded because the ACB block mover is busy. The application might be waiting in the block mover because of an IRLM failure. CMD/PENDING indicates that a /DBD command or a /DBR command is in progress. INPUT indicates that the application program is in wait-for-input (WFI) mode. INTENT or INTENT/POOL indicates one of two conditions: 1. The application program's intent for a database conflicts with the use of the database by a scheduled program. 2. A temporary shortage of DMB, PSB, of PSB work area pool space exists. I/O PREVEN indicates that a BMP region which accesses a GSAM database cannot schedule until I/O prevention has completed. MESSAGE indicates that the application program is in a pseudo wait-for-input mode. The application is scheduled and is waiting for a message. POOLSPACE or POOLSP indicates a temporary shortage of DMB, PSB, or PSB work area pool space exists. SWITCHOVER or SWITCH indicates that the alternate system is tracking the active system. SYNCPOINT indicates that the application in the region is now in sync point. WAIT-EPCB POOL indicates that there is a temporary shortage of EPCB pool space. WAIT-RRS/OTMA PC A program has a protected conversation with an OTMA client.
WAIT BID	Indicates that the OTMA client is processing a Client-Bid request. Start the OTMA client to join the XCF group.

Table 179. Attributes and status in the /DISPLAY command (continued)

Status or attribute	Meaning
WAITING	Indicates that the MPP region is waiting for work. Indicates a log gap is not being filled yet.
WAIT RESPONSE	Indicates that the OTMA member is processing a message and is waiting for a response from the server. This status code might indicate a potential IMS OTMA error. Contact IBM Software Support.
WRERR	Indicates a write I/O error on the OLDS or a database.

Related tasks:

 Setting DEADQ status time with the DLQT parameter (Communications and Connections)

/DISPLAY ACT command

Use the /DISPLAY ACT command to display region and DC information associated with an IMS system. The region is scheduled to an application program and the IMS resources are assigned.

Subsections:

- “Environment”
- “Syntax”
- “Keywords”
- “Usage notes” on page 371
- “Output fields” on page 371
- “Examples” on page 376

Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 180. Valid environments for the /DISPLAY ACT command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DISPLAY	X	X	X
ACT	X	X	X
DC	X		X
REGION	X	X	X

Syntax



Keywords

The following keywords are valid for the /DISPLAY ACT command:

- DC** Displays only the DC subset of the output. The DC portion of the display can include:
- The status of active VTAM ACBs. If MNPS is used for XRF, then both the APPLID ACB and the MNPS ACB are displayed. If MNPS is not active, only the APPLID ACB displays.
 - User variable (USERVAR) name if using an XRF. If MNPS is active, USERVAR is invalid and is not displayed. Instead, the MNPS ACB name is displayed.
 - VTAM generic resource name (GRSNAME) and its current status.
 - The APPC IMS LU name, the APPC connection status, and the APPC timeout value.
 - The APPC/OTMA SHARED QUEUE status, the number of RRS TCBs attached and the number of AWEs (work-elements) queued to the RRS TCBs.
 - OTMA status.
 - The number of active LINES receiving input or sending output.
 - The number of active NODES receiving input or sending output.
 - The number of active LINKS (half sessions) receiving input or sending output.

REGION

Displays only the REGION subset of the output. The display consists of active regions.

Usage notes

When you issue the /DISPLAY ACT command from a specific environment, such as DCCTL, only the information that is valid for that environment is displayed.

Output fields

If /DISPLAY ACT command is issued, the output for both DC and REGION is displayed.

The following output fields are displayed for the /DISPLAY ACT DC command, and also for the /DISPLAY ACT command (no DC or REGION keyword specified):

OTMA GROUP

Status of the IMS Open Transaction Manager Access (OTMA) group. The status can be either ACT or NOTACTIVE.

Only one OTMA group can be active at one time.

VTAM ACB

The status of the VTAM ACB, which can be OPEN, CLOSE PENDING, or CLOSED. The status of LOGONS can be ENABLED or DISABLED. The base IMS LU name and the current APPC connection status are shown if IMS is running with an APPC/MVS-capable operating system.

The following are displayed for the VTAM ACB:

APPLID=

The application identification name for IMS. If MNPS is used with XRF, then it is the APPLID ACB.

USERVAR=

The user name for IMS. Only applicable for XRF-capable or RSR-capable systems.

GRSNAME=

The VTAM generic resource name. Displayed as blanks if no generic resource name exists.

Restriction: IMS displays either the USERVAR or the GRSNAME. For non-XRF or non-RSR subsystems (no USERVAR specified), IMS displays the GRSNAME, which can be blank.

If the IMS system is XRF, the following fields are appended to the date/time stamp:

RSEname

Recoverable service element name

System

ACT or BACKUP

MNPS=

The MNPS ACB name if MNPS is used for XRF.

QUEUED RRSWKS

The number of RRS requests (work elements) currently queued to the RRS TCBs. The work elements might be queued to the RRS TCBs for work from the APPC or OTMA shared message queue function.

STATUS

Status can be one of the following:

AWAITING SNAPQ

Alternate system awaiting SNAPQ checkpoint from active

SYNCHRONIZING

Alternate system processing SNAPQ checkpoint

TRACKING

Alternate system is in process of tracking active system

TAKEOVER REQUESTED

Alternate system requests a takeover

TAKEOVER IN PROGRESS

Alternate system in process of taking over workload from active

I/O TOLERATION

New active system in I/O toleration phase of processing prior to becoming a true active system

The following output fields are displayed for the /DISPLAY ACT REGION command, and also for the /DISPLAY ACT command (no DC or REGION keyword specified):

REGID

Region identifier. For DBCTL, the thread number is displayed.

JOBNAME

The name of the job processing in the region. If no regions of that type

exist, the job name is set to MSGRGN, FPRGN, BATCHRGN, or DBTRGN, depending on the region type. DBTRGN is only displayed for systems that support DBT threads.

DBTRGN, BATCHRGN, or FPRGN is displayed for DBCTL.

TYPE Type of application program processing in the region, or type of region. BMH, BMP, DBRC, DBT, DLS, and FPU are displayed for DBCTL.

The following region/program types can be displayed:

BMH HSP processing

BMP Batch message processing

BMPE Batch message processing for an external subsystem thread

DBRC DBRC address space

DBT DBCTL thread

DLS DL/I address space

FP Fast Path

FPE Fast Path processing for an external subsystem

FPM Fast Path message-driven program

FPME Fast Path message-driven program for an external subsystem thread

FPU Fast Path utility program

FPUE Fast Path utility program for an external subsystem thread

TP Teleprocessing

TPE Message-driven program for an external subsystem thread

TPI Transaction Program Instance. A CPI Communications driven transaction is running in the region

TRAN/STEP

Transaction code being processed by region, or NONE, if there are no regions of that type.

PROGRAM

Name of the program processing in the region.

DFSCPIC is displayed for CPI Communications driven transaction programs that have not issued a DL/I APSB call to allocate a PSB.

For DBCTL, SB name is displayed.

STATUS

Status of the region, which can be one of the following:

ACTIVE

The region is active.

ACTIVE-DBCMD

A /DBD, /DBR, UPD DB STOP(ACCESS), or UPDATE DB STOP(UPDATES) command is in progress and waiting for the region to terminate before the command can complete.

AVAILABLE

The active threads are available. The region is available to schedule an application.

SCHEDULING

The application program is being scheduled.

TERMINATING

A dependent region or application program is being terminated.

TERM-ABDUMP IN-P

A /STOP REGION ABDUMP command has been issued, an SRB has been scheduled for the region, and abnormal termination is in progress.

TERM-ABDUMP PEND

A /STOP REGION ABDUMP command has been issued, but an abnormal termination SRB has not been scheduled because the region is in an ineligible state.

TERM-ABDUMP SCHD

A /STOP REGION ABDUMP command has been issued and an abnormal termination SRB has been scheduled for the region.

TERM-BCKOUT IN-P

Abnormal termination is in progress and backout processing has been initiated.

TERM-THREAD TERM

Region termination is in progress. For abnormal termination, either a /STOP REGION ABDUMP command was issued or the region encountered an error and terminated independently. For normal termination, either a /STOP REGION command was issued or the application program completed and terminated independently.

TERM-WAIT SYNCPT

Region termination is in progress and the application in the region is in the sync point.

When a dependent region is found in this state, a continuation line is inserted into the display, which shows the recovery unit ID (URID) and the originating IMS system ID (ORIGIN) that are associated with the transaction processing in the dependent region.

TERM-WAIT RRS

Region termination is in progress and the application in the region is in the sync point. This status is displayed when an application has a protected conversation with an OTMA client that is processing a sync point. The sync point can continue after the OTMA client issues either an SRRCMIT or SRRBACK call. This status is also displayed when the application program is part of a cascaded family and is processing a sync point. RRS cascaded transaction support is used by APPC/OTMA SMQ enablement to synchronize the back-end and front-end systems.

When a dependent region is found in this state, a continuation line is inserted into the display, which shows the recovery unit ID (URID) and the originating IMS system ID (ORIGIN) that are associated with the transaction processing in the dependent region.

UNAVAILABLE

An active DBT thread is unavailable. An application is using the region, even though the application is not currently scheduled. This region is therefore not available to any other application.

WAIT-AOI

An AO application issued a GMSG call with the WAITAOI subfunction specified, but there are no messages for the AO application to retrieve.

WAIT-BLOCKMOVER

An application control block cannot be loaded because the ACB block mover is busy. The application might be waiting in the block mover because of an IRLM failure.

WAIT-CALLOUT

The application program in the region is waiting for a response to a synchronous callout message.

When a dependent region is found in this state, a continuation line is inserted into the display, which shows the target member (TMEM) and the transaction pipe (TPIPE) that are associated with the transaction processing in the dependent region.

WAIT-CMD/PENDING

A /DBDUMP, /DBRECOVERY, or /START command is in progress.

The status of the MPP region continues to show WAIT-CMD/PENDING until the command completes and the region is rescheduled. To clear a WAIT-CMD/PENDING status without rescheduling the MPP region, issue a /STA DB command against one of the databases in the intent list for the PSB used by the MPP region that failed to initially schedule. Issuing this command drains the scheduler subqueue (SUBQ) 4 and posts all PSTs there, including any suspended MPP regions.

WAIT-EPCB POOL

A temporary shortage of EPCB pool space exists.

WAITING

The MPP region is waiting for work.

WAIT-INPUT

The application program is in WAIT-FOR-INPUT (WFI) mode.

WAIT-INTENT

The application program's intent for a database conflicts with the use of the database by a scheduled program.

WAIT-INTENT/POOL

Indicates either the application program's intent for a database conflicts with the use of the database by a scheduled program, or a temporary shortage of DMB, PSB, or PSB work area pool space exists.

WAIT-INTENT SCHD

The IMS transaction scheduler detected an application scheduling intent failure. (For example, Load Balancing.)

WAIT-I/O PREVEN

A BMP region that accesses a GSAM database cannot schedule until I/O prevention has completed.

WAIT-MESSAGE

The application program is in a pseudo WAIT-FOR-INPUT (WFI) mode. The application is scheduled and is waiting for a message.

WAIT-POOLSPACE

A temporary shortage of DMB, PSB, or PSB work area pool space exists.

WAIT-QSC

The application program (BMP, MPP, IFP, or DBCTL) is waiting for the quiesced state of a database that it tries to access to be released.

WAIT-RRS PC

The application program has a protected conversation with an OTMA client that is processing a sync point. The sync point can continue after the OTMA client issues either an SRRCMIT or SRRBACK call. Or, the application program is part of a cascaded family and is processing a sync point. APPC/OTMA SMQ Enablement uses RRS cascaded transaction support to synchronize the back-end and the front-end system.

When a dependent region is found in this state, a continuation line is inserted into the display, which shows the recovery unit ID (URID) and the originating IMS system ID (ORIGIN) that are associated with the transaction processing in the dependent region.

WAIT-SWITCHOVER

The alternate system is tracking the active system.

WAIT-SYNCPOINT

The application in the region is now in SYNC POINT.

When a dependent region is found in this state, a continuation line is inserted into the display, which shows the recovery unit ID (URID) and the originating IMS system ID (ORIGIN) that are associated with the transaction processing in the dependent region.

CLASS

One of the classes associated with the region. The region can have from one to four classes, whose values range from 1 to 999.

Examples

The examples of the /DISPLAY ACTIVE command are organized into the following three sections:

- “Examples of /DISPLAY ACTIVE”
- “Examples of /DISPLAY ACTIVE DC” on page 380
- “Examples of /DISPLAY ACTIVE REG” on page 381

The following are examples of the /DISPLAY ACT command.

Examples of /DISPLAY ACTIVE

The following series of examples show the output of the /DISPLAY ACTIVE command for various configuration scenarios.

Example 1 for /DISPLAY ACT command

Entry ET:

/DISPLAY ACT

Response ET:

REGID	JOBNAME	TYPE	TRAN/STEP	PROGRAM	STATUS	CLASS
	MSGRGN	TP	NONE			
	BATCHREG	BMP	NONE			
	FPRGN	FP	NONE			
	DBTRGN	DBT	NONE			
1	IMSMPP0	TPE	DSN8PS	DSN8IP13		1, 3
	BATCHREG	BMP	NONE			
	FPRGN	FP	NONE			
	DBR3CTA3	DBRC				
	DLI3CTA3	DLS				
VTAM ACB OPEN			-LOGONS ENABLED			
APPLID=APPL8			GRSNAME=		STATUS=DISABLED	
LINE	ACTIVE-IN	-	1	ACTIV-OUT	-	0
NODE	ACTIVE-IN	-	0	ACTIV-OUT	-	4
LINK	ACTIVE-IN	-	0	ACTIV-OUT	-	0

89041/163619

Example 2 for /DISPLAY ACT command

Entry ET:

/DISPLAY A

Response ET:

REGID	JOBNAME	TYPE	TRAN/STEP	PROGRAM	STATUS	CLASS
1	I3YMPP	TP			WAITING	4, 1, 2, 3
	BATCHREG	BMP	NONE			
	FPRGN	FP	NONE			
	DBRC					
VTAM ACB CLOSED						
APPLID=APPL8			GRSNAME=		STATUS=DISABLED	
LINE	ACTIVE-IN	-	1	ACTIV-OUT	-	0
NODE	ACTIVE-IN	-	0	ACTIV-OUT	-	0

89041/100117

Example 3 for /DISPLAY ACT command

Entry ET:

/DISPLAY A

Response ET:

REGID	JOBNAME	TYPE	TRAN/STEP	PROGRAM	STATUS	CLASS
2	I431MPP	TP	SKS7	DFSDDL7		1, 3, 6, 7
3	IMS1BMP	BMP	REGION	SIS04P01		
1	I431IFP	FPM	TXCDRN07	DDLTRN07		
	R3	DBRC				
VTAM ACB OPEN			-LOGONS ENABLED			
APPLID=APPL8			GRSNAME=		STATUS=DISABLED	
LINE	ACTIVE-IN	-	2	ACTIV-OUT	-	0
NODE	ACTIVE-IN	-	0	ACTIV-OUT	-	0
LINK	ACTIVE-IN	-	0	ACTIV-OUT	-	0

89041/144425 DFSRSENM ACTIVE

Explanation: The system is XRF capable so the date time stamp includes the RSE name and system indicator.

Example 4 for /DISPLAY ACT command

Entry ET:

/DISPLAY A

Response ET:

REGID	JOBNAME	TYPE	TRAN/STEP	PROGRAM	STATUS	CLASS
1	I431MPP	TP	TXCDRN18	DDLTRN18	WAIT-INPUT	1, 3, 6, 7
	BATCHREG	BMP	NONE			
2	I431IFP	FPM	NO MSG.	DDLTRN07		
	R3	DBRC				
	VTAM ACB OPEN				-LOGONS ENABLED	
	APPLID=APPL8	GRSNAME=			STATUS=DISABLED	
LINE	ACTIVE-IN	-	1	ACTIV-OUT	-	0
NODE	ACTIVE-IN	-	0	ACTIV-OUT	-	0
LINE	ACTIVE-IN	-	0	ACTIV-OUT	-	0
89041/132348 DFSRSENM ACTIVE						

Explanation: Transaction TXCDRN18 is waiting for an input message. Program DDLTRN07 currently has no messages to process. Region 1 is in WAIT-FOR-INPUT (WFI) mode.

Example 5 for /DISPLAY ACT command

Entry ET:

/DISPLAY A

Response ET:

REGID	JOBNAME	TYPE	TRAN/STEP	PROGRAM	STATUS	CLASS
2	I431MPP	TP	SKS7	DFSDDL7	WAIT-MESSAGE	1, 3, 6, 7
3	IMS1BMP	BMP	REGION	SIS04P01		
1	I431IFP	FPM	TXCDRN07	DDLTRN07		
	R3	DBRC				
	VTAM ACB OPEN				-LOGONS ENABLED	
	APPLID=APPL8	GRSNAME=			STATUS=DISABLED	
LINE	ACTIVE-IN	-	2	ACTIV-OUT	-	0
NODE	ACTIVE-IN	-	0	ACTIV-OUT	-	0
LINK	ACTIVE-IN	-	0	ACTIV-OUT	-	0
89041/144425 DFSRSENM ACTIVE						

Explanation: Transaction SKS7 is waiting for an input message. Program DFSDDL7 currently has no messages to process. Region 2 is in Pseudo Wait-For-Input (PWFI) mode.

Example 6 for /DISPLAY ACT command

Entry ET:

/DISPLAY A

Response ET:

** SUBSYSTEM NAME **

SYS3

REGID	JOBNAME	TYPE	TRAN/STEP	PROGRAM	STATUS	CLASS
2	I431MPP	TP	SKS7	DFSDDL7	WAIT-MESSAGE	1,3,6,7
3	IMS1BMP	BMP	REGION	SIS04P01		
1	I431IFP	FPM	TXCDRN07	DDLTRN07		
	R3	DBRC				
	VTAM ACB OPEN				-LOGONS ENABLED	
LINE	ACTIVE-IN-		2	ACTIV-OUT-		0
NODE	ACTIVE-IN-		0	ACTIV-OUT-		0
LINK	ACTIVE-IN-		0	ACTIV-OUT-		0
89041/144425 DFSRSENM ACTIVE						

Explanation: Transaction SKS7 is waiting for an input message. Program DFSDDL7 currently has no messages to process. Region 2 is in Pseudo Wait-For-Input (WPFI) mode.

Example 7 for /DISPLAY ACT command

Entry ET:

/DISPLAY ACTIVE

Response ET:

REGID	JOBNAME	TYPE	TRAN/STEP	PROGRAM	STATUS	CLASS
1	IMSMPPA	TPI	TPN1	DFSCPIC	WAIT-BLOCKMOVER	20, 22, 24, 26
2	IMSMPPB	TPI	TPN2	DFSCPIC		21, 23, 25, 22
3	IMSMPPC	TP	TPN3	SAAPSB1		28, 29, 24, 23
4	IMSMPPD	TPI	TPN4	DFSCPIC	WAIT-SYNCPOINT	14, 15, 16, 17
4	IMSMPPE	TP	TRAN1	LU2PGMA	WAIT-INPUT	2, 4, 6, 8
5	IMSMPPF	TP	TRAN2	LU2PGMB		1, 3, 5, 7
VTAM ACB OPEN / APPC LUNAME=IMSLUNME ENABLED -LOGONS ENABLED						
LINE	ACTIVE-IN	-	2	ACTIV-OUT	-	0
NODE	ACTIVE-IN	-	0	ACTIV-OUT	-	0
LINK	ACTIVE-IN	-	0	ACTIV-OUT	-	0
90332/114253						

Example 8 for /DISPLAY ACT command

Entry ET:

/DISPLAY ACTIVE

Response ET:

REGID	JOBNAME	TYPE	TRAN/STEP	PROGRAM	STATUS	CLASS
	MSGRGN	TP	NONE			
	BATCHREG	BMP	NONE			
	FPRGN	FP	NONE			
	DBTRGN	DBT	NONE			
	DBRSCHA5	DBRC				
	DLISCHA5	DLS				
VTAM ACB OPEN -LOGONS DISABLED						
IMSLU=N/A.N/A APPC STATUS=DISABLED TIMEOUT= 0						
APPLID=APPL8 USERVAR=IMS1						
LINE	ACTIVE-IN	-	1	ACTIV-OUT	-	0
NODE	ACTIVE-IN	-	0	ACTIV-OUT	-	0
LINK	ACTIVE-IN	-	0	ACTIV-OUT	-	0
95080/183050 DFSRSENM ACTIVE						

Explanation: The IMS subsystem is both XRF-capable and RSR-capable.

Example 9 for /DISPLAY ACT command

Entry ET:

/DISPLAY ACTIVE

Response ET:

REGID	JOBNAME	TYPE	TRAN/STEP	PROGRAM	STATUS	CLASS
1	IMSMPPA	TP			WAITING	4, 1, 2
2	IMS1BMP	BMP	REGION	SIS04P01	WAIT-AOI	
4	IMS2BMP	BMP	REGION	SIS04P02	WAIT-AOI	
3	I510MPP	TP			WAIT-EPCB POOL	8, 8, 8, 8
2	IMS3BMP	BMP			WAIT-EPCB POOL	
	FPRGN	FP	NONE			
	DBRC	DBRC				
VTAM ACB CLOSED						

```

APPLID=APPL8      GRSNAME=      STATUS=DISABLED
LINE ACTIVE-IN - 1 ACTIV-OUT - 0
NODE ACTIVE-IN - 0 ACTIV-OUT - 0
*96280/095345*

```

Example 10 for /DISPLAY ACTIVE command

Entry ET:

/DISPLAY ACTIVE

Response ET:

```

      REGID JOBNAME TYPE TRAN/STEP PROGRAM STATUS      CLASS
      1 I431MPP TP              TERMINATING 1, 2, 3, 4
      BATCHREG BMP NONE
      2 I431IFP FPM NO MSG. DDLTRN07
      R3 DBRC
VTAM ACB OPEN -LOGONS ENABLED
APPLID=APPL8      GRSNAME=      STATUS=DISABLED
LINE ACTIVE-IN - 1 ACTIV-OUT - 0
NODE ACTIVE-IN - 0 ACTIV-OUT - 0
LINE ACTIVE-IN - 0 ACTIV-OUT - 0
*89041/132348* DFSRSENM ACTIVE

```

Explanation: MPP region I431MPP is in the process of terminating because of a /STOP REGION command. Region 1 is in TERMINATING mode.

Examples of /DISPLAY ACTIVE DC

The following series of examples show the output of the /DISPLAY ACTIVE DC command for various configuration scenarios.

Example 1 for /DISPLAY ACTIVE DC command

Entry ET:

/DISPLAY ACTIVE DC

Response ET:

```

VTAM STATUS AND ACTIVE DC COUNTS
VTAM ACB OPEN              -LOGONS ENABLED
IMSLU=SYS1.IMSLUNME        STATUS=ENABLED
APPLID=APPL8      USERVAR=IMS1
LINE ACTIVE-IN - 2 ACTIV-OUT - 0
NODE ACTIVE-IN - 0 ACTIV-OUT - 0
LINK ACTIVE-IN - 0 ACTIV-OUT - 0
*92232/114253*

```

Example 2 for /DISPLAY ACTIVE DC command

Entry ET:

/DISPLAY ACTIVE DC

Response ET:

```

VTAM STATUS AND ACTIVE DC COUNTS
VTAM ACB CLOSED              -APPLID ACB
VTAM ACB OPEN              -LOGONS ENABLED -MNPS ACB
IMSLU=N/A.N/A      APPC STATUS=DISABLED TIMEOUT= 0
OTMA GROUP=N/A      STATUS=NOTACTIVE
APPC/OTMA SHARED QUEUE STATUS - LOCAL=INACTIVE GLOBAL=INACTIVE
APPC/OTMA RRS MAX TCBS - 2 ATTACHED TCBS - QUEUED RRSWKS - 0 N

```

```

APPLID=APPL8      GRSNAME=          STATUS=DISABLED MNPS=APPL1
LINE ACTIVE-IN -   1  ACTIVE-OUT -   0
NODE ACTIVE-IN -   0  ACTIVE-OUT -   0
LINK ACTIVE-IN -   0  ACTIVE-OUT -   0
*03069/143346* DFSRSENM  ACTIVE

```

Explanation: An XRF system is using MNPS. The MNPS ACB is APPL1, which is open and is accepting logons. The APPLID ACB is APPL8, but it is closed.

Examples of /DISPLAY ACTIVE REG

Example 1 for /DISPLAY ACTIVE REG command

Entry ET:

```
/DISPLAY ACTIVE REG
```

Response ET:

REGID	JOBNAME	TYPE	TRAN/STEP	PROGRAM	STATUS	CLASS	IMS1
2	MPPI3	TP	SHF1	PMVAPZ12	WAIT-QSC	1, 2, 3, 4	
1	MPPI2	TP	NQF1	PMVAPZ12	WAIT-QSC	1, 2, 3, 4	
	JMPRGN	JMP	NONE	IMS1			
3	BMPI4	BMP		PMVAPZ12	WAIT-QSC	IMS1	
	JBPRGN	JBP	NONE	IMS1			
	FPRGN	FP	NONE	IMS1			
	DBTRGN	DBT	NONE	IMS1			
	DBRCSAK	DBRC			IMS1		
	DLIICSAK	DLS	IMS1				
08030/132621 IMS1							

Explanation: The status of MPPI2, MPPI3, and BMPI4 transactions are shown as WAIT-QSC, which indicates that the database that these transactions are trying to access are in quiesce state and that the transactions are waiting for the UPDATE STOP(QUIESCE) command to be issued to release the quiesce.

Example 2 for /DISPLAY ACTIVE REG command

Entry ET:

```
/DISPLAY ACTIVE REG
```

Response ET:

REGID	JOBNAME	TYPE	TRAN/STEP	PROGRAM	STATUS	CLASS
1	MPP1A	TP	APOL11	APOL1	WAIT-CALLOUT	1
		TMEM:	HWS1		TPIPE:	TPIPE1
	JMPRGN	JMP	NONE			
	JBPRGN	JBP	NONE			
	BATCHREG	BMP	NONE			
	FPRGN	FP	NONE			
	DBTRGN	DBT	NONE			
	DBRZCSAJ	DBRC				
	DLIZCSAJ	DLS				
08235/173441						

Explanation: Message processing program APOL1 is processing transaction APOL11, which is waiting for a response to a synchronous callout request (WAIT-CALLOUT) from transaction pipe TPIPE1.

Related reference:

Chapter 2, "Command keywords and their synonyms," on page 57

/DISPLAY AFFIN command

Use the /DISPLAY AFFIN command to display the current link or node affinities that an IMS subsystem has within a VTAM generic resource group.

Subsections:

- “Environment”
- “Syntax”
- “Keywords”
- “Usage notes”
- “Equivalent IMS type-2 commands” on page 383
- “Examples” on page 383

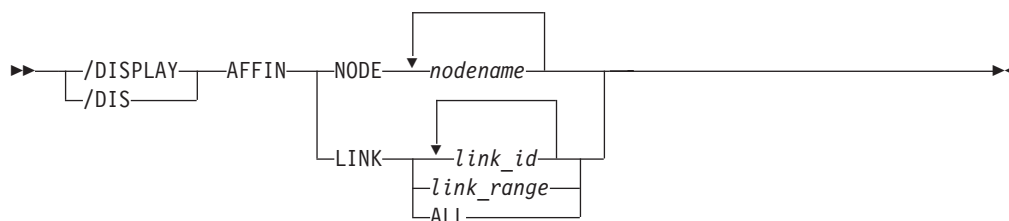
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 181. Valid environments for the /DISPLAY AFFIN command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DISPLAY	X	X	X
AFFIN	X		X
NODE	X		X
LINK	X		X

Syntax



Keywords

The following keywords are valid for the /DISPLAY AFFIN command:

NODE

Specify one or multiple nodes. You cannot specify generic names such as *nodename** or *ALL*.

LINK

Specify one or multiple links, a range of links, or *ALL*. You must specify *link_range* in the form of *link_a-link_b*; for example, 1-3.

Usage notes

This command is valid only when you use VTAM generic resources.

Equivalent IMS type-2 commands

The following table shows variations of the /DISPLAY AFFIN command and the IMS type-2 commands that perform similar functions.

Table 182. Type-2 equivalents for the /DISPLAY AFFIN command

Task	/DISPLAY AFFIN command	Similar IMS type-2 command
Displays VTAM generic resource affinities.	/DISPLAY AFFIN NODE <i>node</i>	QUERY NODE SHOW(AFFIN)

Examples

The following are examples of the /DISPLAY AFFIN command.

Example 1 for /DISPLAY AFFIN command

Entry ET:

```
/DISPLAY AFFIN NODE NDSLUA1
```

Response ET:

```
NODE      APPLID
NDSLUA1  APPL9
*97098/162106*
```

Explanation: The node has an affinity for APPL ID APPL9.

Example 2 for /DISPLAY AFFIN command

Entry ET:

```
/DISPLAY AFFIN NODE LU37722
```

Response ET:

```
NODE      APPLID
LU37722  N/A
*97098/162156*
```

Explanation: The node has no affinities.

Example 4 for /DISPLAY AFFIN command

Entry ET:

```
/DISPLAY AFFIN LINK ALL
```

Response ET:

```
DFS000I LINK LINKNAME NODE      APPLID
DFS000I   1 LNK32V01 L6APPL1  N/A
DFS000I   2 LNK32V02 L6APPL1  N/A
DFS000I   3 LNK32V03 L6APPL1  N/A
DFS000I   4 LNK31V01 L6APPL3  APPL7
DFS000I   5 LNK31V05 L6APPL3  APPL7
DFS000I   6 LNK32V05 L6APPL1  N/A
DFS000I   7 LNK31T01          N/A
```

Explanation: Links 4 and 5 to IMS node L6APPL3 have affinity for APPL7 in the IMSplex. Links 1, 2, 3, and 6 are VTAM links to IMS node L6APPL1 and have no affinity. Link 7 is not a VTAM link.

Related reference:

 [QUERY NODE command \(Commands\)](#)

/DISPLAY AOITKN command

Use the /DISPLAY AOITKN command to display all Automated Operator Interface (AOI) tokens in the system.

Subsections:

- "Environment"
- "Syntax"
- "Usage notes"
- "Output fields"
- "Examples" on page 385

Environment

The /DISPLAY AOITKN command is valid in DB/DC, DBCTL, and DCCTL environments.

Syntax

►► `/DISPLAY` `AOITKN` ►►
 `/DIS`

Usage notes

If QCT=0 and W-REGID=NONE, then the AOI token is deleted at the next checkpoint.

Output fields

The following output fields are displayed for each AOI token:

AOITKN

AOI token name.

ENQCT

Total number of messages enqueued. In a shared-queues environment, only shows messages enqueued for the local subsystem.

QCT Number of messages currently queued to the token and not yet retrieved by the AO application. In a shared-queues environment, only shows messages enqueued for the local subsystem.

SEGS Number of segments in messages queued (QCT) to the AOI token.

W-REGID

The region IDs of AO applications that issued a GMSG call with the WAITAOI subfunction specified. This AO application is in a wait state, since there are currently no messages for it to retrieve.

Examples

Entry ET:

```
/DISPLAY AOITKN
```

Response ET:

AOITOKEN	ENQCT	QCT	SEGS	W-REGID
AOITOKN1	4	2	12	NONE
AOITOKN2	0	0	0	2,4
AOITOKN3	1	0	0	NONE
AOITOKN4	1000000000	1000000000	2147483647	NONE

92280/095345

/DISPLAY APPC command

Use the /DISPLAY APPC command to display inquiries about LU 6.2 related activities, including the current outbound LU if it is different from the base LU.

Subsections:

- “Environment”
- “Syntax”
- “Output fields”
- “Examples” on page 387

Environment

The /DISPLAY APPC command is valid in DB/DC and DCCTL environments.

Syntax

►► /DISPLAY
/DIS APPC —————►►

Output fields

The following output fields are displayed for the /DISPLAY APPC command:

IMSLU

The IMSLU is a base IMS LU name. This LU is always a network-qualified LU name. It is displayed as N/A.N/A if IMS is not connected to APPC/MVS. For example, if status is DISABLED, FAILED, or STARTING, N/A.N/A applies. For the CANCEL status, the field can contain either the LU name or N/A.N/A.

#APPC-CONV

LU 6.2 inbound and outbound conversation count.

SECURITY

RACF security level, which is one of the following:

- CHECK
- FULL
- NONE
- PROFILE

STATUS

The current APPC connection status. The possible values for APPC connection status are:

CANCEL

Shown after the /STOP APPC CANCEL command.

DISABLED

Shown when APPC/IMS is not identified or connected to APPC/MVS.

ENABLED

Shown after successful /START APPC command completion.

FAILED

Shown after unsuccessful /START APPC command.

OUTBOUND

Shown on the XRF alternate system as it tracks the active. It is also shown on the active if IMS is unable to initiate normal APPC processing. For example, the /START APPC command can be reissued to attempt APPC enablement.

PURGING

Shown after the /PURGE APPC command.

STARTING

Shown after the /START APPC is issued and before the status is set to ENABLED or FAILED.

STOPPED

Shown after the /STOP APPC command.

DESIRED

Desired APPC connection status. This status is changed by the /PURGE, /START and /STOP APPC (CANCEL) commands. The possible values for desired APPC connection status are:

CANCEL

Shown after /STOP APPC CANCEL

DISABLED

Shown when APPC/IMS is not identified or connected to the APPC/MVS

ENABLED

Shown after /START APPC

OUTBOUND

Shown on the XRF alternate system as it tracks the active

PURGING

Shown after /PURGE APPC

STOPPED

Shown after /STOP APPC

GRNAME

The IMS/APPC generic LU name (if VTAM Generic Resources is activated).

TYPE BASE for BASE LU or OUTB for OUTBOUND LU.

Examples

Entry ET:

```
/DISPLAY APPC
```

Response ET:

```
IMSLU      #APPC-CONV SECURITY STATUS  DESIRED  
IMSLUNME    0 FULL      ENABLED  ENABLED  
*90347/114253*
```

Entry ET:

```
/DISPLAY APPC
```

Response ET:

```
IMSLU      #APPC-CONV SECURITY STATUS  DESIRED  
IMSLUNME    0 FULL      DISABLED  ENABLED  
*90347/114253*
```

Entry ET:

```
/DISPLAY APPC
```

Response ET:

```
IMSLU      #APPC-CONV SECURITY STATUS  DESIRED  
SYS1.IMSLUNME    0 FULL      STOPPED  STOPPED  
*92232/114253*
```

/DISPLAY AREA command

Use the /DISPLAY AREA command to display data sets, status conditions, control intervals, and databases associated with an area.

Subsections:

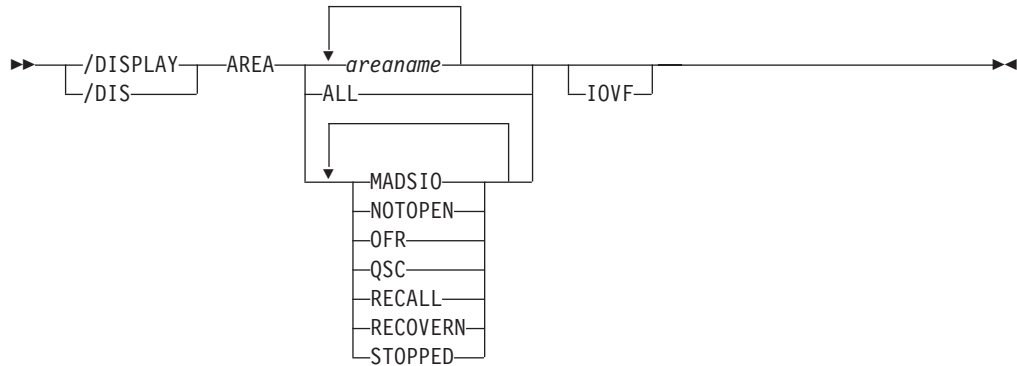
- “Environment”
- “Syntax”
- “Keywords and reserved parameters” on page 388
- “Usage notes” on page 389
- “Equivalent IMS type-2 commands” on page 389
- “Output fields” on page 389
- “Examples” on page 391

Environment

The /DISPLAY AREA command is valid in DB/DC and DBCTL environments.

Syntax

|
|



Keywords and reserved parameters

The following keywords can be specified for the /DISPLAY AREA command:

IOVF

Displays the independent overflow area statistics.

If the /DISPLAY AREA IOVF command is entered on an RSR tracking subsystem, the IOVF statistics might be incorrect.

When the ALL parameter is used with the IOVF keyword (for example, /DIS AREA ALL IOVF), performance can be affected depending on the number and size of areas involved. If large areas, large numbers of areas, or both are involved, the control region can appear to be stopped while processing this command.

Areas are selected for display based on the attributes specified. For example, /DISPLAY AREA STOPPED only displays the areas that are currently stopped. The attribute display format is the same as the standard AREA display. Attributes generally correspond to the conditions displayed for areas. Any exceptions are flagged in the following list.

The attributes are reserved parameters for the /DISPLAY AREA command and cannot be used to name areas. The following list describes the attributes that can be used with the AREA keyword:

MADSIO

Displays the areas that are currently in a long busy condition or are in long busy recovery mode.

NOTOPEN

Displays the areas that have yet to be opened.

OFR

Displays the areas that are being brought up to the current tracking level with online forward recovery.

QSC

Displays the Fast Path DEDB areas that are currently quiesced by a previous UPDATE DB START(QUIESCE) or UPDATE AREA START(QUIESCE) command.

RECALL

Displays the areas that are in recall.

RECOVER

Displays the areas that need recovery. This parameter corresponds to the area condition RECOVERY-NEEDED.

STOPPED

Displays the areas that are currently stopped.

Usage notes

If an IMS Fast Path utility is active when the /DISPLAY AREA command is issued, the following output line is displayed:

UTILITY XXXX PVTOT# YY PTVAVL# ZZ IMSID:SSSS TTTT

or

UTILITY: XXXX IMSID:SSSS

The output values represent:

- XXXX - the active utility name or VSO function
- YY - the total number of private buffers available to the utility
- ZZ - the number of unused private buffers available to the utility
- SSSS - the IMSID of the IMS system on which the utility is active
- TTTT - the IMSID of the IMS system on which the display was issued

The following IMS Fast Path utilities, VSO functions, and IBM DBTOOL utility can be displayed:

- HSSP (High Speed Sequential Processing utility)
- HSRE (DBFUHDR0, High Speed Reorganization utility)
- MDL0 (DBFUMDL0, SDEP Delete utility)
- MSC0 (DBFUMSC0, SDEP Scan utility)
- MRI0 (DBFUMRI0, DEDB Create utility)
- MMH0 (DBFUMMH0, DEDB Compare utility)
- PRLD (VSO Preload is active)
- TOOL (an IBM DBTOOL Online utility)

Equivalent IMS type-2 commands

The following table shows variations of the /DISPLAY AREA command and the IMS type-2 commands that perform similar functions.

Table 183. Type-2 equivalents for the /DISPLAY AREA command

Task	/DISPLAY AREA command	Similar IMS type-2 command
Displays information about an area.	/DISPLAY AREA	QUERY AREA

Output fields

The following output fields are displayed for the /DISPLAY AREA command:

AREANAME

Name of the Fast Path DEDB area.

DDNAME

Names of the data sets that contain that area.

CONDITIONS

Status conditions associated with the area or ADS.

Status conditions associated with the area include:

IC HSSP image copy is currently active on the area.

MADSIO

The area is currently in a long busy condition or long busy recovery mode.

NOTOPEN

The area has yet to be opened. This will be done when first call is issued to the area.

RECALL

Area is in recall.

RECOVERY-NEEDED

The area has been marked RECOVERY-NEEDED. The Database Recovery utility needs to be run to restore this area.

STOPPED

The area is in STOPPED status. All access to it is prohibited. This can be changed with the /START command.

VIR The area is a VSO area.

PREO The area is defined to be preopened during IMS initialization.

PREL The area is defined to be preloaded during IMS initialization.

QUIESCED

The Fast Path DEDB area named on the command is currently quiesced by a previous UPDATE DB START(QUIESCE) or UPDATE AREA START(QUIESCE) command.

QUIESCING

The Fast Path DEDB area named on the command is currently undergoing quiesce by a previous UPDATE DB START(QUIESCE) or UPDATE AREA START(QUIESCE) command.

Status conditions associated with the ADS include the following:

COPY-PHASE

The CREATE utility is currently in the COPY phase on this ADS. The CREATE utility must complete before anything can be done with this ADS.

FORMAT-PHASE

The CREATE utility is currently in the FORMAT phase on this ADS. The CREATE utility must complete before anything can be done with this ADS.

PRE-OPEN FAILED

XRF PREOPEN was not successful for this ADS.

RECALL

Area is in Recall.

SEVERE-ERROR

This ADS has had a severe I/O error (write error to second CI, in which Fast Path keeps its control information).

UNAVAILABLE

This ADS has been marked unavailable, probably because of I/O errors. (EQE REMAIN = 0).

EQECT

Specifies the count of I/O errors for the area.

TOTAL SEQ DEPENDENT

Total control intervals defined for sequential dependent space.

UNUSED SEQ DEPENDENT

Unused control intervals for sequential dependent space.

TOTAL DIRECT ADDRESSABLE

Total control intervals defined for direct addressable space.

UNUSED DIRECT ADDRESSABLE

Unused control intervals for direct addressable space.

DBNAME

Database name.

EEQECT

Count of write error EEQE for this area.

IOVF Independent overflow area statistics.

These statistics are only displayed if IOVF is specified on the /DIS AREA command (/DIS AREA ALL IOVF or /DIS AREA areaname IOVF). If the IOVF parameter is not specified on the /DIS AREA command, N/A appears in the display output.

Examples

The following are examples of the /DISPLAY AREA command.

Example 1 for /DISPLAY AREA command

Entry ET:

```
/DIS AREA db21ar1 db21ar3 db21ar6 IOVF
```

Response ET:

AREANAME	EQECT	TOTAL UNUSED	TOTAL UNUSED		DBNAME	EEQECT	CONDITIONS
DDNAME	REMAIN	SEQ DEPENDENT	DIR ADDRESSABLE				
DB21AR1	N/A	13	11	74	74-CI	DEDBJN21 999	VIR, PRE0, PREL
DB21AR1	10	N/A	N/A	N/A	N/A	N/A	
DB21AR1B	10	N/A	N/A	N/A	N/A	N/A	
DB21AR1C	10	N/A	N/A	N/A	N/A	N/A	
DB21AR3	N/A	13	11	74	56-CI	DEDBJN21	PRE0
DB21AR3	10	N/A	N/A	N/A	N/A	N/A	
DB21AR3B	10	N/A	N/A	N/A	N/A	N/A	
DB21AR6	N/A	17	15	74	56-CI	DEDBJN21	
DB21AR6	10	N/A	N/A	N/A	N/A	N/A	

93076/173254

Explanation: DIR ADDRESSABLE means Independent Overflow part.

Example 2 for /DISPLAY AREA command

Entry ET:

```
/DIS AREA ALL
```

Response ET:

AREANAME DDNAME	EEQECT REMAIN	TOTAL SEQ	UNUSED DEPENDENT	TOTAL DIR	UNUSED ADDRESSABLE	DBNAME	EEQECT	CONDITIONS
DB21AR0	N/A	17	15	74	N/A	DEDBJN21	999	VIR, PREO, PREL
DB21AR0	10	N/A	N/A	N/A	N/A	N/A		
DB21AR1	N/A	13	11	74	N/A	DEDBJN21		VIR, PREO
DB21AR1	10	N/A	N/A	N/A	N/A	N/A		
DB21AR1B	10	N/A	N/A	N/A	N/A	N/A		
DB21AR1C	10	N/A	N/A	N/A	N/A	N/A		
DB21AR10	N/A	17	15	74	N/A	DEDBJN21		VIR, PREO, PREL
DB21AR10	10	N/A	N/A	N/A	N/A	N/A		
DB21AR11	N/A	133	131	74	N/A	DEDBJN21		VIR
DB21AR11	10	N/A	N/A	N/A	N/A	N/A		
DB21AR2	N/A	19	17	74	0-UW	DEDBJN21		VIR, PREO, PREL
UTILITY:	HSRE	PVTTOT#	45	PVTAVL#	15			
DB21AR2	10	N/A	N/A	N/A	N/A	N/A		
DB21AR3	N/A	13	11	74	N/A	DEDBJN21		PREO
DB21AR3	10	N/A	N/A	N/A	N/A	N/A		
DB21AR3B	10	N/A	N/A	N/A	N/A	N/A		
DB21AR4	N/A	N/A	N/A	N/A	N/A	DEDBJN21		STOPPED, NOTOPEN
DB21AR5	N/A	N/A	N/A	N/A	N/A	DEDBJN21		STOPPED, NOTOPEN
DB21AR6	N/A	N/A	N/A	N/A	N/A	DEDBJN21		STOPPED, NOTOPEN
DB21AR7	N/A	N/A	N/A	N/A	N/A	DEDBJN21		NOTOPEN
DB21AR8	N/A	N/A	N/A	N/A	N/A	DEDBJN21		NOTOPEN
DB21AR9	N/A	N/A	N/A	N/A	N/A	DEDBJN21		NOTOPEN

93076/173254

Explanation: DIR ADDRESSABLE means Independent Overflow part.

Example 3 for /DISPLAY AREA command

Entry ET:

/DIS AREA db11ar4

Response ET:

AREANAME DDNAME	EEQECT REMAIN	TOTAL SEQ	UNUSED DEPENDENT	TOTAL DIR	UNUSED ADDRESSABLE	DBNAME	EEQECT	CONDITIONS
DB21AR4	N/A	N/A	N/A	N/A	N/A	DEDBJN21	999	STOPPED, NOTOPEN, RECOVERY

97136/173254

Explanation: RECOVERY means this Fast Path area is undergoing recovery with the Online Recovery Service.

Example 4 for /DISPLAY AREA command

Entry ET:

/DIS AREA DB21AR0

Response ET:

DFS000I	AREANAME	EEQECT	TOTAL	UNUSED	TOTAL	UNUSED	DBNAME	EEQECT	CONDITIONS	SYS3
DFS000I	DDNAME	REMAIN	SEQ	DEPENDENT	DIR	ADDRESSABLE				
DFS000I	DB21AR0	N/A	29	28	74	0-UW	DEDBJN21	0	VIR, PREO, PREL	SYS3
DFS000I	UTILITY:	HSSP	PVTTOT#	45	PVTAVL#	30	IMSID: IMS2			SYS3
DFS000I	DB21AR01	10	N/A	N/A	N/A	N/A	N/A			SYS3
DFS000I	DB21AR02	10	N/A	N/A	N/A	N/A	N/A			SYS3
DFS000I	DB21AR03	10	N/A	N/A	N/A	N/A	N/A			SYS3

Explanation: The IMS Fast Path utility, HSSP, is active on IMSID=IMS2.

Example 5 for /DISPLAY AREA command

Entry ET:

```
/DIS AREA QSC
```

Response ET:

AREANAME	EQECT	TOTAL	UNUSED	TOTAL	UNUSED	DBNAME	EEQECT	CONDITIONS
DDNAME	REMAIN	SEQ	DEPENDENT	DIR	ADDRESSABLE			
AXYZ01	N/A	N/A	N/A	N/A	N/A	FPDBXYZ	0	QUIESCED

Explanation: This is an example of displaying databases that have the status of quiesced.

Related concepts:

 DEDB area design guidelines (Database Administration)

Related reference:

 QUERY AREA command (Commands)

/DISPLAY ASMT command

Use the /DISPLAY ASMT command to display resource assignments.

Subsections:

- “Environment”
- “Syntax” on page 394
- “Keywords” on page 394
- “Equivalent IMS type-2 commands” on page 395
- “Examples” on page 396

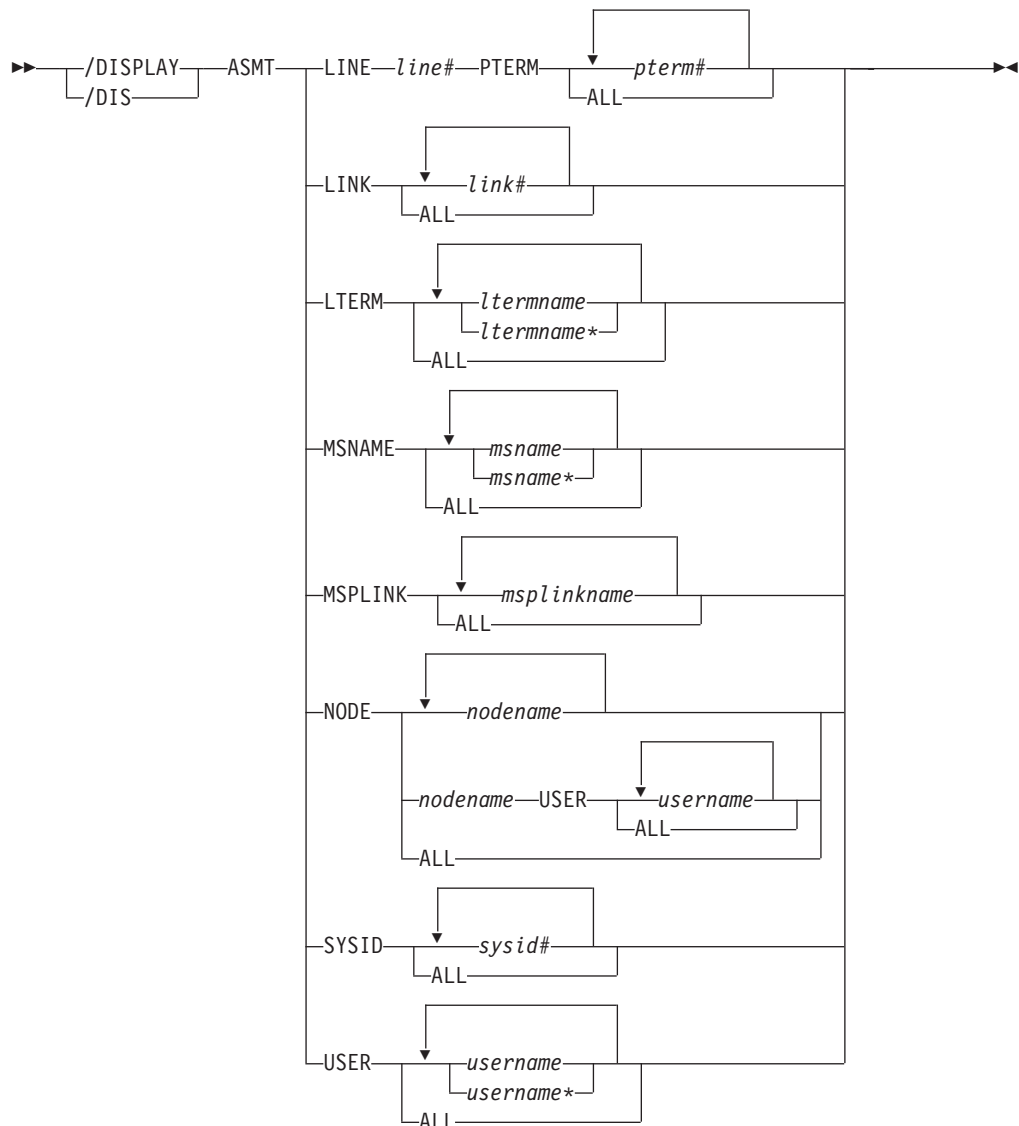
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 184. Valid environments for the /DISPLAY ASMT command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DISPLAY	X	X	X
ASMT	X		X
LINE	X		X
LINK	X		X
LTERM	X		X
MSNAME	X		X
MSPLINK	X		X
NODE	X		X
SYSID	X		X
USER	X		X

Syntax



Keywords

The following keywords are valid for the /DISPLAY ASMT command:

LINE PTERM

The logical terminal names associated with the specified line and physical terminal.

LINK The physical link, SYSIDs, and logical link paths assigned to the specified logical link.

LTERM

The communication line and physical terminal or node and component associated with the specified logical terminal name. When using ISC or a dynamic terminal, the displayed output for a logical terminal assigned to the VTAM pool shows the assigned node, if any, and the user name. The LTERM parameter can be generic.

MSNAME

The physical link and logical link assigned to the specified logical link path.

MSPLINK

The type, address, and logical link associated with the specified physical link.

For MSC with VTAM, MSPLINK also displays the maximum number of allowed sessions and VTAM node name.

NODE

The logical terminal names associated with the specified node. When using ISC, the displayed output shows at least one line of information for each half-session of the node, shows whether the half-session is active, and shows whether LTERMs are assigned. If the half-session is active, the user identifier is displayed. If no LTERMs are assigned, NONE is indicated. The USER keyword is valid for ISC nodes and non-ISC nodes with signed-on users. The NODE parameter can be generic.

Restrictions for using NODE and USER parameters together:

- Commands with the NODE USER keyword pair are valid only if:
 - The USER is signed on to the NODE
 - In an ISC environment, the USER is allocated to the NODE
 - The nodes and users exist
- /DISPLAY ASMT commands with NODE USER keyword pair are valid for ISC and non-ISC nodes and users.

SYSID

The physical link, logical link, and logical link path assignments associated with the specified system identification.

USER All the USER structures and USERIDs that match the parameter specified. These are the following:

- The USER field shows the USER structure name. N/A appears for all static USERIDs signed on to static nodes.
- The USERID field displays the RACF USERID that was used to sign on to the node. N/A appears if a USER structure is not associated with a node. In this case, the USER structure exists to hold status or has messages inserted to it. If no messages or status exist, the USER structure is deleted at the next checkpoint.
- The node name and logical terminal names are displayed if the user is allocated to a node or signed on to a node.
- For ISC sessions, the ID field shows the other half session qualifier.

The USER parameter can be generic.

Equivalent IMS type-2 commands

The following table shows variations of the /DISPLAY ASMT command and the IMS type-2 commands that perform similar functions.

Table 185. Type-2 equivalents for the /DISPLAY ASMT command.

Task	/DISPLAY ASMT command	Similar IMS type-2 command
Displays input and output components.	/DISPLAY ASMT LTERM ltermname	QUERY LTERM SHOW(COMPONENT)

Table 185. Type-2 equivalents for the /DISPLAY ASMT command (continued).

Task	/DISPLAY ASMT command	Similar IMS type-2 command
Displays the node associated with the lterm.	/DISPLAY ASMT LTERM <i>ltermname</i>	QUERY LTERM SHOW(NODE)
Displays the user associated with the lterm.	/DISPLAY ASMT LTERM <i>ltermname</i>	QUERY LTERM SHOW(USER)
Displays the attributes of an MSC logical link	/DISPLAY ASMT MSPLINK <i>msplinkname</i>	QUERY MSLINK SHOW(ALL)
Displays the attributes of an MSC physical link	/DISPLAY ASMT MSPLINK <i>msplinkname</i>	QUERY MSPLINK SHOW(ALL)
Displays assigned lterms.	/DISPLAY ASMT NODE <i>node</i>	QUERY NODE SHOW(LTERM)
Displays the user associated with the node.	/DISPLAY ASMT NODE <i>node</i>	QUERY NODE SHOW(USER)
Displays the other half-session qualifier ID of the ISC node.	/DISPLAY ASMT USER <i>user</i>	QUERY USER SHOW(ID)
Displays assigned lterms.	/DISPLAY ASMT USER <i>user</i>	QUERY USER SHOW(LTERM)
Displays the node.	/DISPLAY ASMT USER <i>user</i>	QUERY USER SHOW(NODE)
		QUERY USERID SHOW(NODE)
Displays the user ID.	/DISPLAY ASMT USER <i>user</i>	QUERY USER SHOW(USERID)
Displays the user.	/DISPLAY ASMT USER <i>user</i>	QUERY USERID SHOW(USER)

Examples

The following are examples of the /DISPLAY ASMT command.

Example 1 for /DISPLAY ASMT command

Entry ET:

```
/DISPLAY ASMT LINE 2 PTERM ALL
```

Response ET:

```

TERMINAL
 2- 1  IN  - L2740S2
        OUT - L2740S1, L2740S2
*90295/130910*
```

Entry ET:

```
/DISPLAY ASMT LINE 4 PTERM 1, 2
```

Response ET:

```

TERMINAL
 4- 1  IN  - L2740SM1
        OUT- L2740SM1
 4- 2  IN  - L2740SM2
        OUT- L2740SM2
*90295/130328*
```

Example 2 for /DISPLAY ASMT command

Entry ET:

```
/DISPLAY ASMT LINK ALL
```

Response ET:

LINK	PLINK	SIDR	SIDL	MSNAME
1	BLCB1CTC	1	4	SYSTEM2A
		1	5	SYSTEM2B
		3	6	FRESNO
2	BLCB2BSC	21	23	BOSTON
		22	24	ALBANY
3	BLCB1MTM	19	20	TEST1

90280/072935

Example 3 for /DISPLAY ASMT command

Entry ET:

/DISPLAY ASMT LTERM DIALQ1 INQUIRY1 L2740S1 MASTER WTOR

Response ET:

LTERM	IN-TERMINAL	OUT-TERMINAL	USER	
DIALQ1	11-	1	11-	1
INQUIRY1	5-	1	5-	1
L2740S1	3-	1	3-	1
MASTER	3-	1	3-	1
WTOR	1-	SC	1-	SC

90295/130657

Entry ET:

/DISPLAY ASMT LTERM L1 L2 L3

Response ET:

LTERM	IN-TERMINAL	OUT-TERMINAL	USER		
L1	14-	1	14-	1	
L2	NODEA	-1	NODEA	-1	A
L3	N/A	-1	N/A	-1	B

90231/143059

Entry ET:

/DISPLAY ASMT LTERM ALL

Response ET:

LTERM	IN-TERMINAL	OUT-TERMINAL	USER	
CRDPUNCH	14-	1	14-	1
DIALQ1	11-	1	11-	1
DIALQ2	12-	1	12-	1
DIALQ3	13-	1	13-	1
INQUIRY1	5-	1	5-	1
INQUIRY2	6-	1	6-	1
INQUIRY3	7-	1	7-	1
INQUIRY4	8-	1	8-	1
INQUIRY5	9-	1	9-	1
INQUIRY6	10-	1	10-	1
L2740SM1	4-	1	4-	1
L2740SM2	4-	2	4-	2
L2740S1	3-	1	3-	1
L2740S2	2-	1	2-	1
MASTER	3-	1	3-	1
PTPPUNCH	14-	1	14-	1
WS12DS	WS12-	1	WS12-	1
WTOR	1-	SC	1-	SC

90295/160953

Example 4 for /DISPLAY ASMT command

Entry ET:

/DISPLAY ASMT MSNAME ALL

Response ET:

LINK	PLINK	SIDR	SIDL	MSNAME	IMS1
	N/A	32	3	LINK23B4	IMS1
10	PLNK12V	20	10	LINK12V1	IMS1
	N/A	35	3	LINK23U2	IMS1
	N/A	28	3	ELINK211	IMS1
1	PLNK12V	31	11	LINK13B3	IMS1
10	PLNK12V	266	2036	LINK13V	IMS1
10	PLNK12V	256	1012	LINK12V	IMS1
2	PLNK12C	33	13	LINK13C2	IMS1
10	PLNK12V	80	300	LINK13X	IMS1
11	PLNK12V	40	9	LINK12V2	IMS1
3	PLNK12M	34	14	LINK13M2	IMS1
12	PLNK13V	38	18	LINK13V2	IMS1
7	N/A	43	44	ELINK124	IMS1
	N/A	36	3	LINK23V1	IMS1
1	PLNK12V	21	11	LINK12B1	IMS1
1	PLNK12V	22	12	LINK12B2	IMS1
10	PLNK12V	90	500	LINK12Y	IMS1
5	N/A	26	16	ELINK120	IMS1
1	PLNK12V	32	12	LINK13B4	IMS1
	N/A	8	3	LINK21V3	IMS1
6	N/A	51	41	ELINK1MS	IMS1
3	PLNK12M	24	14	LINK12M1	IMS1
	N/A	266	3	LINK23V	IMS1
4	N/A	35	15	LINK13U2	IMS1
	N/A	31	3	LINK23B3	IMS1
	N/A	43	3	ELINK224	IMS1
	N/A	80	3	LINK23X	IMS1
	N/A	37	3	LINK23V2	IMS1
6	N/A	27	17	ELINK121	IMS1
	N/A	33	3	LINK23C2	IMS1
4	N/A	25	15	LINK12U1	IMS1
	N/A	34	3	LINK23M2	IMS1
5	N/A	29	19	ELINK122	IMS1
	N/A	29	3	ELINK222	IMS1
2	PLNK12C	23	13	LINK12C1	IMS1
10	PLNK12V	36	16	LINK13V1	IMS1
7	N/A	42	45	ELINK123	IMS1
16	LKV1TSTB	93	3	PTH3TSTB	IMS1

97258/170244

Example 5 for /DISPLAY ASMT command

The following example displays information about MSC physical link assignments. The output is displayed in tabular format. Each logical link assigned to a physical link is displayed on a single row. The attributes of the physical links are displayed in columns.

In the output of the /DISPLAY ASMT MSPLINK command:

LINK The link number of the logical link that is assigned to the physical link.

PLINK

The name of the physical link.

TYPE The physical link type.

ADDR

The address of the physical link. ADDR applies to VTAM and CTC only.

MAXSESS

The maximum number of logical links or sessions that can be assigned to the physical link.

NODE

The identifier of the remote IMS system.

Entry ET:

```
/DISPLAY ASMT MSPLINK ALCB3MTM
```

Response ET:

```
LINK PLINK  TYPE ADDR  MAXSESS  NODE
   3 ALCB3MTM MTM  ****
*90280/072754*
```

Example 6 for /DISPLAY ASMT command

Entry ET:

```
/DISPLAY ASMT NODE NLU1 NLUT65 NLUT6P
```

Response ET:

```
NODE      USER      LTERM
NLU1              I/O- L1      , L2
NLUT65              I/O- L3
NLUT6P      A        I/O- L5      , L6
NLUT6P      N/A      I/O- NONE
NLUT6P      C        I/O- L7
*04008/113126*
```

Entry ET:

```
/DISPLAY ASMT NODE NLUT6P USER C
```

Response ET:

```
NODE      USER      LTERM
NLUT6P      C        I/O- L7
*04008/113126*
```

Entry ET:

```
/DISPLAY ASMT NODE ALL
```

Response ET:

```
NODE      USER      LTERM
CT3275              I/O- VT3275  , VT3275P
CT3277A              I/O- VT3270A
CT3277B              I/O- VT3270B
CT3277C              I/O- VT3270C
CT3277D              I/O- VT3270P1
CT3277E              I/O- VT3270P2
L3270A              I/O- VT3270L1
L3270B              I/O- VT3270L2
L3284A              I/O- VT3270P3
W612                I/O- W610JP  , W610D6  , W610FP
W613                I/O- W620JP  , W620D6  , W620PB  , W620M6
FCBOX1              I/O- W6CIT
*04008/113126*
```

Example 7 for /DISPLAY ASMT command

Entry ET:

/DISPLAY ASMT SYSID ALL

Response ET:

LINK	PLINK	SIDR	SIDL	MSNAME
1	BLCB1CTC	1	4	SYSTEM2A
1	BLCB1CTC	2	5	SYSTEM2B
1	BLCB1CTC	3	6	FRESNO
3	BLCB1MTM	19	20	TEST1
2	BLCB2BSC	21	23	BOSTON
2	BLCB2BSC	22	24	ALBANY

90280/072821

Entry ET:

/DISPLAY ASMT SYSID ALL

Response ET:

LINK	PLINK	SIDR	SIDL	MSNAME	IMS1
	N/A	8	3	LINK21V3	IMS1
	N/A	28	3	ELINK211	IMS1
5	N/A	29	19	ELINK122	IMS1
1	PLNK12V	31	11	LINK13B3	IMS1
1	PLNK12V	32	12	LINK13B4	IMS1
2	PLNK12C	33	13	LINK13C2	IMS1
3	PLNK12M	34	14	LINK13M2	IMS1
4	N/A	35	15	LINK13U2	IMS1
10	PLNK12V	36	16	LINK13V1	IMS1
	N/A	37	3	LINK23V2	IMS1
12	PLNK13V	38	18	LINK13V2	IMS1
7	N/A	43	44	ELINK124	IMS1
6	N/A	51	41	ELINK1MS	IMS1
10	PLNK12V	80	300	LINK13X	IMS1
10	PLNK12V	266	2036	LINK13V	IMS1

97258/170653

Entry ET:

/DISPLAY ASMT SYSID 22 23 24

Response ET:

LINK	PLINK	SIDR	SIDL	MSNAME
2	BLCB2BSC	22	24	ALBANY
23	IS	LOCAL		
24	IS	LOCAL		

90280/072902

Example 8 for /DISPLAY ASMT command

Entry ET:

/DISPLAY ASMT USER A B C D

Response ET:

USER	ID	NODE	I/O-	L1	, L2
A	CICSA	NLUT6P	I/O-	L1	
B			I/O-	L3	
C	CICSB	NLUT6P	I/O-	L4	
D			I/O-	NONE	

90229/083059

Entry ET:

/DISPLAY ASMT USER IMSUS01 IMSUS02

Response ET:

USER	USERID	ID	NODE
IMSUS01	IMSUS01		DTSLU201 I/O- IMSUS01
N/A	IMSUS01		L3270A I/O- T3270LA
N/A	IMSUS02		L3270B I/O- T3270LB
DT327002	IMSUS02		DT327002 I/O- DT327002

92350/112229

Entry ET:

/DISPLAY ASMT USER IMSUS01*

Response ET:

USER	USERID	ID	NODE
IMSUS01C	N/A		I/O- NONE
IMSUS01D	N/A		I/O- NONE
IMSUS01	IMSUS01		DTSLU201 I/O- IMSUS01
N/A	IMSUS01		L3270A I/O- T3270LA

92350/113904

Entry ET:

/DISPLAY ASMT USER ALL

Response ET:

USER	USERID	ID	NODE
CA13			I/O- CA1SP3T1, CA1SP3T2
IMSUS01C	N/A		I/O- NONE
IMSUS01D	N/A		I/O- NONE
LU6SPA	N/A	LU6NDPF	I/O- LU6LTPA1
LU6SPB	N/A		I/O- LU6LTPB1, LU6LTPB2
DT327002	IMSUS02	DT327002	I/O- DT327002
IMSUS03	IMSUS03	DTSLU601	I/O- IMSUS03
IMSUS01	IMSUS01	DTSLU201	I/O- IMSUS01
IMSUS05	N/A		I/O- NONE
N/A	IMSUS02	L3270B	I/O- T3270LB
N/A	IMSUS01	L3270A	I/O- T3270LA
N/A	IMSUS04	L3270C	I/O- T3270LC

92350/114845

Related reference:

-  QUERY LTERM command (Commands)
-  QUERY NODE command (Commands)
-  QUERY USER command (Commands)
-  QUERY USERID command (Commands)
-  QUERY MSLINK command (Commands)
-  QUERY MSPLINK command (Commands)

/DISPLAY CCTL command

Use the /DISPLAY CCTL command to display all coordinator controllers that are connected to DBCTL along with the pseudorecovery token, recovery token, region ID, PSB name, and status.

Restriction: The /DISPLAY CCTL command does not support the ODBA interface to IMS DB. To display status information about units of work for protected resources that are managed by z/OS Resource Recovery Services, use the /DISPLAY UOR command.

Subsections:

- “Environment”
- “Syntax”
- “Keywords”
- “Output fields” on page 403
- “Examples” on page 403

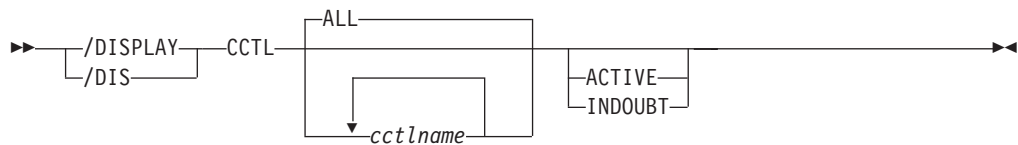
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 186. Valid environments for the /DISPLAY CCTL command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DISPLAY	X	X	X
ACTIVE	X	X	X
CCTL	X	X	
INDOUBT	X	X	

Syntax



Keywords

The following keywords are valid for the /DISPLAY CCTL command:

ALL | *cctlname*

Specifies the coordinator controllers to be displayed.

ALL

Displays all coordinator controllers that are connected to IMS.

cctlname

Specifies the name of the coordinator controller. You can specify one or more coordinator controller names.

ACTIVE | **INDOUBT**

Mutually exclusive, optional keywords that you use to specify the type of threads to be displayed.

ACTIVE

Displays all currently active threads that are associated with either the specified coordinator controller name (*cctlname*) or with all coordinator controllers.

INDOUBT

Displays all in-doubt threads that are associated with either the specified coordinator controller name (*cctlname*) or with all coordinator controllers.

Output fields

Coordinator controllers that are attached to IMS show a status of ATTACHED.

The status of active threads can be any of the following:

- ACTIVE
- ACTIVE-DBCMD
- AVAILABLE
- TERM
- UNAVAIL
- W-BLKMVR
- W-INTENT
- W-POOLSP
- W-SWITCH

The status of in-doubt threads is always displayed as INDOUBT.

Examples

The following are examples of the /DISPLAY CCTL command.

Example 1 for /DISPLAY CCTL command

Entry ET:

```
/DISPLAY CCTL
```

Response ET:

CCTL	STATUS
CICS1	
89067/114857	

Example 2 for /DISPLAY CCTL command

Entry ET:

```
/DISPLAY CCTL ALL
```

Response ET:

CCTL	PSEUDO-RTKN	RECOVERY-TOKEN	REGID	PSBNAME	STATUS
CICS1					ATTACHED
		0000000000000000	3		AVAILABLE
		0000000000000000	2		AVAILABLE
		0000000000000000	1		AVAILABLE
89067/113236					

Example 3 for /DISPLAY CCTL command

Entry ET:

```
/DISPLAY CCTL CICS1
```

Response ET:

CCTL	PSEUDO-RTKN	RECOVERY-TOKEN	REGID	PSBNAME	STATUS
CICS1					ATTACHED
		9FFA9568FF594301	3	BMP255	ACTIVE
		9FFA956B7AE24E00	2	BMP255	ACTIVE
		0000000000000000	1		AVAILABLE

89067/113251

Example 4 for /DISPLAY CCTL command

Entry ET:

/DISPLAY CCTL CICS1 ACTIVE

Response ET:

CCTL	PSEUDO-RTKN	RECOVERY-TOKEN	REGID	PSBNAME	STATUS
CICS1					ATTACHED
		9FFA967C26D69802	2	BMP255	ACTIVE
		9FFA967ACF9EB802	1	BMP255	ACTIVE

89067/114557

Example 5 for /DISPLAY CCTL command

Entry ET:

/DISPLAY CCTL CICS1 INDOUBT

Response ET:

CCTL	PSEUDO-RTKN	RECOVERY-TOKEN	REGID	PSBNAME	STATUS
CICS1					ATTACHED
	000100C0	9FFA956B7AE24E00		BMP255	INDOUBT
	00010040	9FFA9568FF594301		BMP255	INDOUBT

89067/113413

Related reference:

"Status and attributes for the /DISPLAY command" on page 357

/DISPLAY CONV command

Use the /DISPLAY CONV command to display all BUSY and HELD conversations in the IMS system if no other keywords or parameters are specified.

Subsections:

- "Environment"
- "Syntax" on page 405
- "Keywords and reserved parameters" on page 405
- "Usage notes" on page 406
- "Equivalent IMS type-2 commands" on page 406
- "Output fields" on page 406
- "Examples" on page 407

Environment

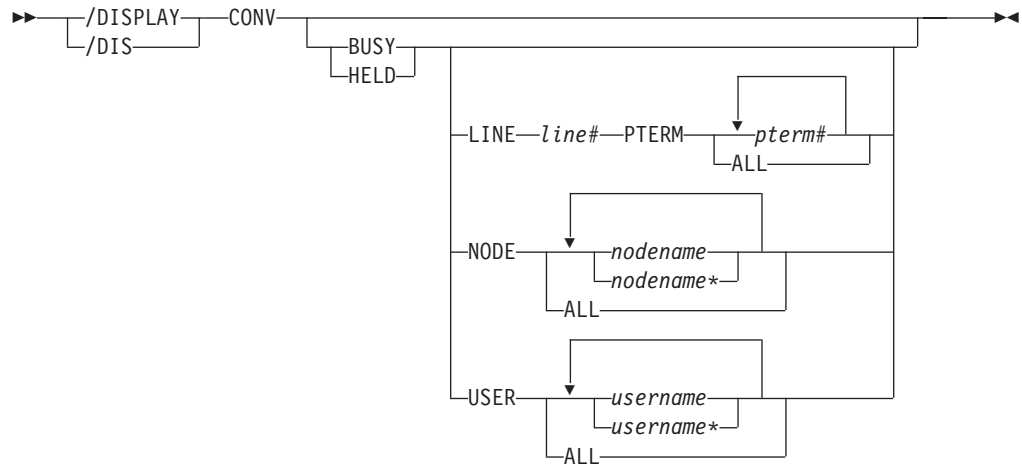
The /DISPLAY CONV command is valid in DB/DC and DCCTL environments.

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 187. Valid environments for the /DISPLAY CONV command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DISPLAY	X	X	X
CONV	X		X
LINE	X		X
NODE	X		X
USER	X		X

Syntax



Keywords and reserved parameters

The following keywords and reserved parameters are valid for the /DISPLAY CONV command:

BUSY The conversations currently active for the system or active for a specific node, line and physical terminal, or user.

HELD The conversations currently held in the system or held from a specific node, line and physical terminal, or user.

LINE All conversations for the specified communication line are displayed.

NODE

All conversations for the specified node are displayed. If the NODE keyword is used and the node is an ISC node, information for all applicable sessions of the parallel session node is displayed. For dynamic terminals, the conversations of the currently associated user are displayed. The NODE parameter can be generic.

PTERM

All conversations for the specified physical terminal are displayed.

USER All conversations that apply to the specified user are displayed. The USER parameter can be generic.

Usage notes

/DISPLAY CONVERSATION is accepted as a valid command from an IMS terminal because CONVERSATION is a valid synonym of CONV.

When ISC is used with parallel sessions, one line of information for each session in a conversation is displayed. The user name is also displayed.

Attention: In an IMSplex, use of the /DISPLAY CONV command without a specific resource name will result in extensive accesses to the Resource Manager for global information, and its use should be carefully considered.

For an IMS conversational transaction issued from an LU 6.2 application program, the /DISPLAY CONV command shows the LU name and user ID (if available) of the LU 6.2 conversation along with the IMS conversation ID and status.

For an IMS conversational transaction issued from an OTMA client, the /DISPLAY CONV command shows the TMEMBER and TPIPE name in addition to the IMS conversation ID and status.

On an IMS XRF alternate system, where TMEMBER and TPIPE name information is not available, the literal 'UNKNOWN.OTMA' is displayed instead of the TMEMBER and TPIPE names associated with the conversation.

Equivalent IMS type-2 commands

The following table shows variations of the /DISPLAY CONV command and the IMS type-2 commands that perform similar functions.

Table 188. Type-2 equivalents for the /DISPLAY CONV command

Task	/DISPLAY CONV command	Similar IMS type-2 command
Displays nodes with active or held conversations.	/DISPLAY CONV	QUERY NODE STATUS(CONV)
Displays users with active or held conversations.	/DISPLAY CONV	QUERY USER STATUS(CONV)
Displays IMS conversation information for a particular node.	/DISPLAY CONV NODE <i>node</i>	QUERY NODE SHOW(CONV)
Displays IMS conversation information for a particular user.	/DISPLAY CONV USER <i>user</i>	QUERY USER SHOW(CONV)

Output fields

The following output fields are displayed for the /DISPLAY CONV command:

ID A 4-byte conversation ID, which is unique for each user and terminal.

STATUS Conversation status. The status can be ACTIVE, HELD, or SCHEDULED.

TERMINAL Physical device with which the conversation is associated. This can be a non-VTAM device/pterm, a VTAM node, an ISC node, an APPC luname, or an OTMA tmember/tpipe.

USER The user signed on to a dynamic VTAM node, or the subpool associated with an ISC node, or the user ID for an LU 6.2 conversation.

Examples

Entry ET:

```
/DISPLAY CONV
```

Response ET:

```
TERMINAL USER  ID STATUS
NO CONVERSATIONS
*91113/182917*
```

Entry ET:

```
/DISPLAY CONV
```

Response ET:

```
TERMINAL USER  ID STATUS
11-   2          0001 HELD
4-    2          0002 ACTIVE, SCHEDULED
11-   4          0001 HELD
2-    1          0001 HELD
5-    1          0002 ACTIVE
*91115/135706*
```

Entry ET:

```
/DISPLAY CONV
```

Response ET:

```
TERMINAL USER  ID STATUS
LUNAME1  USERID1 0001 ACTIVE
DT327001 IMSUS01 0005 ACTIVE
LUNAME2          0002 ACTIVE, SCHEDULED
LUNAME3  USERID4 0003 ACTIVE, SCHEDULED
LUNAME1  USERID4 0004 SCHEDULED
*90332/114253*
```

Entry ET:

```
/DISPLAY CONV BUSY
```

Response ET:

```
TERMINAL USER  ID STATUS
NO BUSY CONVERSATIONS
*91113/182959*
```

Entry ET:

```
/DISPLAY CONV BUSY
```

Response ET:

```
TERMINAL USER  ID STATUS
2-    1          0001 ACTIVE, SCHEDULED
4-    2          0010 ACTIVE, SCHEDULED
4-    1          0011 ACTIVE, SCHEDULED
*91113/192021*
```

Entry ET:

```
/DISPLAY CONV BUSY LINE 4 PTERM ALL
```

Response ET:

TERMINAL	USER	ID	STATUS
4-	2	0001	ACTIVE, SCHEDULED
4-	1	0002	ACTIVE, SCHEDULED

91113/192101

Entry ET:

/DISPLAY CONV BUSY

Response ET:

TERMINAL	USER	ID	STATUS
NETWORK1.LUNAME1	USERID1	0001	ACTIVE
DT327001	IMSUS01	0005	ACTIVE
NID2.LUNAME2		0002	ACTIVE,SCHEDULED
LUNAME3	USERID4	0003	ACTIVE,SCHEDULED
NETWORK1.LUNAME1	USERID5	0004	ACTIVE

92232/114253

Entry ET:

/DISPLAY CONV HELD

Response ET:

TERMINAL	USER	ID	STATUS
NO HELD CONVERSATIONS			

91113/183022

Entry ET:

/DISPLAY CONV HELD NODE NSLUTP6

Response ET:

TERMINAL	USER	ID	STATUS
NSLUTP6	SPOOLA	0007	HELD
NSLUTP6	SPOOLC	000A	HELD

91113/183033

Related reference:

-  [QUERY NODE command \(Commands\)](#)
-  [QUERY USER command \(Commands\)](#)

/DISPLAY CPLOG command

Use the /DISPLAY CPLOG command to display the value of the IMS execution parameter, CPLOG. CPLOG specifies the number of system log records between system-generated checkpoints.

Subsections:

- “Environment”
- “Syntax” on page 409

Environment

The /DISPLAY CPLOG command is valid in DB/DC, DBCTL, and DCCTL environments.

Syntax



/DISPLAY CQS command

Use the /DISPLAY CQS command to display information about the Common Queue Server (CQS), including the CQS job name, version number, and current status. Valid status conditions are CONNECTED and DISCONNECTED.

Subsections:

- "Environment"
- "Syntax"
- "Examples"

Environment

The /DISPLAY CQS command is valid in DB/DC and DCCTL environments.

This command is valid only in a shared-queues environment.

Syntax



Examples

Entry ET:

```
/DISPLAY CQS
```

Response ET:

```
JOBNAME    VERS#   STATUS
CQS1        1.1    CONNECTED
*95200/170817*
```

Explanation: IMS is connected to the Common Queue Server, CQS1.

/DISPLAY DB command

Use the /DISPLAY DB command to display the status of the specified databases. If a specified database is a DEDB, the associated DEDB areas are also displayed.

The /DISPLAY DB command can be used on HALDB databases.

Subsections:

- "Environment" on page 410
- "Syntax" on page 410
- "Keywords and reserved parameters" on page 410
- "Usage notes" on page 412
- "Equivalent IMS type-2 commands" on page 413

- “Output fields” on page 413
- “Examples” on page 415

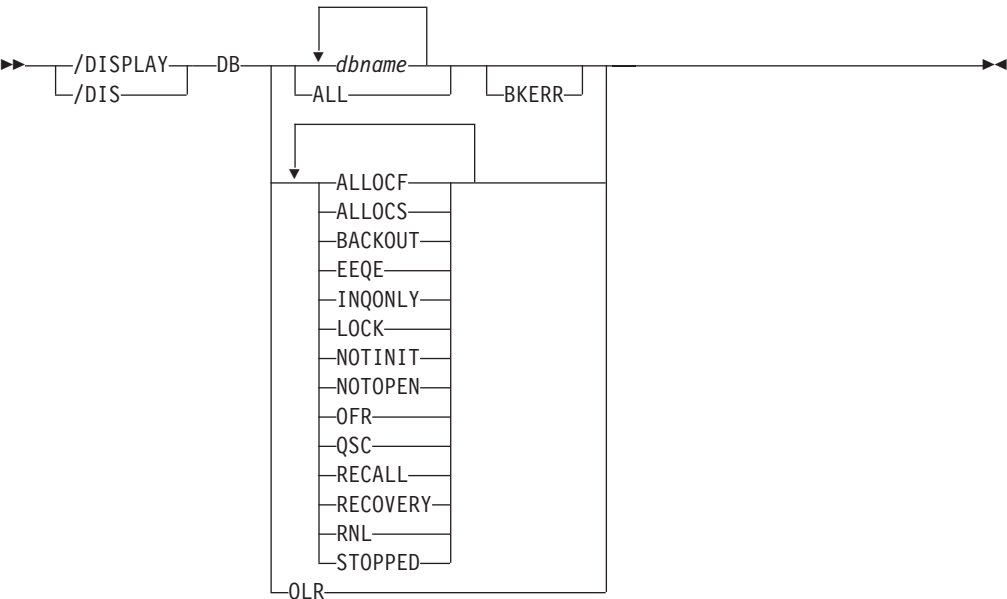
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 189. Valid environments for the /DISPLAY DB command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DISPLAY	X	X	X
DB	X	X	
BKERR	X	X	

Syntax



Keywords and reserved parameters

The following keywords can be specified for the /DISPLAY DB command:

BKERR

Displays the error queue elements associated with a DL/I or DEDB database. It also displays incomplete backouts preventing the use of a DL/I database.

OLR

The /DISPLAY DB OLR command displays the status of a specified partition locally; that is, the status is only from the IMS where the command was issued. The /DISPLAY DB OLR command returns OLR information and status of all partitions that have HALDB online reorganization (OLR) cursor-active status. The following information is returned:

RATE The rate at which the HALDB OLR is running, from 1 to 100

BYTES

The total number of bytes moved to the output data sets

SEGMENT

The total number of segments moved to the output data sets

ROOTS

The total number of roots moved to the output data sets

STARTTIME

The local time the OLR was first started

STATUS

HALDB OLR status. One or more of the following statuses are returned:

- RUNNING - OLR is running.
- WAITLOCK - OLR is waiting for a lock.
- WAITRATE - OLR is waiting because of an intentional delay. This intentional delay occurred because a value of less than 100 was specified for the RATE parameter.
- OPTDEL - Output data sets are deleted at the end of OLR.
- OPTNODEL - Output data sets are not deleted at the end of OLR.
- RESUMED - OLR is resumed at this IMS after being stopped for some reason such as a TERMINATE OLREORG command or a user abend.
- NOTOWNED - OLR is not owned by this IMS.

The /DISPLAY DB OLR command can be issued to obtain the above information for an OLR that has been stopped for some reason such as a TERMINATE OLREORG command or a user abend. The data associated with the terminated OLR is maintained and provided under any of the following conditions:

- The TERMINATE OLR command is issued.
- Abnormal OLR termination occurs (for example, DFS2971W message is issued)
- IMS is normally shut down.

Note: If the partition or HALDB master has been taken offline with a /DBR command, the status will not be available through the /DISPLAY DB OLR command until the OLR is resumed. The status, however, can be obtained through the LIST.DB or LIST.RECON command.

The OLR attribute cannot be specified on the /DISPLAY DB command with any other attribute such as STOPPED or ALLOC. If additional attributes are specified, the command is rejected and message, DFS0135 is displayed. If a /DISPLAY DB OLR command is issued on an RSR tracker or an XRF alternate, the message, DFS132I - ALL PARAMETERS ARE INVALID is displayed.

Attributes are reserved parameters for the /DISPLAY DB command and cannot be used to name databases. Attributes listed with the following table can be used with the DB keyword. Databases are selected for display based on the attribute or attributes specified. The attribute display format is the same as the standard DB display. Attributes usually correspond to the conditions displayed for databases.

Table 190. /DISPLAY DB command attributes

ALLOCF	ALLOCS

Table 190. /DISPLAY DB command attributes (continued)

BACKOUT	EEQE
INQONLY	LOCK
NOTINIT	NOTOPEN
OFR	OLR
QSC	RECALL
STOPPED	

ALLOCF

Displays the databases whose allocation failed.

ALLOCS

Displays the databases whose allocation was successful.

BACKOUT

Displays the databases with incomplete backouts, which prevent the use of the databases.

EEQE

Displays the databases that are associated with one or more error queue elements.

INQONLY

Displays the databases for which a /DBDUMP command was issued.

LOCK

Displays the databases that are locked.

NOTINIT

Displays the databases for which directory initialization failed.

NOTOPEN

Displays the databases that are not in open status. This status is not applicable to MSDBs.

OFR

Displays the databases that are currently being recovered by online forward recovery (OFR).

Note: The OFR attribute is valid only when issued from an RSR tracking subsystem.

OLR

Displays the databases that have online reorganization in progress.

Restriction: The OLR attribute cannot be entered with any other attribute.

QSC

Displays the databases that have the status of quiesced or quiescing.

RECALL

Displays the databases that are in recall.

STOPPED

Displays the databases that are stopped.

Usage notes

If you use the /DISPLAY command to identify OLRs that are terminated using the TERMINATE OLREORG command, it does not report status for partitions that have not been authorized. Alternately, use the commands QUERY OLREORG

STATUS (NOTOWNED) with ROUTE(*) on the command request, and /RMLIST DBRC='DB DBD(partname)'. If all systems on the PLEX show status NOTOWNED, and the DBRC database record shows an OLR active cursor, then OLR has been terminated.

When you enter this command, the database name can be an existing non-HALDB, a HALDB master, or a HALDB partition. A command against a HALDB partition operates exactly like a command against a non-HALDB except for the /START DB and the UPDATE DB START(ACCESS) command. A HALDB partition is not allocated during the command unless it was previously authorized but not allocated, the OPEN keyword was specified, or the partition has EEQEs. The partition is allocated at first reference.

The HALDB partition reflects conditions such as STOPPED, LOCKED, or NOTOPEN. When a HALDB partition is stopped, it must be explicitly started again. Commands with the keyword ALL and commands against a HALDB master do not change the STOPPED and LOCKED indicators in each HALDB partition.

When the command target is a HALDB master, processing acts on all HALDB partitions. For example, if the IMS command is /DBR on the HALDB master, all of the HALDB partitions are closed, deallocated, and deauthorized. Only the HALDB master displays STOPPED (each HALDB partition does not display STOPPED unless it was itself stopped). If a /DBR command was issued against a HALDB master, the display output of a /DISPLAY DB command shows the HALDB master (as STOPPED), but does not display the status of the partitions.

Each partition inherits the access limitations of its HALDB master. If the /DBD command is issued against a HALDB master, all of its partitions close. A subsequent reference to any of the partitions results in the partition opening for input, although the partition's access might be UPDATE or EXCLUSIVE. The DBRC authorization state reflects the limited access.

Equivalent IMS type-2 commands

The following table shows variations of the /DISPLAY DB command and the IMS type-2 commands that perform similar functions.

Table 191. Type-2 equivalents for the /DISPLAY DB command

Task	/DISPLAY DB command	Similar IMS type-2 command
Displays the status of a database.	/DISPLAY DB dbname1 ...dbnamen ALL	QUERY DB

Output fields

The following output fields are displayed for the /DISPLAY DB command:

- DB** Name of the database.
- TYPE** Type of database:
 - DL/I
 - DEDB
 - MSNR (refers to MSDB non-related databases)
 - MSRD (refers to MSDB-related dynamic databases)
 - MSRF (refers to MSDB-related fixed databases)

- PHIDAM
- PHDAM
- PSINDEX
- PART
- blank (if the database status is NOTINIT)

TOTAL SEQ DEPEND

Total control intervals defined for sequential dependent space, which applies to areas associated with DEDBs. This column appears only if Fast Path is installed.

UNUSED SEQ DEPEND

Unused control intervals for sequential dependent space. This column appears only if Fast Path is installed.

TOTAL DIRECT ADDRESS

Total control intervals for independent overflow part of direct addressable space, which applies to areas associated with DEDBs. This column appears only if Fast Path is installed.

UNUSED DIRECT ADDRESS

Total unused control intervals for independent overflow part of a direct addressable space, which applies to areas associated with DEDBs. This column appears only if Fast Path is installed. This IOVF count is updated on a timed basis, with a default timer of 2 hours.

ACC Type of access to the database, which can be one of the following:

- RO** Read only
- RD** Read
- UP** Update
- EX** Exclusive

CONDITIONS

Status conditions of the database, which can be one or more of the following:

- ALLOCF
- ALLOCS
- BACKOUT
- EEQE
- INQONLY
- LOCK
- NOTINIT
- NOTOPEN
- OFR
- OLR
- QUIESCED
- QUIESCING
- RECALL
- RECOVERY
- RNL
- STOPPED

The /DISPLAY DB command with the BKERR keyword displays error queue elements associated with a DL/I database and displays incomplete backouts.

The following output fields are displayed by the /DISPLAY DB command with the BKERR keyword:

DATABASE

Name of the database with error queue elements or backout pending data.

ERROR DD

DDNAME of the data set with the error queue element

TYPE Type of error queue element, which is one of the following:

BACK PSB

PSB needing backout

BLOCK

OSAM block number or VSAM CI RBA

DATE Date

IDT In-doubt

IDT+WRT

In-doubt and write error

IDT+IOT

In-doubt and I/O toleration

IOT I/O toleration

IOT/VSO

I/O toleration for VSO areas

PRM DBRC permanent

RD Read error

TIME Time

USE DBRC user created

WRT Write error

BLOCK

The /DISPLAY DB command with BKERR does not display individual RBAs for I/O tolerated non-SDEP CIs of a DEDB area defined with the Virtual Storage Option (VSO). Instead, a single entry with a value of 00000001 is displayed; the EEQE type is set to IOT/VSO. I/O tolerated SDEP CIs for the area are displayed individually by RBA.

The EEQE information might not be current if the database is registered with DBRC and is not open, because IMS updates EEQE information from DBRC when the database is opened.

Examples

The following are examples of the /DISPLAY DB command.

Example 1 for /DISPLAY DB command

Entry ET:

/DISPLAY DB ALL

Response ET:

DATABASE	TYPE	TOTAL	UNUSED	TOTAL	UNUSED	ACC	CONDITIONS
DD41M702	DL/I					EX	NOTOPEN
DD41M803	DL/I					EX	NOTOPEN
DEDBJN21	DEDB	SEQ	DEPEND	DIRECT	ADDRES	EX	NOTOPEN
DB21AR0	AREA	N/A	N/A	N/A	N/A		NOTOPEN
DB21AR1	AREA	N/A	N/A	N/A	N/A		NOTOPEN
DB21AR2	AREA	N/A	N/A	N/A	N/A		NOTOPEN
DB21AR3	AREA	N/A	N/A	N/A	N/A		NOTOPEN
DB21AR4	AREA	N/A	N/A	N/A	N/A		NOTOPEN
DB21AR5	AREA	N/A	N/A	N/A	N/A		NOTOPEN
DB21AR6	AREA	N/A	N/A	N/A	N/A		NOTOPEN
DB21AR7	AREA	N/A	N/A	N/A	N/A		NOTOPEN
DB21AR8	AREA	N/A	N/A	N/A	N/A		NOTOPEN
DB21AR9	AREA	N/A	N/A	N/A	N/A		NOTOPEN
DB21AR10	AREA	N/A	N/A	N/A	N/A		NOTOPEN
DB21AR11	AREA	N/A	N/A	N/A	N/A		NOTOPEN
DEDBJN22	DEDB	SEQ	DEPEND	DIRECT	ADDRES	EX	NOTOPEN
DB22AR0	AREA	N/A	N/A	N/A	N/A		NOTOPEN
DB22AR1	AREA	N/A	N/A	N/A	N/A		NOTOPEN
DEDBJN23	DEDB	SEQ	DEPEND	DIRECT	ADDRES	EX	NOTOPEN
DB23AR0	AREA	N/A	N/A	N/A	N/A		NOTOPEN
DB23AR1	AREA	N/A	N/A	N/A	N/A		NOTOPEN
DIMSRN01	DL/I					EX	NOTOPEN
DIMSRN02	DL/I					EX	NOTOPEN
DIMSRN03	DL/I					EX	NOTOPEN

89184/142639

Entry ET:

/DISPLAY DB DD41M803 BKERR

Response ET:

```

DATABASE
DD41M803
      ERROR DD   TYPE      BLOCK
      DD41M803  IOT      0000003F
*90135/161902*
```

Explanation: An I/O toleration error queue element exists for database DD41M803 on a newly created active system in an XRF environment.

Following an /UNLOCK SYSTEM command on the above system, the /DISPLAY DB DD41M803 BKERR command would yield the following display:

```

DATABASE
DD41M803
      NO EEQE OR INCOMPLETE BACKOUT INFORMATION AVAILABLE
*90135/163500*
```

Example 2 for /DISPLAY DB command

Entry ET:

/DIS DB BE3ORDER BE3PARTS.

Response ET:

DATABASE	TYPE	TOTAL	UNUSED	TOTAL	UNUSED	ACC	CONDITIONS
BE3ORDER	DL/I					EX	STOPPED, LOCK, NOTOPEN, RECALL
BE3PARTS	DL/I					EX	NOTOPEN, RECALL

94277/124039

Example 3 for /DISPLAY DB command

Entry ET:

/DIS DB RECALL.

Response ET:

DATABASE	TYPE	TOTAL UNUSED	TOTAL UNUSED	ACC	CONDITIONS
BE3ORDER	DL/I			EX	STOPPED, LOCK, NOTOPEN, RECALL
BE3PARTS	DL/I			EX	NOTOPEN, RECALL
IVPDB1	DL/I			UP	STOPPED, LOCK, NOTOPEN, RECALL
IVPDB2	DL/I			UP	NOTOPEN, RECALL
94277/124119					

Example 4 for /DISPLAY DB command

Entry ET:

/DISPLAY DB DEDBJN21 BKERR

Response ET:

DATABASE	ERROR DD	TYPE	BLOCK
DEDBJN21			
	DB21AR0	IOT	00015000
	DB21AR0	IOT/VSO	00000001
	DB21AR1	IOT	00054000
	DB21AR1	IOT/VSO	00000001

Explanation: The /DISPLAY DB command with the BKERR keyword does not display individual RBAs for I/O tolerated non-SDEP CIs of a DEDB area defined with the Virtual Storage Option (VSO). Instead, a single entry with a value of 00000001 is displayed and the EEQE type is set to IOT/VSO. I/O tolerated SDEP CIs for the area are displayed individually by RBA.

Example 5 for /DISPLAY DB command

Entry ET:

/DISPLAY DB OFR

Response ET:

DATABASE	TYPE	TOTAL UNUSED	TOTAL UNUSED	ACC	CONDITIONS
BE2PCUST	DL/I			EX	ALLOCS OFR
BE3ORDER	DL/I			EX	ALLOCS OFR
BE3ORDRX	DL/I			EX	ALLOCS OFR
BE3PARTS	DL/I			EX	ALLOCS OFR
BE3PSID1	DL/I			EX	ALLOCS OFR
91240/132406	SYS3				

Example 6 for /DISPLAY DB command

If a full function database data set is undergoing recovery with Online Recovery Service, the output of the /DISPLAY DB command includes this information in the command response.

Entry ET:

/DISPLAY DB DD41M702

Response ET:

DATABASE	TYPE	TOTAL UNUSED	TOTAL UNUSED	ACC	CONDITIONS
DD41M702	DL/I			EX	STOPPED, LOCK, NOTOPEN RECOVERY

97184/142639

Example 7 for /DISPLAY DB command

Display the HALDB master for the PHIDAM database called PARTMAST.

Entry ET:

/DIS DB PARTMAST

Response ET:

DATABASE	TYPE	TOTAL UNUSED	TOTAL UNUSED	ACC	CONDITIONS
PARTMAST	PHIDAM			UP	
PART1	PART			UP	ALLOCS
PART2	PART			UP	NOTOPEN
PART3	PART			UP	STOPPED

99166/092514

Example 8 for /DISPLAY DB command

Display the HALDB partition for PHIDAM PART2.

Entry ET:

/DIS DB PART2

Response ET:

DFS000I	DATABASE	TYPE	TOTAL UNUSED	TOTAL UNUSED	ACC	CONDITIONS
DFS000I	PARTMAST	PHIDAM			UP	
DFS000I	PART2	PART			UP	NOTOPEN

99166/092737

Example 9 for /DISPLAY DB command

Entry ET:

/DIS DB OLR

Response ET:

DATABASE	PART	RATE	BYTES	SEGS	ROOTS	STARTTIME
STATUS						
DBHDOJ01	PDHDOJB	1	0	0	0	07295/143354
WAITRATE, OPTNODEL						
DBHDOJ01	PDHDOJA	1	3330	17	1	07295/143354
WAITRATE, OPTDEL						
DBHDOJ01	PDHDOJC	1	1400	5	2	07295/143354
WAITLOCK, OPTNODEL						

07295/143358

Explanation: Issue the /DISPLAY DB OLR command to obtain information about all HALDB online reorganizations that are running in cursor-active status. The following information is returned:

- Master database name
- Partition name
- OLR rate
- Number of bytes moved

- Number of segments moved
- Number of roots moved
- Start time of the OLR when it was first started
- Status of the progress of OLR
- OLR inactive data set option
- Date/Time stamp when the command was processed

Note: For partitions in NOTOWNED status, if the OLR statistics information is unavailable, only the master database name, partition name, and status are displayed.

Example 10 for /DISPLAY DB command

Entry ET:

/DISPLAY DB QSC

Response ET:

DATABASE	TYPE	TOTAL UNUSED	TOTAL UNUSED	ACC	CONDITIONS
AUTODB	DL/I			UP	NOTOPEN, QUIESCING
DBHIDJ03	PHIDAM			UP	
POHIDJC	PART			UP	NOTOPEN, QUIESCED
DBOHIDK5	PHIDAM			UP	QUIESCED
POHIDKA	PART			UP	NOTOPEN, ALLOCS, QUIESCED
POHIDKB	PART			UP	NOTOPEN, QUIESCED
POHIDKC	PART			UP	NOTOPEN, QUIESCED
POHIDKD	PART			UP	NOTOPEN, QUIESCED
DBOVLFPC	DL/I			UP	NOTOPEN, QUIESCING

Explanation: Issue the /DISPLAY DB QSC command to obtain information about all databases that have the status of quiesced or quiescing.

Related reference:

“Status and attributes for the /DISPLAY command” on page 357

 Parameter descriptions for IMS procedures (System Definition)

 QUERY DB command (Commands)

/DISPLAY DBD command

Use the /DISPLAY DBD command to display, for databases that are being accessed, their type, the PSBs accessing them, and the type of access.

Subsections:

- “Environment”
- “Syntax” on page 420
- “Equivalent IMS type-2 commands” on page 420
- “Examples” on page 420

Environment

The /DISPLAY DBD command is valid in DB/DC and DBCTL environments.

Syntax



Equivalent IMS type-2 commands

The following table shows variations of the /DISPLAY DBD command and the IMS type-2 commands that perform similar functions.

Table 192. Type-2 equivalents for the /DISPLAY DBD command

Task	/DISPLAY DBD command	Similar IMS type-2 command
Displays the programs being accessed by databases.	/DISPLAY DBD dbdname	QUERY DB NAME(dbname) SHOW(PGM)

Examples

Entry ET:
/DISPLAY DBD MSDBLM01 MSDBLM02 MSDBLM03 MSDBLM04

Response ET:

DBD-NAME	TYPE	PSB-NAME	ACCESS
MSDBLM01	MSDB	DDLTL06	R/W
		DDLTL07	R/W
MSDBLM02	MSDB	DDLTL06	R/W
		DDLTL07	R/W
MSDBLM03	MSDB	DDLTL06	R/W
		DDLTL07	R/W
MSDBLM04	MSDB	DDLTL06	R/W
		DDLTL07	R/W

91068/110958

Related reference:
 QUERY DB command (Commands)

/DISPLAY DESC command

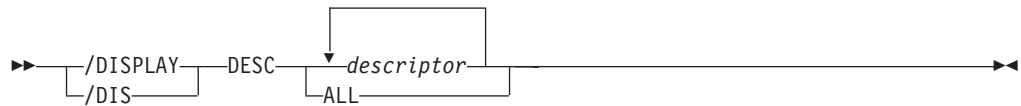
Use the /DISPLAY DESC command to display LU 6.2 descriptors. All specified values are displayed, as are defaults/blanks for values not specified in the descriptor.

- Subsections:
- “Environment”
 - “Syntax” on page 421
 - “Output fields” on page 421
 - “Examples” on page 421

Environment

The /DISPLAY DESC command is valid in DB/DC and DCCTL environments.

Syntax



Output fields

The following output fields are displayed for the /DISPLAY DESC command:

DESC Name of the descriptor.

LUNAME

LU name value in the descriptor. The network-qualified LU name is optional for the LUNAME keyword.

MODE

VTAM LOGON mode table entry value in the descriptor.

OUTBNDLU

Shows which local-LU will be used for APPC outbound processing when the descriptor is used.

SIDE APPC z/OS side table entry value in the descriptor.

SYNCLEVEL

APPC synchronous level in the descriptor; either NONE or CONFIRM.

TPNAME

TP name value in the descriptor. If the tpname is too long, a + is appended at the end, and the rest is continued on a second line.

TYPE APPC conversation type value in the descriptor; it is either BASIC or MAPPED.

Examples

Entry ET:

```
/DISPLAY DESC ALL
```

Response ET:

DESC	LUNAME	MODE	SIDE	SYNCLEVEL	TYPE	OUTBNDLU
LU62DES1	NID2.LUNAME4	ALPHA	SIDENME1	CONFIRM	MAPPED	MYLU02
TPNAME: ACCOUNT						
LU62DES2	LUNAME7	BETHA	SIDENME2	NONE	BASIC	
TPNAME: APPLE67890123456789012345						
92232/114253						

/DISPLAY FDR command

Use the /DISPLAY FDR command to display the current status for IMS Fast Database Recovery regions.

IMS rejects this command if the active IMS subsystem is not connected to a Fast Database Recovery region.

Subsections:

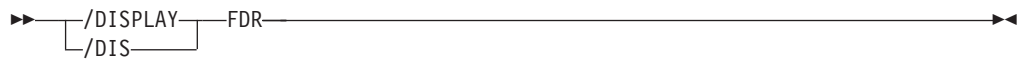
- “Environment” on page 422

- “Syntax”
- “Output fields”
- “Examples”

Environment

The /DISPLAY FDR command is valid in DB/DC and DBCTL environments.

Syntax



Output fields

The following output fields are displayed for the /DISPLAY FDR command:

FDR-REGION

Status of the Fast Database Recovery region to which the IMS subsystem is connected. The status can be ACTIVE or NO_ACTIVE.

GROUPNAME

The z/OS cross-system coupling facility (XCF) group name specified in the DFSFDRxx member of IMS.PROCLIB.

TIMEOUT

The failure-detection timeout value specified in the DFSFDRxx member or set by a /CHANGE FDR command.

Examples

Entry ET:

```
/DISPLAY FDR
```

Response ET:

```

FDR-REGION  GROUPNAME  TIMEOUT
ACTIVE      FDBRSYS3   055
*96232/114253*
  
```

/DISPLAY FPV command

Use the /DISPLAY FPV command to display the areas loaded into a z/OS data space or coupling facility. That is, those areas that have been specified with the virtual storage option (VSO) are displayed with this command.

Subsections:

- “Environment”
- “Syntax” on page 423
- “Output fields” on page 423
- “Examples” on page 423

Environment

The /DISPLAY FPV command is valid in DB/DC and DBCTL environments.

Syntax



Output fields

Each data space is displayed, along with each of the areas that reside in the data space. All numbers shown are in decimal values.

The following output fields are displayed by the `/DISPLAY FPV` command:

DATASPACE

Data space number.

MAXSIZE(4K)

Maximum available size, in 4 KB blocks. This is the amount of space available in the data space for user data.

AREANAME

Name of the area located in the data space or in the coupling facility.

AREASIZE(4K)

Actual storage available for a particular area, in 4 KB blocks. The actual space usage can be significantly less than what is reserved if a VSO dataspace is not preloaded.

OPTION

A data space option (which can be DREF) or an area option (which can be PREL or PRE0). Area options are defined to DBRC with the `INIT.DBDS` or `CHANGE.DBDS` command.

STRUCTURE

Name of the coupling facility structure allocated for this area.

ENTRIES

Number of area CIs in the structure.

CHANGED

Number of area CIs in the structure that have been updated. IMS writes these updated CIs to DASD (and resets this value) when you enter any of the following commands:

- `/CHECKPOINT`
- `/STOP AREA`
- `/VUNLOAD`

AREACI#

Total number of area CIs that can be loaded into the structure.

POOLNAME

Name of the private buffer pool used by the area.

Examples

Entry ET:

```
/DISPLAY FPV
```

Response ET:

DATASPACE	MAXSIZE(4K)	AREANAME	AREASIZE(4K)	OPTION	SYS3
001	524188	DB21AR1	76	PREO	
		DB21AR11	152		
000	524188			DREF	
		DB21AR0	19	PREO, PREL	
		DB21AR10	19	PREO, PREL	
		DB21AR2	38	PREO, PREL	

93076/173254

Entry ET:

/DISPLAY FPV

Response ET:

DATASPACE	MAXSIZE(4K)	AREANAME	AREASIZE(4K)	OPTION
000	524263			DREF
		DB21AR4	167	PREO, PREL
		DB21AR2	42	PREO, PREL
001	524263	DB21AR3	84	PREO
		DB21AR1	84	
CF	POOL	CACHE	AREANAME	AREASIZE(4K) OPTION
CF1	4K	N	AREAFR01	1000 PREO, PREL
CF2	512	Y	AREA2	100 PREO, PREL

95225/173254

Entry ET:

/DISPLAY FPV

Response ET:

DATASPACE	MAXSIZE(4K)	AREANAME	AREASIZE(4K)	OPTION	SYS3
000	524238			DREF	SYS3
		DB21AR1	19	PREO, PREL	
		DB21AR0	19	PREO, PREL	
		DB23AR1	19	PREO, PREL	
001	524238				SYS3
NO AREAS LOADED INTO NORM DATASPACE 001. SYS3					
002	524238				SYS3
NO AREAS LOADED INTO NORM DATASPACE 002. SYS3					
AREANAME STRUCTURE ENTRIES CHANGED AREA CI# POOLNAME OPTIONS SYS2					
NO BLOCK LEVEL SHARED AREAS EXIST. SYS3					

03129/145840 SYS3

Entry ET:

/DISPLAY FPV

Response ET:

AREANAME	STRUCTURE	ENTRIES	CHANGED	AREA	CI#	POOLNAME	OPTIONS
DB33FR01	DB33FR01STRUCTUR	0000150	0000018	00000150	FR01		PREO, PREL
DB21AR9	MAS1KSTR	0000043	0000043	00000270	MAS1K		PREO
DB21AR8	MAS1KSTR	0000044	0000044	00000150	MAS1K		PREO
DD01AR0	DD01AR0STR1	0000045	0000025	00000045	DD01		PREO, PREL
DB21AR10	MAS512STR	0000084	0000084	00000150	V\$\$\$512		PREO
DB21AR3	MAS2KSTR	0000150	0000015	00000150	MAS2K		PREO, PREL
DB21AR1	MAS2KSTR	0000150	0000126	00000150	MAS2K		PREO, PREL
DB21AR0	MAS512STR	0000150	0000001	00000150	V\$\$\$512		PREO, PREL
DB21AR4	MAS4KSTR	0000010	0000010	00000150	MAS4K		PREO
DB21AR11	MAS4KSTR	0000010	0000010	00000150	MAS4K		PREO
DB21AR5	MAS1KSTR	0000044	0000044	00000150	MAS1K		PREO
DB21AR6	MAS512STR	0000077	0000077	00000150	V\$\$\$512		PREO
DB21AR7	MAS1KSTR	0000040	0000040	00000150	MAS1K		PREO
DB21AR2	MAS1KSTR	0000044	0000044	00000150	MAS1K		PREO

Explanation: Each area using a multi-area structure is listed individually with its own statistics. Column AREACI# displays the total number of CIs in the root addressable part. This is the total number of CIs loaded into the structure if the entire Area was preloaded.

/DISPLAY HSB command

Use the /DISPLAY HSB command to display the system-related information in an Extended Recovery Facility (XRF) environment.

If the command is entered on the active system, information about the active system is displayed. If the command is entered on the alternate system, information about both systems is displayed.

Subsections:

- "Environment"
- "Syntax"
- "Output fields"
- "Examples" on page 427

Environment

The /DISPLAY HSB command is valid in DB/DC and DCCTL environments.

Syntax



Output fields

The following output fields are displayed for the /DISPLAY HSB command:

RSENAME

Recoverable service element name.

STATUS

System entering command (ACTIVE or BACKUP).

MODETBL

Indication of whether (IOT) or not (blank) the system is in I/O toleration mode. This field is displayed only if the command is entered on the active system.

PHASE

Displays only if the command is entered on the alternate system; indicates the phase of the alternate system. The following phases can be displayed:

INIT Initialization phase

SYN Processing SNAPQ checkpoint

TRK Tracking active system

TKO Taking over workload from active

IMS-ID

IMS identifier of system entering command.

VTAM UVAR

VTAM generic name.

ACT-ID

IMS identifier of active system; field is displayed only if the command is entered on the alternate system.

LOG-TIME

Time associated with the log record currently being read by the alternate system in the process of tracking the active system. The length of time the alternate system lags behind the active system in reading the log is the difference between the current time, as shown by the time stamp, and the log time. Some of this time difference might be caused by differences in the synchronization of the clocks of the processors.

SURVEILLANCE

Indicates one of the following surveillance mechanisms:

LNK IMS ISC link

LOG IMS system log

RDS IMS restart data set

INTERVAL

The surveillance interval, in seconds, for the specific surveillance mechanism

TIMEOUT

The surveillance timeout value, in seconds, for the specific surveillance mechanism

STATUS

The status of the specific surveillance mechanism (ACTIVE or INACTIVE).

TAKEOVER CONDITIONS

The following takeover conditions may apply:

ALARM

The alarm on the alternate processor will be sounded when takeover is requested.

AUTO

Automatic takeover is in effect.

Following the display line of ALARM, AUTO, or both, the takeover conditions specified on the SWITCH control statement of the DFSHSBxx PROCLIB member are shown. (xx is the SUF= parameter of the IMS procedure.) There are two groups per line and each group is separated by an asterisk. Each group can include one or more of the following:

VTAM

VTAM TPEND exit

LNK IMS ISC link

LOG IMS system log

RDS IMS restart data set

Examples

Entry ET (Active System):

/DISPLAY HSB

Response ET:

RSENAME	STATUS	MODE	IMS-ID	VTAM UVAR
DFSRSENM	ACTIVE		IMSA	USERVAR1
SURVEILLANCE	INTERVAL	TIMEOUT	STATUS	
LOG	10	99	ACTIVE	
LNK	3	9	ACTIVE	
RDS	10	99	ACTIVE	

89340/094236

Entry ET (Active System - MNPS environment):

/DISPLAY HSB

Response ET:

RSENAME	STATUS	MODE	IMS-ID	MNPS NAME
DFSRSENM	ACTIVE		IMSA	USERVAR1
SURVEILLANCE	INTERVAL	TIMEOUT	STATUS	
LOG	10	99	ACTIVE	
LNK	3	9	ACTIVE	
RDS	10	99	ACTIVE	

89340/094236

Entry ET (Alternate System):

/DISPLAY HSB

Response ET:

RSENAME	STATUS	PHASE	IMS-ID	VTAM UVAR	ACT-ID	LOG-TIME
DFSRSENM	BACKUP	TRK	IMSB	USERVAR1	IMSA	09:42:56
	BACKUP	SYSTEM		ACTIVE	SYSTEM	
SURVEILLANCE	INTERVAL	TIMEOUT	STATUS	INTERVAL	TIMEOUT	STATUS
LOG	10	99	INACTIVE	10	99	INACTIVE
LNK	3	9	INACTIVE	3	9	INACTIVE
RDS	10	99	INACTIVE	10	99	INACTIVE
TAKEOVER CONDITIONS - ALARM						
VTAM			*RDS LOG			

89340/094256

Entry ET (Alternate System - MNPS environment):

/DISPLAY HSB

Response ET:

RSENAME	STATUS	PHASE	IMS-ID	MNPS NAME	ACT-ID	LOG-TIME
DFSRSENM	BACKUP	TRK	IMSB	USERVAR1	IMSA	09:42:56
	BACKUP	SYSTEM		ACTIVE	SYSTEM	
SURVEILLANCE	INTERVAL	TIMEOUT	STATUS	INTERVAL	TIMEOUT	STATUS
LOG	10	99	INACTIVE	10	99	INACTIVE
LNK	3	9	INACTIVE	3	9	INACTIVE
RDS	10	99	INACTIVE	10	99	INACTIVE
TAKEOVER CONDITIONS - ALARM						
VTAM			*RDS LOG			

89340/094256

/DISPLAY HSSP command

Use the /DISPLAY HSSP command to display information about the current HSSP (high-speed sequential processing) activities.

Subsections:

- "Environment"
- "Syntax"
- "Output fields"
- "Examples" on page 429

Environment

The /DISPLAY HSSP command is valid in DB/DC and DBCTL environments.

Syntax

►► — /DISPLAY — HSSP ————— ►►
 └ /DIS —————

Output fields

The following output fields are displayed for the /DISPLAY HSSP command:

RGN Region ID as displayed in the /DISPLAY ACTIVE command (three digit PST number)

TYP Region type (BMP only)

JOBNAME

Job name

PSB Program Specification Block name

DB Database name

AREAS-OPTIONS

Information on the SETO statement:

AREA Area name

PCB Information on whether the named area has updated intent.

PROCOPT

Whether PROCOPT H is specified.

IC Image Copy in process.

UPD Information on whether the area is updated, which is one of the following:

N The PCB has no update intent on the named area.

Y The PCB has update intent on the named area.

OPTION

Information on the execution

IC Image Copy in process

Examples

Entry ET (Active System):

```
/DISPLAY HSSP
```

Response ET:

```
RGN TYP JOBNAME PSB DATABASE AREAS-OPTIONS SYS3
  1 BMP CSSP020B BMPFPE02 DEDBJN21 IC=(1,C) SYS3
*89122/094325* SYS3
```

/DISPLAY LINE command

The /DISPLAY LINE command, when followed by a valid line number or ALL, displays the status and queue counts for the specified communication line or lines and physical terminal.

The queue count for /DISPLAY LINE is reset to zero after an IMS cold start.

Subsystems:

- “Environment”
- “Syntax”
- “Keywords” on page 430
- “Reserved parameters” on page 430
- “Usage notes” on page 431
- “Output fields” on page 432
- “Examples” on page 432

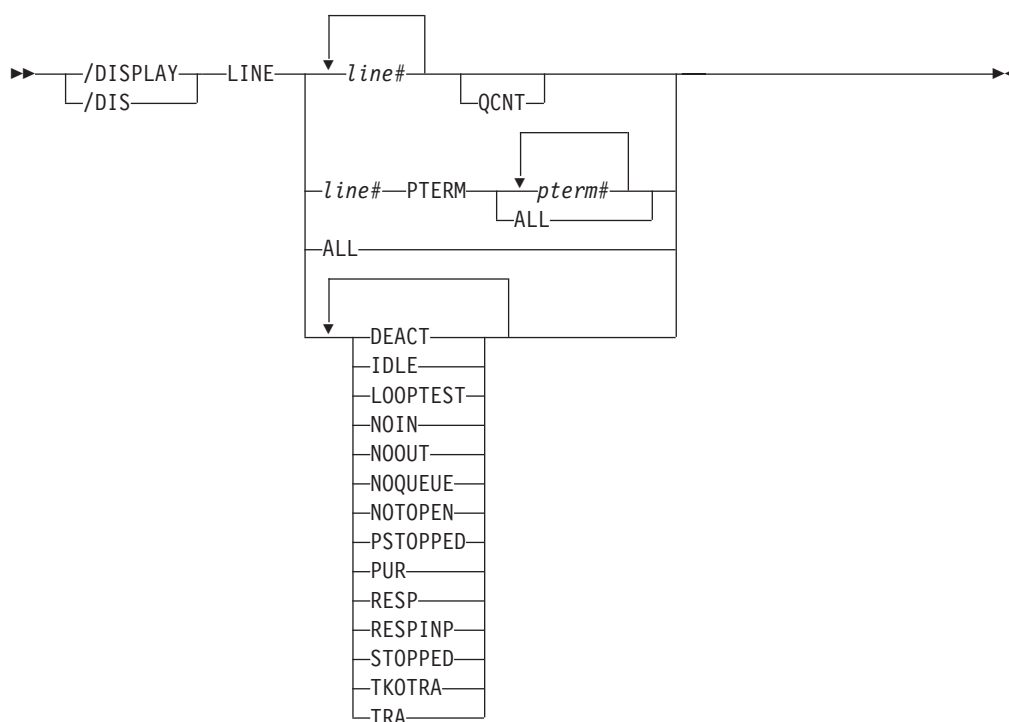
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 193. Valid environments for the /DISPLAY LINE command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DISPLAY	X	X	X
LINE	X		X
QCNT	X		X
PTERM	X		X

Syntax



Keywords

The following keywords are valid for the `/DISPLAY LINE` command:

QCNT

Specifies that global queue count information is to be displayed. If `QCNT` is not specified, local queue counts are displayed; when it is specified, no local queue counts are displayed.

This keyword is valid only in a shared-queues environment.

PTERM

Is used to refer to a relative physical terminal. Valid parameters are number corresponding to the relative position of the terminal on the line. When used without the `LINE` keyword on the `/DISPLAY` command, valid parameters are physical terminal attributes.

Reserved parameters

Lines are selected for display based on the attributes specified. Attributes that can be used with the `LINE` keyword are shown in the following table. The attribute display format is the same as the standard `LINE` display. The attributes correspond to the conditions displayed for lines. For example, `/DISPLAY LINE LOOPTEST` displays all lines that are currently in looptest mode.

Table 194. `/DISPLAY LINE` command attributes

DEACT	IDLE	LOOPTEST
NOIN	NOOUT	NOQUEUE
NOTOPEN	PSTOPPED	PUR
RESP	RESPINP	STOPPED
TKOTRA	TRA	

DEACT

Displays the lines that have been permanently deactivated. Message DFS2473 in the system console log might contain information regarding the reason this status was set. DFS2473 can occur more than once in the system console log.

IDLE

Displays the lines for which no activity of any kind is in progress for them.

LOOPTEST

Displays the lines that are in looptest mode.

NOIN

Displays the lines that are stopped for input.

NOOUT

Displays the lines that are stopped for output.

NOQUEUE

Displays the lines that have had message queuing stopped for message switching.

NOTOPEN

Displays the lines that are not in open status.

PSTOPPED

Displays the lines that have been stopped by the /PSTOP command. This status might indicate that a different, necessary resource is unavailable.

PUR

Displays the lines that are purging all of their output.

RESP

Displays the lines that are in input response mode and the response reply message is available for output or in the process of being sent.

RESPINP

Displays the lines that are in full-function input response mode and the response mode input is still in-doubt; for example, the response reply message is not available for output.

STOPPED

Displays the lines that are stopped.

TKOTRA

Displays the lines that are to be traced only during takeover to help diagnose XRF terminal switch problems.

TRA

Displays the lines that are being traced.

Usage notes

In a shared-queues environment, use the QCNT keyword to obtain the current message queue counts on the shared queues structure. The local queue counts (ENQCT, DEQCT, and QCT) value that is returned on this command when the QCNT keyword is not specified represents the messages being processed by the IMS system where this command is issued. Do not use local queue counts for queue evaluation purposes.

Output fields

The following output fields are displayed by the /DISPLAY LINE command.

- LIN/PTE
- TYPE
- ADDR
- RECD
- ENQCT
- DEQCT
- QCT
- SENT
- Status
 - IDLE
 - NOTOPEN
 - STOPPED
 - COMPINOP

Examples

Entry ET:

```
/DISPLAY LINE 1, 3, 10
```

Response ET:

LINE	TYPE	ADDR	RECD	ENQCT	DEQCT	QCT	SENT
1	CONSOLE	****	0	1	0	1	6
3	3270 R	0C9	43	51	43	8	79

85098/141118

Entry ET:

```
/DISPLAY LINE ALL
```

Response ET:

LINE	TYPE	ADDR	RECD	ENQCT	DEQCT	QCT	SENT
1	CONSOLE	****	4	1	1	0	6
2	3270 R	0C9	43	51	43	8	79
3	3270 L	****	0	0	0	0	0 STOPPED IDLE
4	3270 L	1234	20	22	20	2	0
5	RDR/PTR	****	0	0	0	0	0 STOPPED IDLE
6	RDR/PTR	****	0	0	0	0	0 STOPPED IDLE
7	RDR/PTR	****	0	0	0	0	0 STOPPED IDLE
8	RDR/PTR	****	0	0	0	0	0 STOPPED IDLE
9	DIAL	POOL		0	0	0	POOL STOPPED IDLE

85098/141244

Entry ET:

```
/DISPLAY LINE 5 PTERM ALL
```

Response ET:

LIN/PTE	TYPE	ADDR	RECD	ENQCT	DEQCT	QCT	SENT
5- 1	3270 R	404081	3	6	6	0	8
5- 2	3270 R	C14081	0	6	6	0	7
5- 3	3270 R	C1C181	40	30	28	2	61
5- 4	3270 R	C1C281	0	3	0	3	0 COMPINOP
5- 5	3270 R	C1C381	0	3	0	3	0 COMPINOP
5- 6	3270 R	C1C481	0	3	3	0	3

85098/141412

Entry ET:

/DISPLAY LINE PSTOPPED, PUR

Response ET:

LINE	TYPE	ADDR	RECD	ENQCT	DEQCT	QCT	SENT			
4	3270 R	****	4	8	8	0	33	PUR	IDLE	NOTOPEN
18	3270 R	022	0	4	4	0	4	PSTOPPED	IDLE	

85098/141283

/DISPLAY LINK command

The /DISPLAY LINK command, when followed by a valid link number or ALL, displays the status and queue counts for the specified logical link.

The queue count for the /DISPLAY LINK command is reset to zero after an IMS cold start.

In addition, the /DISPLAY LINK command shows if the logical link is assigned to a physical link and the partner identification that is assigned to it during system definition.

Subsections:

- “Environment”
- “Syntax”
- “Keywords” on page 434
- “Usage notes” on page 434
- “Output fields” on page 434
- “Examples” on page 435

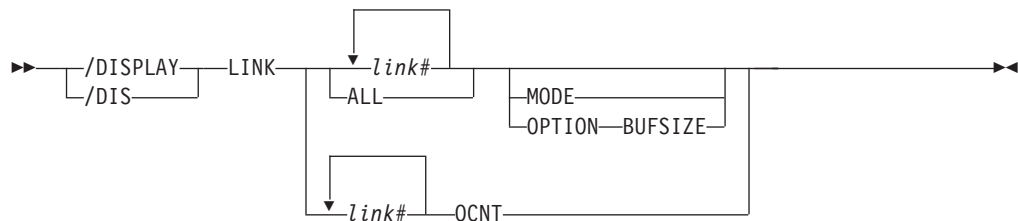
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 195. Valid environments for the /DISPLAY LINK command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DISPLAY	X	X	X
LINK	X		X
MODE	X		X
OPTION	X		X
QCNT	X		X

Syntax



Keywords

The following keywords are valid for the /DISPLAY LINK command:

MODE

Displays various modes in which VTAM terminals can operate.

OPTION

Specifies the following:

BUFSIZE

Displays the link parameters such as the link number, link name, bandwidth, buffer size, and the link status.

QCNT

Specifies that global queue count information is to be displayed. If QCNT is not specified, local queue counts are displayed; when it is specified, no local queue counts are displayed.

This count represents the message counts of messages that can be processed by the IMS system where the command is issued. This count includes messages that can be processed by any IMS system (messages with no affinity), plus messages that can be processed by the IMS system where the command is issued (messages with an affinity to the IMS system that issued the command).

This keyword is valid only in a shared-queues environment.

Usage notes

The /DISPLAY LINK link# MODE command, when entered from the primary IMS system, displays in the ACT MODETBL field the mode table name from the /RESTART command or LOGON exit. The same field does not display on the secondary IMS system.

Note: N/A is displayed by /DISPLAY LINK ALL MODE for non-VTAM MSC links.

In a shared-queues environment, use the QCNT keyword to obtain the current message queue counts on the shared queues structure. The local queue counts (ENQCT, DEQCT, and QCT) value that is returned on this command when the QCNT keyword is not specified represents the messages being processed by the IMS system where this command is issued. Do not use local queue counts for queue evaluation purposes.

Output fields

The following output fields are displayed by the /DISPLAY LINK command:

ACT MODETBL

Mode table name actually used to initiate the session. This name is displayed only if the MODE keyword is specified and only while the session is active. The field is blank at normal session termination.

BUFSIZE

Link buffer size. The link buffer size is displayed only if the OPTION BUFSIZE keyword is specified.

DEF MODETBL

Default mode table name set by system definition or /CHANGE command. This name can be overridden with the /RSTART command or,

for non-IMS session initiations, the LOGON exit. This name is displayed only if the MODE keyword is specified.

DEQCT

Count of messages dequeued.

ENQCT

Count of messages enqueued.

LINK Logical link number.

LINKNAME

Name of the logical link. The link name is displayed only if the OPTION BUFSIZE keyword is specified on the /DISPLAY LINK command.

PARTNER

The identification specified during IMS system definition for this multiple system partnership.

QCT The current count of messages queued.

RECD Count of messages received.

SENT Count of messages sent.

STATUS

Displays the link status.

Examples

The following are example of the /DISPLAY LINK command.

Example 1 for /DISPLAY LINK command

Entry ET:

/DISPLAY LINK ALL

Response ET:

LINK	PARTNER	RECD	ENQCT	DEQCT	QCT	SENT
1	AB	0	0	0	0	0 PSTOPPED IDLE COLD
2	AC	8	21	12	9	12 NOTIDLE-C0C ACTV TRA
3	AD	4	6	6	0	6 IDLE ACTV TRA
4	BC	0	0	0	0	0 PSTOPPED IDLE COLD
5	AE	0	3	0	3	0 PSTOPPED IDLE

91293/171240

Example 2 for /DISPLAY LINK command

Entry ET:

/DISPLAY LINK 1 3

Response ET:

LINK	PARTNER	RECD	ENQCT	DEQCT	QCT	SENT
1	AB	0	1	0	1	0 IDLE
3	AD	0	0	0	0	0 PSTOPPED IDLE

90280/072548

Example 3 for /DISPLAY LINK command

Entry ET:

/DISPLAY LINK ALL MODE

Response ET:

LINK	PARTNER	DEF	MODETBL	ACT	MODETBL
1	AB	N/A		N/A	
2	AC	N/A		N/A	
3	AD	N/A		N/A	
4	AE	N/A		N/A	
5	AK	MSC12V			
6	AL	MS12V			

90179/102238

Explanation: N/A is displayed in the mode table name fields of non-VTAM MSC links. MSC12V and MS12V are mode table names defined at system definition or established using the /CHA command.

Example 4 for /DISPLAY LINK command

Entry ET:

/DISPLAY LINK 10 OPTION BUFSIZE

Response ET:

DFS000I	LINK	LINKNAME	BUFSIZE	STATUS
DFS000I	10	LNK12V02	4096	IDLE ACTV PRI FORCE TRA BANDWIDTH
DFS000I	*06108/153639*			

Explanation: The link buffer size of 4096 and the bandwidth status are displayed.

/DISPLAY LTERM command

Use the /DISPLAY LTERM command to display status and queue counts for the specified logical terminal name.

Subsections:

- “Environment”
- “Syntax” on page 437
- “Keywords” on page 437
- “Usage notes” on page 437
- “Equivalent IMS type-2 commands” on page 438
- “Output fields” on page 438
- “Examples” on page 438

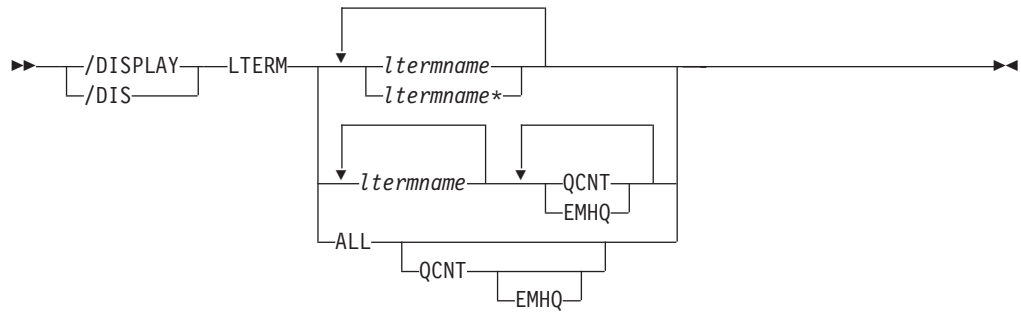
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 196. Valid environments for the /DISPLAY LTERM command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DISPLAY	X	X	X
EMHQ	X		X
LTERM	X		X
QCNT	X		X

Syntax



Keywords

The following keywords can be specified for the /DISPLAY LTERM command:

EMHQ

Specifies that global queue count information on the Expedited Message Handler Queues (EMHQ) displays when both EMHQ and QCNT are specified. If EMHQ is specified, QCNT must also be specified. This keyword is only valid in a shared-queues environment.

QCNT

Specifies that global queue count information is to be displayed. If QCNT is not specified, local queue counts are displayed; when it is specified, no local queue counts are displayed. If QCNT is specified and EMHQ is not, global queue count information on the shared message queues (MSGQ) is displayed.

This count represents the message counts of messages that can be processed by the IMS system where the command is issued. This count includes messages that can be processed by any IMS system (messages with no affinity), plus messages that can be processed by the IMS system where the command is issued (messages with an affinity to the IMS system that issued the command).

IMS does not check if the specified name is a valid LTERM in the IMS subsystem on which the command is entered.

The /DISPLAY LTERM ALL QCNT command displays all of the LTERMs on the shared queues with a global queue count.

This command does not display queue counts for Fast Path output messages for the NODE unless EMHQ and QCNT are specified.

This keyword is only valid in a shared-queues environment.

For IMS subsystems in a shared-queues environment with the time control option, TCO, enabled, AFFIN has been added to the queue names of TCO LTERMs. When the /DISPLAY LTERM DFSTCFI QCNT command is issued, the queue count of messages for the DFSTCFI LTERM pertains to the TCO LTERM on the local IMS subsystem. The queue count is zero prior to adding AFFIN to the queue names.

Usage notes

The LTERM parameter can be generic where the generic parameter specifies lterms that already exist.

/DISPLAY LTERM ALL does not display lterms in alphabetical order.

In a shared-queues environment, there are certain situations that cause an LTERM message to be retrieved from the global queue and moved to the local queue, but the message has not been delivered. If this occurs, the global queue count is zero and you need to display the local queue to see the output message.

In a shared-queues environment, use the QCNT keyword to obtain the current message queue counts on the shared queues structure. The local queue counts (ENQCT, DEQCT, and QCT) value that is returned on this command when the QCNT keyword is not specified represents the messages being processed by the IMS system where this command is issued. Do not use local queue counts for queue evaluation purposes.

Equivalent IMS type-2 commands

The following table shows variations of the /DISPLAY LTERM command and the IMS type-2 commands that perform similar functions.

Table 197. Type-2 equivalents for the /DISPLAY LTERM command.

Task	/DISPLAY LTERM command	Similar IMS type-2 command
Displays logical link path for remote lterms.	/DISPLAY LTERM ltermname	QUERY LTERM SHOW(MSNAME)
Displays the lterm message queue count.	/DISPLAY LTERM ltermname /DISPLAY LTERM ltermname QCNT	QUERY LTERM SHOW(QCNT)
Displays status of the lterm.	/DISPLAY LTERM ltermname	QUERY LTERM SHOW(STATUS)
Displays queue count in the EMH queues.	/DISPLAY LTERM ltermname QCNT EMHQ	QUERY LTERM SHOW(EMHQ)

Output fields

The status displayed can be one of the following:

- LOCK
- PSTOP
- PUR
- QERR
- QLOCK
- STATIC
- STOP

Examples

The following are examples of the /DISPLAY LTERM command.

Example 1 for /DISPLAY LTERM command

Entry ET:

```
/DISPLAY LTERM DIALQ1 INQUIRY1 L2740S1 L2740SM1 MASTER WTOR
```

Response ET:

LTERM	ENQCT	DEQCT	QCT	
DIALQ1	0	0	0	
INQUIRY1	0	0	0	
L2740S1	1	1	0	STOP

```

L2740SM1      1      0      1  STOP
MASTER        12      12     0
WTOR           0       0     0
*90295/123755*

```

Example 2 for /DISPLAY LTERM command

Entry ET:

```
/DISPLAY LTERM ALL
```

Response ET:

```

LTERM      ENQCT      DEQCT      QCT
DSPLY1      0          0          0
DSPLY2      0          0          0
DSPLY3      0          0          0
MASTER      8          8          0
WTOR         0          0          0
2740AA1      0          0          0
2740AA2      0          0          0
2740AA3      0          0          0
2740C1       0          0          0
2740C2       0          0          0
2740SM1      2          2          0 STOP
2740SM2      2          2          0 STOP
2740S1       1          1          0
2740S2       1          1          0 QERR
LU6A         1          1          0 QLOCK
*91276/125448*

```

Example 3 for /DISPLAY LTERM command

Entry ET:

```
/DISPLAY LTERM LTERMA LTERM123 ABCD QCNT
```

Response ET:

```

LTERM      GBLQCT
LTERMA     1000000000
LTERM123    25
ABCD        0
*95200/170817*

```

Example 4 for /DISPLAY LTERM command

Entry ET:

```
/DISPLAY LTERM EMHQ QCNT
```

(one user is on the queue)

Response ET:

```

LTERM      GBLQCT
FPE0001    1
*98203/145857*

```

Example 5 for /DISPLAY LTERM command

Entry ET:

```
/DIS LTERM ALL QCNT EMHQ
```

Response ET:

LTERM	GBLQCT	SYS3
IMSUS01	1	SYS3
IMSUS02	1	SYS3
04310/132048		SYS3

Related reference:

“Status and attributes for the /DISPLAY command” on page 357

 [QUERY LTERM command \(Commands\)](#)

/DISPLAY LUNAME command

Use the /DISPLAY LUNAME command to display information about a specific LU 6.2 application program.

After restart and any checkpoint, only LU 6.2 resources with status or messages queued are displayed.

If you use a side information entry name to place messages on queues, specify the side information entry name for the LU name and the character string DFFSIDE for the TP name to display those messages.

Subsections:

- “Environment”
- “Syntax”
- “Keywords” on page 441
- “Usage notes” on page 442
- “Output fields” on page 442
- “Examples” on page 443

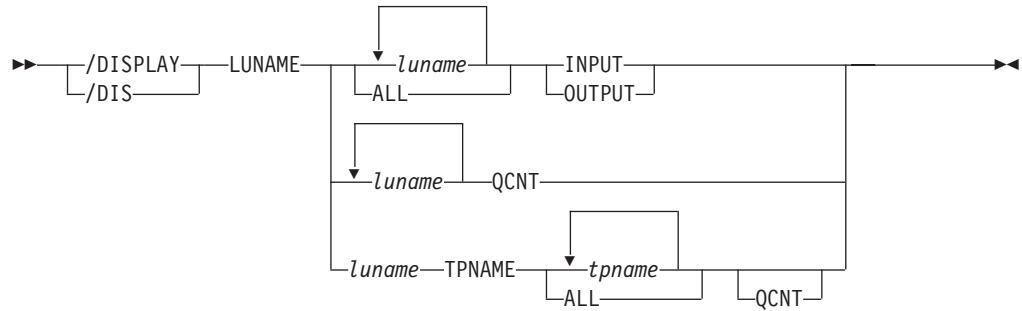
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 198. Valid environments for the /DISPLAY LUNAME command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DISPLAY	X	X	X
INPUT	X		X
LUNAME	X		X
OUTPUT	X		X
QCNT	X		X
TPNAME	X		X

Syntax



Keywords

The following keywords are valid for the `/DISPLAY LUNAME` command:

LUNAME

The LU name of the LU 6.2 application program about which you want to display information.

INPUT

Displays the count of LU 6.2 inbound conversations and synchronous outbound activities for the specified LU names and their status.

`/DISPLAY LUNAME INPUT` can indicate that a command such as the `/STO LU ALL INPUT` command or the `/TRACE SET ON LU ALL INPUT` command was entered before the display that applies to all future LU 6.2 inbound conversations.

OUTPUT

Displays the count of asynchronous output messages that are being enqueued and dequeued for the LU name and the count of LU 6.2 asynchronous outbound conversations for that LU name.

The `/DISPLAY LUNAME OUTPUT` command can indicate that a command such as the `/STO LU ALL OUTPUT` command or the `/TRACE SET ON LU ALL OUTPUT` command was entered that applies to all future LU 6.2 outbound conversations.

QCNT

Displays the number of output messages on the global queue for the specified LU name. QCNT specifies that global queue count information is to be displayed. Local queue counts are not displayed.

This count represents the message counts of messages that can be processed by the IMS system where the command is issued. This count includes messages that can be processed by any IMS system (messages with no affinity), plus messages that can be processed by the IMS system where the command is issued (messages with an affinity to the IMS system that issued the command).

The `/DISPLAY LUNAME QCNT` form of the command is only valid in a shared-queues environment.

TPNAME

Displays the number of asynchronous output messages being enqueued and dequeued and their status.

If the LU name includes a network identifier, you must specify the network-qualified LU name when using the TPNNAME keyword. A network-qualified LU name refers to a different resource than a non-qualified LU name.

Usage notes

In a shared-queues environment, use the QCNT keyword to obtain the current message queue counts on the shared queues structure. The local queue counts (ENQCT, DEQCT, and QCT) value that is returned on this command when the QCNT keyword is not specified represents the messages being processed by the IMS system where this command is issued. Do not use local queue counts for queue evaluation purposes.

Output fields

The following output fields are displayed for the /DISPLAY LUNAME command:

LUNAME

LU name of the LU 6.2 application program

#APPC-CONV

The number of LU 6.2 inbound conversations

ENQCT

Total number of messages enqueued on this LU name. In a shared-queues environment, only shows messages enqueued for the local subsystem.

DEQCT

Total number of messages dequeued from this LU name. In a shared-queues environment, only shows messages dequeued for the local subsystem.

QCT

Total number of messages still in the queue. In a shared-queues environment, only shows messages enqueued for the local subsystem.

CONVCT

Number of LU 6.2 asynchronous outbound conversations.

Status can be stopped (STO), traced (TRA), or stopped and traced.

The CONVCT output field only applies if the OUTPUT keyword was specified.

GBLQCNT

The total number of APPC output messages on the global queue. The global queue count includes messages that were placed on the global queue prior to the latest cold start of the owning IMS. Synchronous and asynchronous APPC output messages are included in the global queue count.

AFFINITY

The IMSID (or the first seven bytes of the RSENAME if XRF capable) of the IMS to which the output messages have affinity.

Status

The status displayed can be none, stopped (STO), traced (TRA), or both stopped and traced. The status information does not have a header.

Examples

Entry ET:

```
/DISPLAY LU luname1 luname2 INPUT
```

Response ET:

```
LUNAME    #APPC-CONV
LUNAME1           15 TRA
LUNAME2           5
*90332/114253*
```

Entry ET:

```
/DISPLAY LU luname1 luname3 BADLUNME OUTPUT
```

Response ET:

```
LUNAME      ENQCT      DEQCT      QCT      CONVCT
LUNAME1           5           3           2           2
LUNAME3           5           4           1           1
BADLUNME IS INVALID
*90332/114253*
```

Entry ET:

```
/DISPLAY LU LUNAME1 TPNAME TPNAME1 BADTPNME
```

Response ET:

```
LUNAME/TPNAME      ENQCT      DEQCT      QCT
LUNAME1
-TPNAME1              0           0           0 STO
BADTPNME IS INVALID
*90332/114253*
```

Entry ET:

```
/DISPLAY LU LUNAME1 TPNAME ALL OUTPUT
```

Response ET:

```
LUNAME/TPNAME      ENQCT      DEQCT      QCT
LUNAME1
-TPNAME1              0           0           0 STO
-TPNAME7890123456+  5           3           2 TRA,STO
789END
-DFSSIDE              2           2           0
*90332/114253*
```

Entry ET:

```
/DISPLAY LU LUNAME2 TPNAME ALL
```

Response ET:

```
LUNAME/TPNAME      ENQCT      DEQCT      QCT
NO TPNAME(S) ASSOCIATED WITH LUNAME
*90332/114253*
```

Entry ET:

```
/DISPLAY LU 'network1.luname1' luname3 'nid2.luname4' OUTPUT
```

Response ET:

LUNAME	ENQCT	DEQCT	QCT	CONVCT
NETWORK1.LUNAME1	5	3	2	2
LUNAME3	5	4	1	1
NID2.LUNAME4	0	0	0	0

92232/114253

Entry ET:

/DISPLAY LU 'network1.luname1' TPNAME tpname1 badtpnme

Response ET:

LUNAME/TPNAME	ENQCT	DEQCT	QCT
NETWORK1.LUNAME1			
-TPNAME1	0	0	0 STO
-BADTPNME	IS INVALID		

92232/114253

Entry ET:

/DISPLAY LU ALL INPUT

Response ET

LUNAME	#APPC-CONV
NET1.LU1	0 STO,TRA
NET2.LU1	0
LU3	0 STO,TRA
NET4.LU3	0 STO
NET5.LU5	0 TRA

FUTURE INPUT: STO,TRA
93069/114435

Entry ET:

/DISPLAY LU ALL OUTPUT

Response ET:

LUNAME	ENQCT	DEQCT	QCT	CONVCT
NET1.LU1	0	0	0	0 STO
NET2.LU1	0	0	0	0 TRA
LU3	0	0	0	0 STO,TRA
NET4.LU3	0	0	0	0 TRA
NET5.LU5	0	0	0	0 STO

FUTURE OUTPUT: STO,TRA
93069/114435

Entry ET:

/DISPLAY LU L62MVS1 LU1 CTA73 QCNT

Response ET:

LUNAME	GBLQCT	AFFINITY
DEBVMU00.CTA73	8	SYS3
L62MVS1	22	SYS3
CTA73	6	SYS3
NTWKA.CTA73	16	SYS3
L62MVS1	26	IMS2
NTWKA.CTA73	4	IMS2
LU1	0	

03202/143132

Entry ET:

/DIS LU CTA73 TPNAME ALL QCNT

Response ET:

Syntax



Equivalent IMS type-2 commands

The following table shows variations of the /DISPLAY MASTER command and the IMS type-2 commands that perform similar functions.

Table 199. Type-2 equivalents for the /DISPLAY MASTER command

Task	/DISPLAY MASTER command	Similar IMS type-2 command
Displays the primary and secondary master terminal.	/DISPLAY MASTER	QUERY LTERM STATUS(MTO,SMTO)

Examples

Entry ET:

/DISPLAY MASTER

Response ET:

LTERM MASTER
PTERM 3- 1
89117/130245

Related reference:

 QUERY LTERM command (Commands)

/DISPLAY MODIFY command

Use the /DISPLAY MODIFY command to display online change status for this IMS, which is participating in a local or global online change.

The command displays the following information:

- Online change libraries
- Work in progress for resources to be deleted or changed by a /MODIFY COMMIT or a INITIATE OLC PHASE(PREPARE) command
- Resources to be added, changed, and deleted by a /MODIFY COMMIT or an INITIATE OLC PHASE(COMMIT) command

Subsections:

- “Environment” on page 447
- “Syntax” on page 447
- “Keywords” on page 447
- “Usage notes” on page 449
- “Equivalent IMS type-2 commands” on page 449
- “Output fields” on page 450
- “Examples” on page 455

Environment

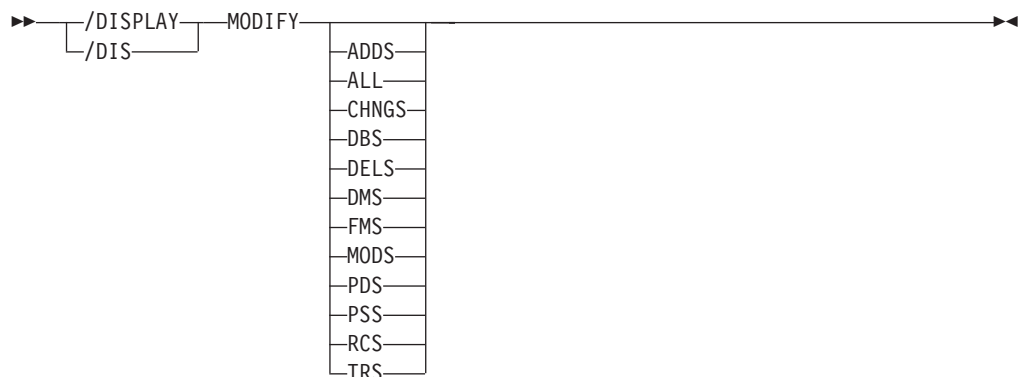
The `/DISPLAY MODIFY` command is valid in DB/DC, DBCTL, and DCCTL environments.

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 200. Valid environments for the `/DISPLAY MODIFY` command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
<code>/DISPLAY</code>	X	X	X
<code>MODIFY</code>	X	X	X
<code>ADDS</code>	X	X	X
<code>ALL</code>	X	X	X
<code>CHNGS</code>	X	X	X
<code>DBS</code>	X	X	
<code>DELS</code>	X	X	X
<code>DMS</code>	X	X	
<code>FMS</code>	X		X
<code>MODS</code>	X	X	X
<code>PDS</code>	X	X	X
<code>PSS</code>	X	X	X
<code>RCS</code>	X		X
<code>TRS</code>	X		X

Syntax



Keywords

The following keywords are valid for the `/DISPLAY MODIFY` command:

<blanks>

Displays the status of online change libraries.

ADDS

Displays the resources to be added by online change. Each display line

contains a resource type, resource name, and a status of ADDED. The resource type can be: DATABASE, DMB, FORMAT, PROGRAM, PSB, RT CODE, or TRAN.

ALL

Displays the status of online change libraries and any work in progress for database, program, routing code, or transaction resources to be deleted or changed by the /MODIFY COMMIT or the INITIATE OLC PHASE(COMMIT) command.

For DBCTL, transactions do not apply. For DCCTL, databases do not apply.

CHNGS

Displays the resources to be changed by online change. Each display line contains a resource type, resource name, and a status of CHANGED. Resource type can be: DATABASE, DMB, FORMAT, PROGRAM, PSB, RT CODE, or TRAN.

DBS

Displays the databases to be changed or deleted with work in progress that would prevent /MODIFY COMMIT from succeeding. If DBS is specified with the ADDS, CHNGS, DELS, or MODS parameters, the databases in MODBLKS to be added, changed, or deleted display. Each display line contains a resource type of DATABASE, the database name, and a status of ADDED, CHANGED, or DELETED.

DELS

Displays the resources to be deleted by online change. Each display line contains a resource type, resource name, and a status of DELETED. The resource type can be: DATABASE, DMB, FORMAT, PROGRAM, PSB, RT CODE, or TRAN.

DMS

If DMS is specified with the ADDS, CHNGS, DELS, or MODS parameters, the DMBs in ACBLIB to be added, changed, or deleted display as ADDED, CHANGED, or DELETED.

If the status of the associated database in MODBLKS is ADDED, DMS displays a DMB as ADDED. If the status of the associated database in MODBLKS is DELETED, DMS displays a DMB as DELETED.

FMS

If FMS is specified with the ADDS, CHNGS, DELS, or MODS parameters, the MFS formats to be added, changed, or deleted in FMTLIB display. Each display line contains a resource type of FORMAT, the format name, and a status of ADDED, CHANGED, or DELETED.

MODS

Displays the resource to be modified by online change, which are resources to be added, changed, and deleted. Each display line contains the resource type, resource name, and a status of ADDED, CHANGED, or DELETED. The resource type can be: DATABASE, DMB, FORMAT, PROGRAM, PSB, RT CODE, or TRAN.

/DISPLAY MODIFY MODS shows all of the resources to be added, changed, or deleted by /MODIFY COMMIT, which is equivalent to the output from /MODIFY PREPARE with the LTERM keyword specified.

PDS

Displays the programs to be changed or deleted in MODBLKS with work in progress that would prevent a /MODIFY COMMIT or an INITIATE OLC

PHASE(COMMIT) command from succeeding. If PDS is specified with the ADDS, CHNGS, DELS, or MODS parameters, the programs in MODBLKS to be added, changed, or deleted display. Each display line contains a resource type of PROGRAM, the program name, and a status of ADDED, CHANGED, or DELETED.

PSS

If PSS is specified with the ADDS, CHNGS, DELS, or MODS parameters, the PSBs in ACBLIB to be added, changed, or deleted display as ADDED, CHANGED, or DELETED.

If the status of the associated program in MODBLKS is ADDED, PSS displays a PSB as ADDED. If the status of the associated program in MODBLKS is DELETED, PSS displays a PSB as DELETED.

RCS

Displays the routing codes to be changed or deleted in MODBLKS with work in progress that would prevent a /MODIFY COMMIT or an INITIATE OLC PHASE(COMMIT) command from succeeding. If RCS is specified with the ADDS, CHNGS, DELS, or MODS parameters, RTCODEs in MODBLKS to be added, changed, or deleted display.

TRS

Displays the transactions to be changed or deleted in MODBLKS with work in progress that would prevent a /MODIFY COMMIT or an INITIATE OLC PHASE(COMMIT) command from succeeding. If TRS is specified with the ADDS, CHNGS, DELS, or MODS parameters, transactions in MODBLKS to be added, changed, or deleted display.

Usage notes

The /DISPLAY MODIFY command with one or more keywords (not including ALL) is only valid if IMS is in the MODIFY PREPARE state, which means that a /MODIFY PREPARE command or an INITIATE OLC PHASE(PREPARE) command completed successfully.

If IMS cannot access the global queue counts, IMS displays the GLOBAL QUEUE COUNT INTERNAL ERROR status. If IMS cannot obtain sufficient storage to query global queue counts, IMS displays the GLOBAL QUEUE COUNT STORAGE ERROR status. In either case, online change will fail if there are global queue counts for resources being changed or deleted.

For an IMS that has online change for MODBLKS disabled and no MODBLKS data sets are included in the IMS JCL, no information about active and inactive MODBLKS data sets is displayed.

Equivalent IMS type-2 commands

The following table shows variations of the /DISPLAY MODIFY command and the IMS type-2 commands that perform similar functions.

Table 201. Type-2 equivalents for the /DISPLAY MODIFY command.

Task	/DISPLAY MODIFY command	Similar IMS type-2 command
Displays work in progress for runtime resource definitions that would cause a DELETE, /MODIFY COMMIT, INITIATE OLC PHASE(COMMIT), or UPDATE command to change resource definitions to fail.	/DISPLAY MODIFY ALL	QUERY DB NAME(<i>dbname</i>) SHOW(WORK)
		QUERY PGM NAME(<i>pgmname</i>) SHOW(WORK)
		QUERY RTC NAME(<i>rtcode</i>) SHOW(WORK)
		QUERY TRAN NAME(<i>tranname</i>) SHOW(WORK)

Output fields

The online change libraries are described in the output in the following order: the word "LIBRARY", the library name, the library status displayed as A for active, I for inactive, or U for unallocated, and the data set in which the library resides. If the ACBLIB data sets are allocated by JCL, the status displayed for each library is displayed as A for active or I for inactive. It is followed by the DD names and data set names that make up the library. If the ACBLIB data sets are allocated by DFSMDA, the status of the inactive ACBLIB data sets is displayed as U for unallocated. The data set names displayed are those specified in the DFSMDA member for that ACBLIB DD statement.

Status information is displayed for the following libraries:

- IMSACBA and IMSACBB
- FORMATA and FORMATB
- MODBLKSA and MODBLKSB

The following output fields are displayed for the /DISPLAY MODIFY command.

Resource type

Resource type can be LIBRARY, DATABASE, PROGRAM, RTCODE, or TRAN.

Resource name

The name of the library, database, program, routing code, or transaction.

Status Status of the resource or data set name, for a library.

The following status terms are displayed by the /DISPLAY MODIFY command:

ACTIVE

The routing code rtcode is active.

ADDED

One of the following:

- The database, DMB, MFS format, program, PSB, Fast Path routing code (RTCODE), or transaction resource is to be added by online change.
- The DMB already exists in ACBLIB and its associated database is to be added to MODBLKS, making the database usable.
- The PSB already exists in ACBLIB and its associated program is to be added to MODBLKS, making the program usable.

AREAS OPEN:

A DEDB database has open areas. One or more lines listing the open areas follow this line.

CHANGED

One of the following:

- The database, DMB, MFS format, program, PSB, Fast Path routing code (RTCODE), or transaction resource is to be changed by online change. The prepare command has stopped queuing to transactions affected by the online change. Affected transactions are rejected from an input terminal until the online change is committed or aborted. Program-to-program switches are not rejected. Commit will fail for the resource to be changed, if it has work in progress.
- The program is not to be changed, but is associated with a PSB whose JAVA attribute is to be changed. The program is treated as if it is to be changed, because a PSB scheduling attribute is changing.
- The routing code is not to be changed, but references a PSB that is to be deleted. The routing code is treated as if it is to be changed, because it will no longer be usable.
- The transaction is not to be changed, but references a PSB that is to be deleted. The transaction is treated as if it is to be changed, because it will no longer be usable.

CHANGED (DSID CHANGED)

The area is to be changed and the data set ID (area number) is to be changed.

Attention: Actions must be taken to prevent damage to the area. See The online change function, DEDBs, and Availability of IFP and MPP Regions (Database Administration).

CHANGED (TIMESTAMP ONLY)

The PSB is to be changed, but only the time stamp is to be changed. The PSB is considered to be affected by the online change, even though nothing is really changing.

CONVERSATION TERM/USER

The transaction to be changed or deleted or the transaction referencing a program or database to be changed or deleted is in conversation. The terminal originating the conversational transaction and the conversation ID are also displayed.

The terminal information displayed is:

- nodename for VTAM terminals
- nodename and username if an ETO user is signed on to the node
- username for ETO users that signed off while in conversation
- lin#-pte# (line and pterm number) for IMS-supported terminals
- 1-SC for the system console

CONVERSATION LUNAME

An APPC logical unit originated the conversational transaction that is to be changed or deleted or that references a program or database to be changed or deleted. The LUNAME and

conversation ID are also displayed. The LUNAME information is in the format of luname, or networkid.luname, if networkid-qualified.

CONVERSATION TMEM/TPIPE

An OTMA tmember/tpipe originated a conversational transaction that is to be changed or deleted or that references a program or database to be changed or deleted. The tmember, tpipe and conversation ID are also displayed. The tmember and tpipe information is in the format of tmember.tpipe, where the tmember name can be up to 8 characters.

DATABASE IN USE

The database is in use by one or more active regions referencing the database.

/DBD ACTIVE

A /DBDUMP command is in progress for a database to be changed or deleted.

/DBR ACTIVE

A /DBRECOVERY command is in progress for a database to be changed or deleted.

/DBR OR /STOP IN PROGRESS

A /DBRECOVERY command or /STOP command is in progress for a DEDB database.

DBR NEEDED FOR PARTITION

A /DBRECOVERY command must be issued for the DB partition before the database can be changed or deleted by online change

DELETED

One of the following:

- The database, DMB, MFS format, program, PSB, Fast Path routing code (RTCODE), or transaction resource is to be deleted by online change. The prepare command has stopped queuing to transactions affected by the online change. Affected transactions are rejected from an input terminal until the online change is committed or aborted. Program-to-program switches are not rejected. Commit will fail for the resource to be deleted, if it has work in progress.
- The DMB is not to be changed, but references a database that is to be deleted. The DMB is treated as if it is to be deleted, because IMS will no longer have any information about the DMB.
- The PSB is not to be changed, but references a program that is to be deleted. The PSB is treated as if it is to be deleted, because IMS will no longer have any information about the PSB.

ELIGIBLE FOR SCHEDULING

The transaction is eligible for scheduling and cannot be deleted or changed by online change. The transaction itself is being changed or deleted, or the program it references is being changed. Stop the transaction before attempting another online change commit. If the only thing being changed is the PSB associated with the program that the transaction references, the transaction might not need to be stopped.

IN USE

Queuing is in progress for this transaction (either terminal input or program-to-program switch).

NOT CHANGED (DMB CHANGED ONLY)

The PSB is not to be changed, but references a DMB that is to be changed or deleted. The PSB is considered to be affected by the online change, where commit will fail for work in progress.

NOT CHANGED (PDIR/PSB CHANGE ONLY)

One of the following:

- The routing code is not to be changed, but references a PDIR or PSB that is to be changed. The routing code is considered to be affected by the online change, where commit will fail for work in progress.
- The transaction is not to be changed, but references a PSB that is to be changed. This status does not apply to PSB attribute changes that affect scheduling, such as the JAVA attribute. The transaction is not affected by online change, so commit will succeed even if there is work in progress.

NOT OPEN, BUT DBR NEEDED ON TRACKER

The database is not open, but the area can be open, so the database needs to be taken offline by use of the /DBRECOVERY command. This can happen if the area is not stopped and the database is not open and prepared to be online changed on a tracker environment. The area can be open if log records type 5701 or 5950 are routed to the RSR tracking IMS from the active IMS while online change is in progress. It is then required that the database be taken offline in the case of database level change. The tracking suspend point (Suspended Log Sequence Number) is registered in the RECON data set when the area is stopped. After the online change committed successfully, and when the /STA AREA command is entered, the online forward recovery (OFR) will open the area and all log records from the suspended point will be applied to the area.

PSB SCHEDULED

A program referencing a database to be changed or deleted is scheduled.

QUEUING *nn*

Messages are queued to the transaction or program; *nn* is the number of messages queued. Global queue counts represent the number of messages on the coupling facility list structure for the transaction or program.

Q STRUCTURE IS UNAVAILABLE

The queue structure is unavailable. IMS is unable to check the global queue count for transactions to be added, changed, or deleted. Commit is not permitted to proceed. The structure may be unavailable for one of the following reasons:

- CQS is unavailable.
- The MSGQ structure failed and it has not been rebuilt yet.
- CQS lost connectivity to the MSGQ structure.

RANDOMIZER: *rndmname*

A DEDB database that has no work in progress lists the

randomizer name (*rndmname*). The randomizer display lines are information only, not work in progress that would prevent online change commit from succeeding.

This line is followed by a line with the randomizer name and status of LOADED or NOT LOADED.

If the randomizer is shared by one or more DEDBs, another line is displayed with 'DEDBS SHARING RANDOMIZER:' followed by the randomizer name. Online change will not delete a randomizer that is shared by other DEDBs. This line is followed by one line for each DEDB sharing the same randomizer.

RECOVERY IN PROGRESS

A /RECOVER START command is in progress to recover one or more databases with the database recovery service.

SAME (DSID CHANGED)

The area is not to be changed, but the data set ID (area number) is to be changed.

Attention: Actions must be taken to prevent damage to the area. See The online change function, DEDBs, and Availability of IFP and MPP Regions (Database Administration).

SCHEDULED

The named resource (a transaction or program to be changed or deleted, or a program referencing a database to be changed or deleted) is scheduled.

SUSPENDED

The transaction to be changed or deleted is on the suspend queue.

Work in progress for resources to be deleted or changed causes the /MODIFY COMMIT command to fail. You must wait for the work in progress to complete, or force it to complete (for example, by issuing a command), before issuing /MODIFY COMMIT. The following table lists the resource type, resource name, and the status displays for work in progress that would prevent the /MODIFY COMMIT command from completing successfully:

Table 202. Work in progress for resources that prevent a successful /MODIFY COMMIT

Resource type	Resource name	Status
DATABASE	dbname	AREAS OPEN: /DBD ACTIVE /DBR ACTIVE /DBR OR /STOP IN PROGRESS DATABASE IN USE DBR NEEDED FOR PARTITION nnnn PSB SCHEDULED RANDOMIZER: rndmname RECOVERY IN PROGRESS
AREA	areaname	OPEN RECOVERY IN PROGRESS
PROGRAM	pgmname	SCHEDULED QUEUEING nn GLOBAL QUEUE COUNT INTERNAL ERROR GLOBAL QUEUE COUNT STORAGE ERROR
RTCODE	rtcode	ACTIVE

Table 202. Work in progress for resources that prevent a successful /MODIFY COMMIT (continued)

Resource type	Resource name	Status
TRAN	tranname	IN USE QUEUING nn SCHEDULED SUSPENDED CONVERSATION TERM/USER nodename ID= nnnn nodename username ID= nnnn username ID= nnnn lin#-pte# ID= nnnn 1- SC ID= nnnn GLOBAL QUEUE COUNT INTERNAL ERROR GLOBAL QUEUE COUNT STORAGE ERROR ELIGIBLE FOR SCHEDULING

In a shared-queues environment, /DISPLAY MODIFY only shows local work in progress, except for the TRAN QUEUING status and the PROGRAM QUEUING status, for which this command shows the sum of local and global queue counts. That is, /DISPLAY MODIFY does not show whether there is work in progress for other IMS subsystems sharing the message queues. If the /DISPLAY MODIFY command shows no work in progress for the IMS subsystem which the command was issued, a /MODIFY COMMIT command can be issued for that IMS subsystem.

Examples

The following are examples of the /DISPLAY MODIFY command.

Example 1 for /DISPLAY MODIFY command

In these examples for /DISPLAY MODIFY, /MODIFY PREPARE has already succeeded.

Entry ET:

```
/DISPLAY MODIFY ALL
```

Response ET:

```
LIBRARY IMSACBA (A) OLC.ACBLIB.ALL
LIBRARY FORMATA (I) IMSQA.FMT1
LIBRARY MODBLKSA (A) I41RTS42.CMODBLKS
LIBRARY IMSACBB (I) OLC.ACBLIB.ALL
LIBRARY FORMATB (A) IMSQA.FMT1
LIBRARY MODBLKSB (I) I41RTS42.CMODBLK1
DATABASE OLCDB088 /DBR ACTIVE
DATABASE OLCDB101 PSB SCHEDULED
PROGRAM OLCPB021 SCHEDULED
PROGRAM OLCPB109 SCHEDULED
RTCODE OLCRC056 ACTIVE
TRAN OLCTB105 QUEUING 1
TRAN CDEBTRN5 CONVERSATION TERM/USER 4- 2 ID= 0009
TRAN OLCTB109 SCHEDULED
TRAN CDEBTRN8 CONVERSATION TERM/USER L3270D ID= 0002
TRAN OLCTB111 QUEUING 5
TRAN CDEBTRN2 CONVERSATION TERM/USER DYNT0001 IMSUS01 ID= 0005
```

```

TRAN      CDEBTRN3      CONVERSATION TERM/USER  12-  1      ID= 0008
TRAN      CDEBTRN1      CONVERSATION TERM/USER                IMSUS12 ID= 0001
DISPLAY MODIFY COMPLETE
*93336/093025*

```

Entry ET:

```
/DISPLAY MODIFY DBS
```

Response ET:

```

DATABASE CALENDER      AREAS OPEN:
  AREA FEBRUARY
  AREA APRIL
  AREA JULY
  AREA AUGUST
  AREA SEPTEMBER
  AREA OCTOBER
  AREA DECEMBER
DATABASE CALENDER      RANDOMIZER: RMOD3
DEDBS   SHARING        RANDOMIZER: RMOD3
DATABASE DEDBJN21      RANDOMIZER: RMOD3
RMOD3   NOT             LOADED
DATABASE DEDBJN22      RANDOMIZER: RMOD5
RMOD5   NOT             LOADED
DISPLAY MODIFY COMPLETE *95299/161529*

```

Entry ET:

```
/DISPLAY MODIFY TRS
```

Response ET:

```

TRAN      OLCFT112      QUEUING      2
TRAN      OLCFT115      QUEUING      23
PROGRAM   OLCFP115      QUEUING      1
TRAN      CDEBTRN8      GLOBAL QUEUE COUNT INTERNAL ERROR
TRAN      OLCFT116      QUEUING      6
DISPLAY MODIFY COMPLETE *96193/135935*

```

Explanation: Work is in progress that will cause online change to fail, because several transactions and a FP program have a global queue count on the shared queues. The global queue count for transaction CDEBTRN8 could not be determined because of an internal error.

Example 2 for /DISPLAY MODIFY command

Entry ET:

```
/DISPLAY MODIFY MODS
```

Response ET:

```

DFS000I   FORMAT      0C01_FF02A _O ADDED
DFS000I   FORMAT      0C01_FF02B _O ADDED
DFS000I   FORMAT      0C7F_FN01A _O CHANGED
DFS000I   FORMAT      0C7F_FN01B _O CHANGED
DFS000I   FORMAT      0C7F_FN01C _O CHANGED
DFS000I   FORMAT      0C7F_FF04A _O DELETED
DFS000I   FORMAT      MF04E      DELETED
DFS000I   DATABASE    OLCDB101    ADDED
DFS000I   DATABASE    OLCDB102    ADDED
DFS000I   DATABASE    OLCDB103    ADDED
DFS000I   DATABASE    OLCDB104    ADDED
DFS000I   DATABASE    OLCDB157    ADDED
DFS000I   DATABASE    OLCDB111    DELETED
DFS000I   DATABASE    OLCDB159    DELETED

```

DFS000I	DATABASE	OLCDI105	DELETED
DFS000I	DATABASE	OLCDI106	DELETED
DFS000I	DMB	OLCDB101	ADDED
DFS000I	DMB	OLCDB102	ADDED
DFS000I	DMB	DEDBJN24	CHANGED
DFS000I	AREA	DB24A000	CHANGED
DFS000I	DMB	OLCDB105	DELETED
DFS000I	PROGRAM	OLCFP107	ADDED
DFS000I	PROGRAM	OLCFP108	ADDED
DFS000I	PROGRAM	OLCPB101	ADDED
DFS000I	PROGRAM	OLCFP109	CHANGED
DFS000I	PROGRAM	OLCFP110	CHANGED
DFS000I	PROGRAM	OLCFP111	CHANGED
DFS000I	PROGRAM	OLCPB105	DELETED
DFS000I	PROGRAM	OLCPB106	DELETED
DFS000I	PSB	OLCFP107	ADDED
DFS000I	PSB	OLCFP108	ADDED
DFS000I	PSB	CDEBS	CHANGED
DFS000I	PSB	OLCPB105	DELETED
DFS000I	PSB	OLCPB106	DELETED
DFS000I	RT CODE	OLCFT108	ADDED
DFS000I	RT CODE	OLCFR119	CHANGED
DFS000I	RT CODE	OLCFR117	DELETED
DFS000I	TRAN	OLCFT108	ADDED
DFS000I	TRAN	OLCTBG17	ADDED
DFS000I	TRAN	CDEBTRNA	CHANGED
DFS000I	TRAN	CDEBTRN1	CHANGED
DFS000I	TRAN	CONV31X	DELETED
DFS000I	DISPLAY MODIFY COMPLETE	*98356/094452*	SYS3

Explanation: Displays resources to be modified (added, changed, or deleted) by online change.

Example 3 for /DISPLAY MODIFY command

Entry ET:

/DISPLAY MODIFY ALL

Response ET:

LIBRARY	IMSACBA	(A)	IMSTESTG.DELTALIB	
		(A)	IMSTESTL.TNUC2	
		(A)	IMSTESTG.IMS61RC.ACBLIB	
		(A)	IMSTESTG.IMS61R.ACBLIB	
LIBRARY	FORMATA	(A)	IMSTESTG.MFS.OVERRIDE.FORM	
		(A)	IMSTESTG.MFS.FORMAT	
		(A)	IMSQA.FMT1	
LIBRARY	MODBLKSA	(A)	IMSB LD.I61RTS25.CMODBLKS	
LIBRARY	IMSACBB	(I)	IMSTESTG.DELTALIB	
		(I)	IMSTESTL.TNUC3	
		(I)	IMSTESTG.IMS61RC.ACBLIB	
		(I)	IMSTESTG.IMS61R.ACBLIB	
LIBRARY	FORMATB	(I)	IMSTESTG.MFS.OVERRIDE.FORM	
		(I)	IMSTESTG.MFS.FORMAT	
		(I)	IMSQA.FMT1	
LIBRARY	MODBLKSB	(I)	IMSB LD.I61RTS25.CMODBLKS	
DATABASE	DEDBJN21		RANDOMIZER: RMOD3	(1)
RMOD3	LOADED			(2)
DEDBS	SHARING		RANDOMIZER: RMOD3	(3)
	DEDB	DEDBJN22		
	DEDB	DEDBJN23		
	DEDB	DEDB3301		
DATABASE	DEDBJN22		RANDOMIZER: RMOD3	
RMOD3	NOT		LOADED	
DEDBS	SHARING		RANDOMIZER: RMOD3	
	DEDB	DEDBJN21		

```

        DEDB DEDBJN23
        DEDB DEDB3301
DATABASE DEDBJN23      RANDOMIZER: RMOD3
RMOD3      LOADED
DEDBS      SHARING      RANDOMIZER: RMOD3
        DEDB DEDBJN21
        DEDB DEDBJN22
        DEDB DEDB3301
NO WORK PENDING *99328/110535*    SYS3

```

Explanation: In this example:

- DEDB databases DEDBJN21, DEDBJN22, and DEDBJN23 have undergone Online Change.
- After a database line for DEDBS displays, a line follows containing randomizer status (loaded or not loaded).
- After the randomizer status displays, a line might follow containing DEDBS SHARING RANDOMIZER; this line is followed by DEDB lines listing the DEDBs that share the randomizer.

Example 4 for /DISPLAY MODIFY command

Entry ET:

```
/DISPLAY MODIFY ALL
```

Response ET:

```

LIBRARY  IMSACBA  (A)  IMSTESTG.DELTALIB
                (A)  IMSTESTL.TEMPA.ACBLIB
                (A)  IMSTESTG.IMS800C.ACBLIB
                (A)  IMSTESTG.IMS800.ACBLIB
LIBRARY  FORMATA  (A)  IMSTESTG.MFS.OVERRIDE.FORMAT
                (A)  IMSTESTG.MFS.FORMAT
                (A)  IMSQA.FMT1
LIBRARY  MODBLKSA (A)  TEMPA.MODBLKS
LIBRARY  IMSACBB  (I)  IMSTESTG.DELTALIB
                (I)  IMSTESTL.TEMPB.ACBLIB
                (I)  IMSTESTG.IMS800C.ACBLIB
                (I)  IMSTESTG.IMS800.ACBLIB
                (I)  IMSTESTG.MFS.OVERRIDE.FORMAT
LIBRARY  FORMATB  (I)  IMSTESTG.MFS.FORMAT
                (I)  IMSQA.FMT1
LIBRARY  MODBLKSB (I)  TEMPB.MODBLKS
DATABASE DEDBJN21  NOT OPEN, BUT DBR NEEDED ON TRACKER  (1)
DATABASE DEDBJN21  RANDOMIZER: RMOD3
RMOD3      NOT      LOADED
DATABASE DEDBJN22  RANDOMIZER: RMOD5
RMOD5      NOT      LOADED
DATABASE DEDBJN24  RANDOMIZER: RMOD4
RMOD4      NOT      LOADED
DATABASE THFP1WEB  RANDOMIZER: DBFHDC44
DBFHDC44  NOT      LOADED
DISPLAY          MODIFY COMPLETE *01303/085213*    SYS3

```

Explanation: The DEDB database DEDBJN21 is prepared to be online changed on a tracker environment. If the AREA is not stopped and the database is not open, the AREA can be open if log records type 5701 or 5950 are routed to the RSR tracking IMS from the active IMS while Online Change is in progress. It is then required that the database be taken offline by use of the /DBRECOVERY command in the case of database level change. The tracking suspend point (Suspended Log Sequence Number) is registered in RECON when the AREA is stopped. After the online change committed successfully, and when the /STA AREA command is

entered, the Online Forward Recovery will open the AREA and all log records from the suspended point will be applied to the AREA.

Example 5 for /DISPLAY MODIFY command

Entry ET:

/DISPLAY MODIFY ALL

Response ET:

```

LIBRARY  IMSACBA  (A)  IMSTESTG.DELTA1
              (A)  IMSTESTG.IMS10AC.ACBLIB1
              (A)  IMSTESTG.IMS10A.ACBLIB1
LIBRARY  FORMATA  (A)  IMSTESTG.MFS.FORMAT1
              (A)  IMSTESTG.MFS.FORMAT2
              (A)  IMSQA.FMT1
LIBRARY  MODBLKSA (A)  IMSBLD.I10ATS17.COMBLKS1
LIBRARY  IMSACBB  (U)  IMSTESTG.DELTA2
              (U)  IMSTESTG.IMS10AC.ACBLIB2
              (U)  IMSTESTG.IMS10A.ACBLIB2
LIBRARY  FORMATB  (I)  IMSTESTG.MFS.FORMAT3
              (I)  IMSTESTG.MFS.FORMAT4
              (I)  IMSQA.FMT1
LIBRARY  MODBLKSB (I)  IMSBLD.I10ATS17.COMBLKS2
DISPLAY MODIFY COMPLETE *07003/110121*  SYS3

```

TSO SPOC output:

```

MBRNAME  MESSAGES
-----
SYS3      LIBRARY  IMSACBA  (A)  IMSTESTG.DELTA1
SYS3      (A)  IMSTESTG.IMS10AC.ACBLIB1
SYS3      (A)  IMSTESTG.IMS10A.ACBLIB1
SYS3      LIBRARY  FORMATA  (A)  IMSTESTG.MFS.OVERRIDE.FORMAT1
SYS3      (A)  IMSTESTG.MFS.FORMAT1
SYS3      (A)  IMSQA.FMT1
SYS3      LIBRARY  MODBLKSA (A)  IMSBLD.I10ATS17.COMBLKS1
SYS3      LIBRARY  IMSACBB  (U)  IMSTESTG.DELTA2
SYS3      (U)  IMSTESTG.IMS10AC.ACBLIB2
SYS3      (U)  IMSTESTG.IMS10A.ACBLIB2
SYS3      LIBRARY  FORMATB  (I)  IMSTESTG.MFS.OVERRIDE.FORMAT2
SYS3      (I)  IMSTESTG.MFS.FORMAT2
SYS3      (I)  IMSQA.FMT2
SYS3      LIBRARY  MODBLKSB (I)  IMSBLD.I10ATS17.COMBLKS2
SYS3      DISPLAY MODIFY COMPLETE *07003/114249*

```

Explanation: In this example, IMSACBA is the active ACBLIB; IMSACBB is the inactive ACBLIB. The inactive ACBLIB data sets are displayed even though they are not allocated. The "U" indicates that they are unallocated.

Example 6 for /DISPLAY MODIFY command

Entry ET:

/DISPLAY MODIFY ALL

Response ET:

```

DFS000I    LIBRARY  IMSACBA  (A)  IMSTESTG.DELTALIB
DFS000I    (A)  IMSTESTG.IMS10AC.ACBLIB
DFS000I    (A)  IMSTESTG.IMS10A.ACBLIB
DFS000I    LIBRARY  FORMATA  (A)  IMSTESTG.MFS.FORMAT1
DFS000I    (A)  IMSTESTG.MFS.FORMAT2
DFS000I    (A)  IMSQA.FMT1
DFS000I    LIBRARY  MODBLKSA (A)  IMSBLD.I10ATS17.COMBLKS1

```

```

DFS000I      LIBRARY  IMSACBB  ( )  NO DFSMDA MEMBER
DFS000I      LIBRARY  FORMATB  (I)  IMSTESTG.MFS.FORMAT3
DFS000I                        (I)  IMSTESTG.MFS.FORMAT4
DFS000I                        (I)  IMSQA.FMT1
DFS000I      LIBRARY  MODBLKSB (I)  IMSBLD.I10ATS17.COMBLKS1
DFS000I      DISPLAY MODIFY COMPLETE *07003/110121*   SYS3

```

Explanation: In this example, IMSACBA is the active ACBLIB; IMSACBB is the inactive ACBLIB. There is no DFSMDA member for the inactive ACBLIB data sets. The data set name field contains "NO DFSMDA MEMBER". The status field is left blank.

Related tasks:

[➡](#) The online change function, DEDBs, and Availability of IFP and MPP Regions (Database Administration)

Related reference:

"Status and attributes for the /DISPLAY command" on page 357

[➡](#) QUERY DB command (Commands)

[➡](#) QUERY PGM command (Commands)

[➡](#) QUERY RTC command (Commands)

[➡](#) QUERY TRAN command (Commands)

/DISPLAY MSNAME command

Use the /DISPLAY MSNAME command to display the queue counts for the specified logical link path. Generic parameters are supported for the MSNAME keyword.

Subsections:

- "Environment"
- "Syntax"
- "Keywords" on page 461
- "Usage notes" on page 461
- "Examples" on page 461

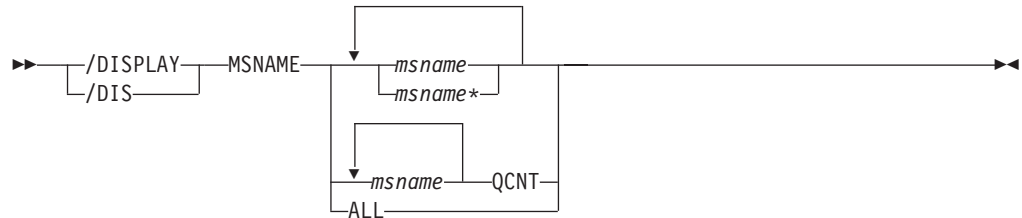
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 203. Valid environments for the /DISPLAY MSNAME command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DISPLAY	X	X	X
MSNAME	X		X
QCNT	X		X

Syntax



Keywords

The following keyword can be specified for the /DISPLAY MSNAME command:

QCNT

Specifies that global queue count information is to be displayed. If QCNT is not specified, local queue counts are displayed; when it is specified, no local queue counts are displayed.

This count represents the message counts of messages that can be processed by the IMS system where the command is issued. This count includes messages that can be processed by any IMS system (messages with no affinity), plus messages that can be processed by the IMS system where the command is issued (messages with an affinity to the IMS system that issued the command).

This keyword is valid only in a shared-queues environment.

Usage notes

In a shared-queues environment, use the QCNT keyword to obtain the current message queue counts on the shared queues structure. The local queue counts (ENQCT, DEQCT, and QCT) value that is returned on this command when the QCNT keyword is not specified represents the messages being processed by the IMS system where this command is issued. Do not use local queue counts for queue evaluation purposes.

Examples

Entry ET:

```
/DISPLAY MSNAME ALL
```

Response ET:

MSNAME	ENQCT	DEQCT	QCT
SYSTEM2A	0	0	0
SYSTEM2B	0	0	0
FRESNO	0	0	0
BOSTON	0	0	0
ALBANY	0	0	0
TEST1	0	0	0
91350/053859			

Entry ET:

```
/DISPLAY MSNAME ALL
```

Response ET:

MSNAME	ENQCT	DEQCT	QCT	IMS1	IMS1
LINK23B4	0	0	0	DYNAMIC	IMS1
LINK12V1	0	0	0	IMS1	
LINK23U2	0	0	0	DYNAMIC	IMS1

ELINK211	0	0	0	DYNAMIC	IMS1
LINK13B3	0	0	0	IMS1	
LINK13V	0	0	0	IMS1	
LINK12V	0	0	0	IMS1	
LINK13C2	0	0	0	IMS1	
LINK13X	0	0	0	IMS1	
LINK12V2	0	0	0	IMS1	
LINK13M2	0	0	0	IMS1	
LINK13V2	0	0	0	IMS1	
ELINK124	0	0	0	IMS1	
LINK23V1	0	0	0	DYNAMIC	IMS1
LINK12B1	0	0	0	IMS1	
LINK12B2	0	0	0	IMS1	
LINK12Y	0	0	0	IMS1	
ELINK120	0	0	0	IMS1	
LINK13B4	0	0	0	IMS1	
LINK21V3	0	0	0	DYNAMIC	IMS1
ELINK1MS	0	0	0	IMS1	
LINK12M1	0	0	0	IMS1	
LINK23V	0	0	0	DYNAMIC	IMS1
LINK13U2	0	0	0	IMS1	
LINK23B3	0	0	0	DYNAMIC	IMS1
ELINK224	0	0	0	DYNAMIC	IMS1
LINK23X	0	0	0	DYNAMIC	IMS1
LINK23V2	0	0	0	DYNAMIC	IMS1
ELINK121	0	0	0	IMS1	
LINK23C2	0	0	0	DYNAMIC	IMS1
LINK12U1	0	0	0	IMS1	
LINK23M2	0	0	0	DYNAMIC	IMS1
ELINK122	0	0	0	IMS1	
ELINK222	0	0	0	DYNAMIC	IMS1
LINK12C1	0	0	0	IMS1	
LINK13V1	0	0	0	IMS1	
ELINK123	0	0	0	IMS1	
PTH3TSTB	0	0	0	IMS1	

97258/175636

/DISPLAY NODE command

The /DISPLAY NODE command, when followed by a valid node name or ALL, displays status, queue counts, and number of messages sent to and received from the specified node.

Subsections:

- "Environment"
- "Syntax" on page 463
- "Keywords" on page 464
- "Usage notes" on page 466
- "Equivalent IMS type-2 commands" on page 467
- "Output fields" on page 467
- "Examples" on page 468

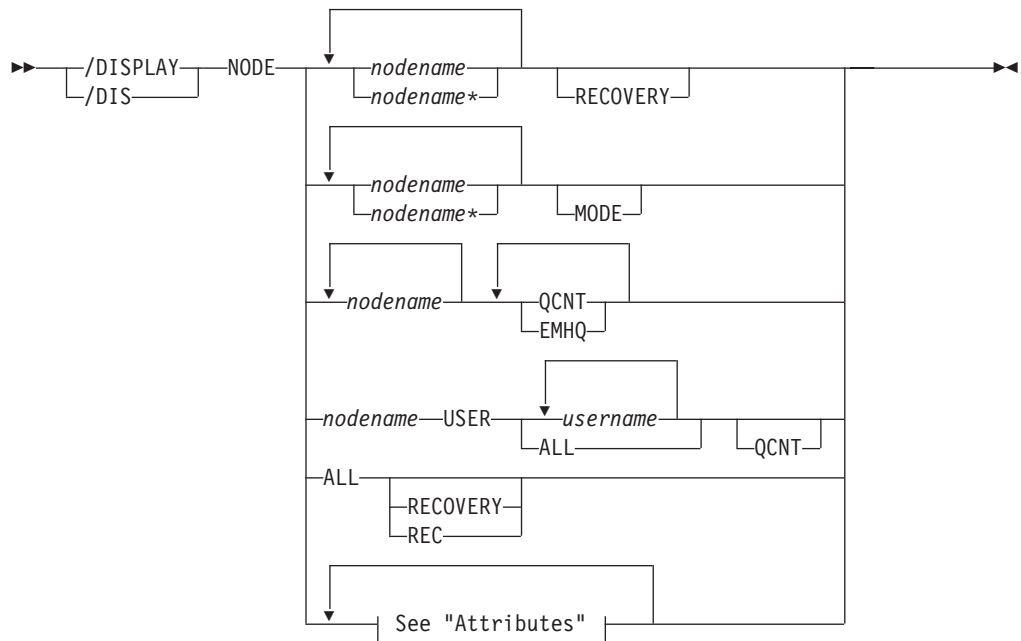
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 204. Valid environments for the /DISPLAY NODE command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DISPLAY	X	X	X
EMHQ	X		X
NODE	X		X
QCNT	X		X
RECOVERY	X	X	
USER	X		X

Syntax



Attributes:

ACTIV
AUTOSR
BCKUP
CLSDST
CON
CONVACT
CONVHLD
C1INOP
C2INOP
C3INOP
C4INOP
DEACT
EXCL
FORCES
IDLE
INOP
LOCK
LOST
MFST
OPNDST
PAGE
PRI
PRST
QUI
RELREQ
RESP
RESPINP
RESYNC
SEC
SHUT
SIGN
SIMLOGON
STATIC
STOPPED
TEST
TKOTRA
TRA

Keywords

The following keywords can be specified for the /DISPLAY NODE command:

MODE

Displays the mode table names that are associated with the specified nodes.

EMHQ

Specifies that global queue count information on the Expedited Message Handler Queues (EMHQ) displays when both EMHQ and QCNT are specified. If EMHQ is specified, QCNT must also be specified. This keyword is valid only in a shared-queues environment.

QCNT

Specifies that global queue count information is to be displayed. If QCNT is not specified, local queue counts are displayed; when it is specified, no local queue counts are displayed. If QCNT is specified and EMHQ is not, global queue count information on the shared message queues (MSGQ) is displayed.

This count represents the message counts of messages that can be processed by the IMS system where the command is issued. This count includes messages that can be processed by any IMS system (messages with no affinity), plus

| messages that can be processed by the IMS system where the command is
| issued (messages with an affinity to the IMS system that issued the command).

IMS does not check if the specified name is a valid LTERM in the IMS subsystem on which the command is entered.

This command does not display queue counts for Fast Path output messages for the NODE unless EMHQ and QCNT are specified.

This keyword is valid only in a shared-queues environment.

RECOVERY

The /DISPLAY NODE|USER RECOVERY command can be used to display the recovery values that pertain to the node or user. The recovery values may be displayed from the local control blocks, if available, or from values saved for the node or user in the Resource Manager, if resource information is being kept in Resource Manager, and the node or user is defined to have its status kept in Resource Manager.

Attributes

Reserved parameters for the /DISPLAY NODE command and cannot be used to name nodes.

Attributes listed in “Keywords and reserved parameters” on page 388 for the /DISPLAY AREA command can be used with the NODE keyword. Nodes are selected for display based on the attribute or attributes specified. The attribute display format is the same as the standard NODE display. Attributes usually correspond to the conditions displayed for nodes. Any exceptions are flagged in the following list.

For example, /DISPLAY NODE TRACE displays all nodes that are currently being traced. Following is a list of the attributes that can be specified with the NODE keyword.

- ACTIV
- AUTOSR (Corresponds to the NODE conditions ASR)
- BCKUP
- CLSDST
- CON
- CONVACT (Corresponds to the NODE condition CONV-ACT)
- CONVHLD (Corresponds to the NODE condition CONV-HLD)
- C1INOP
- C2INOP
- C3INOP
- C4INOP
- DEACT
- EXCL
- FORCES (Corresponds to the NODE condition FORCE)
- IDLE
- INOP
- LOCK
- LOST
- MFST
- OPNDST
- PAGE

- PRI
- PRST
- QUI
- RECOVER
- RELREQ
- RESP
- RESPINP
- RESYNC
- SEC
- SHUT
- SIGN
- SIMLOGON
- STATIC
- STOPPED
- TEST
- TKOTRA
- TRA

Note: The /DISPLAY NODE RESPINP command returns all nodes that have RESP-INP and RESP-INP-FP status.

N/A is displayed by the /DISPLAY NODE ALL MODE command for VTAM 3270 nodes.

Usage notes

In a shared-queues environment, use the QCNT keyword to obtain the current message queue counts on the shared queues structure. The local queue counts (ENQCT, DEQCT, and QCT) value that is returned on this command when the QCNT keyword is not specified represents the messages being processed by the IMS system where this command is issued. Do not use local queue counts for queue evaluation purposes.

When using ISC, the output for a parallel-session node shows one line of information for each session of the node whether the node is active or not and whether logical terminals are assigned or not. If a session is active, the user identifier (preceded by a dash) and the status and queue counts are displayed on a subsequent line. The /DISPLAY NODE command displays queue counts up to a maximum of 32 KB. The queue count for the /DISPLAY NODE command is reset to zero when sessions are not active, or when a signed-on user issues /SIGN OFF.

The USER keyword is valid for ISC nodes with users or dynamic nodes with signed on users. The NODE parameter can be generic where the USER keyword is not present. The generic parameter specifies nodes that already exist. A status of STATIC is displayed for nodes defined to IMS by way of system definition. STATIC is also supported as an attribute parameter. Static nodes are used with the /DISPLAY NODE command in the same way that dynamic nodes are used.

The /DISPLAY NODE command shows signed on users, where the user ID follows the status SIGN in parentheses.

Restrictions for using NODE and USER parameters together:

- Commands with the NODE USER keyword pair are valid only if:
 - The USER is signed on to the NODE
 - In an ISC environment, the USER is allocated to the NODE
 - The nodes and users already exist
- /DISPLAY NODE USER commands are valid for ISC and non-ISC nodes and users.

Equivalent IMS type-2 commands

The following table shows variations of the /DISPLAY NODE command and the IMS type-2 commands that perform similar functions.

Table 205. Type-2 equivalents for the /DISPLAY NODE command.

Task	/DISPLAY NODE command	Similar IMS type-2 command
Displays VTAM connection identifier (CID).	/DISPLAY NODE <i>node</i>	QUERY NODE SHOW(CID)
Displays send/receive message counts.	/DISPLAY NODE <i>node</i>	QUERY NODE SHOW(COUNT)
Displays preset destination.	/DISPLAY NODE <i>node</i>	QUERY NODE SHOW(PRESET)
Displays queue count.	/DISPLAY NODE <i>node</i> /DISPLAY NODE <i>node</i> QCNT	QUERY NODE SHOW(QCNT)
Displays status for a particular node.	/DISPLAY NODE <i>node</i>	QUERY NODE SHOW(STATUS)
Displays terminal type.	/DISPLAY NODE <i>node</i>	QUERY NODE SHOW(TYPE)
Displays user ID.	/DISPLAY NODE <i>node</i>	QUERY NODE SHOW(USERID)
Displays user.	/DISPLAY NODE <i>node</i>	QUERY NODE SHOW(USER)
Displays VTAM mode table names.	/DISPLAY NODE <i>node</i> MODE	QUERY NODE SHOW(MODETBL)
Displays message queue count in the Expedited Message Handler (EMH) queues.	/DISPLAY NODE <i>node</i> QCNT EMHQ	QUERY NODE SHOW(EMHQ)
Displays owner IMSID in RM resource structure.	/DISPLAY NODE <i>node</i> RECOVERY	QUERY NODE SHOW(OWNER)
Displays status recovery information.	/DISPLAY NODE <i>node</i> RECOVERY	QUERY NODE SHOW(RECOVERY)

Output fields

The output fields displayed for the /DISPLAY NODE command include the following:

NODE-USR

Node name and user identifier.

TYPE Type of node.

DEF MODETBL

Default mode table name set by way of system definition or logon descriptor or /CHANGE command. This name can be overridden using the /OPNDST command or the LOGON exit for non-IMS session initiations.

ACT MODETBL

Mode table name actually used to initiate the session. This name is only displayed while the session is active. The field is blank at normal session termination.

OWNER

The IMS ID (RSEname if an XRF system) of the IMS system that currently owns this resource. If the resource is not currently owned, this field will be displayed as NONE

SRM The scope of recovery for a resource, and from where the end-user significant status is maintained and recovered.

CONV

Frequently changes for a resource, and thus there are performance considerations related to maintaining end-user significant status. The installation can tell IMS how to recover end-user significant status by specifying the level of recovery for each status. Shown for each resource is the level of recovery for each end-user significant status.

STSN Frequently changes for a resource, and thus there are performance considerations related to maintaining end-user significant status. The installation can tell IMS how to recover end-user significant status by specifying the level of recovery for each status. Shown for each resource is the level of recovery for each end-user significant status.

FPATH

Frequently changes for a resource, and thus there are performance considerations related to maintaining end-user significant status. The installation can tell IMS how to recover end-user significant status by specifying the level of recovery for each status. Shown for each resource is the level of recovery for each end-user significant status.

Examples

The following are examples of the /DISPLAY NODE command.

Example 1 for /DISPLAY NODE command

Entry ET:

```
/DISPLAY NODE DTSLU* LUP1 ENDS01 LU6NDPA LU6NDPH
```

Response ET:

NODE-USR	TYPE	CID	RECD	ENQCT	DEQCT	QCT	SENT	SYS3
DTSLU002	SLUP	010000D3	0	0	0	0	0	SIGN(IMSUS05) IDLE CON
DTSLU202	SLU2	010000CB	0	0	0	0	1	SIGN(IMSUS02) IDLE CON
DTSLU603	LUT6							
-IMSUS04		010000C7	0	0	0	0	0	SIGN(IMSUS04) IDLE CON PRI
DTSLU205	SLU2	010000A5	2	1	1	0	3	SIGN(IMSUS14) IDLE CONV-ACT CON
DTSLU204	SLU2	010000A4	3	0	0	0	4	SIGN(IMSUS13) IDLE CON EXC
DTSLU203	SLU2	010000A3	3	0	0	0	4	SIGN(IMSUS12) PRST(WTOR) IDLE MFST CON
LUP1	SLUP	010000CD	0	0	0	0	0	IDLE CON STATIC
ENDS01	SLU2	010000A6	1	0	0	0	2	SIGN(IMSUS08) IDLE CON STATIC

```

LU6NDPA  LUT6
-LU6SPG      010000BB      0      0      0      0      0 IDLE CON PRI
-CA12        010000BD      0      0      0      0      0 IDLE CON PRI
-CA11        010000BF      0      0      0      0      0 IDLE CON PRI
LU6NDPH  LUT6
-CA14        010000C1      0      0      0      0      0 IDLE CON PRI
-N/A         00000000      0      0      0      0      0 IDLE STATIC
-N/A         00000000      0      0      0      0      0 IDLE STATIC
*90240/134730*

```

Explanation: User IMSUS05 is signed on to dynamic node DTSLU002. User IMSUS02 is signed on to dynamic node DTSLU202. User IMSUS04 is allocated to ISC node DTSLU603. User IMSUS14 is signed on to dynamic node DTSLU205 and has an active conversation. User IMSUS13 is signed on to dynamic node DTSLU204 and is in exclusive mode. User IMSUS12 is signed on to dynamic node DTSLU203 and has a preset destination of LTERM WTOR and is in MFS test mode. Static node LUP1 is logged on. User IMSUS08 is signed on to static node ENDS01. Users LU6SPG, CA12, and CA11 are allocated to static ISC node LU6NDPA, which means node LU6NDPA has 3 active parallel sessions. User CA14 is allocated to static ISC node LU6NDPH, which means node LU6NDPH has one active parallel session.

Example 2 for /DISPLAY NODE command

Entry ET:

```
/DISPLAY NODE NSLUTP1 NSLUTP6 NPLUTP6
```

Response ET:

NODE-USR	TYPE	CID	RECD	ENQCT	DEQCT	QCT	SENT	
NSLUTP1	SLU1	00000000	0	0	0	0	0	IDLE
NSLUTP6	LUT6	00000000	5	3	2	1	5	IDLE
NPLUTP6	LUT6							
-A		00000000	1	1	1	0	1	IDLE FORCE
-B		00000000	10	25	13	12	9	IDLE
-N/A		00000000	0	0	0	0	0	IDLE
-C		00000000	0	4	4	0	4	IDLE

90229/083059

Entry ET:

```
/DISPLAY NODE ALL
```

Response ET:

NODE-USR	TYPE	CID	RECD	ENQCT	DEQCT	QCT	SENT	SYS3
WRIGHT	SLU2	00000000	0	0	0	0	0	IDLE
LUNS01	NT0	00000000	0	0	0	0	0	IDLE
WS12	FIN	00000000	0	0	0	0	0	IDLE
VR3275A1	3277	00000000	0	0	0	0	0	IDLE
VR3286A1	3286	00000000	0	0	0	0	0	IDLE
LUP1	SLUP	00000000	0	0	0	0	0	IDLE
Q3290A	SLU2	00000000	0	0	0	0	0	IDLE
LU6FP02	LUT6	00000000	0	0	0	0	0	IDLE
LU6NDPA	LUT6							
-N/A		00000000	0	0	0	0	0	IDLE
-N/A		00000000	0	0	0	0	0	IDLE
-N/A		00000000	0	0	0	0	0	IDLE
NDNTOXA1	NT0	00000000	0	0	0	0	0	ASR
ND3287A1	SLU1	00000000	0	0	0	0	0	ASR
ND3287A2	SLU1	00000000	0	0	0	0	0	IDLE
ND3287A3	SLU1	00000000	0	0	0	0	0	IDLE
ND3287A4	SLU1	00000000	0	0	0	0	0	ASR
NDSLUA1	SLU2	00000000	0	0	0	0	0	ASR

NDSL2A2	SLU2	00000000	1	1	0	1	1	ASR
NDSLUPA1	SLUP	00000000	0	0	0	0	0	ASR
NDSLUPA2	SLUP	00000000	0	0	0	0	0	IDLE
NDLU6XSG	LUT6	00000000	0	0	0	0	0	IDLE
NDLU6XPG	LUT6							
-N/A		00000000	0	0	0	0	0	ASR
-N/A		00000000	0	0	0	0	0	ASR
-N/A		00000000	0	0	0	0	0	ASR
-N/A		00000000	0	0	0	0	0	ASR
91213/100107			SYS3					

Entry ET:

/DISPLAY NODE IN902D1 IN902D4

Response ET:

NODE-USR	TYPE	CID	RECD	ENQCT	QCT	SENT
IN902D1	SLU1	100121C5	125	125	0	125 CON
91012/192544						

Entry ET:

/DISPLAY NODE NLUTP6P USER C

Response ET:

NODE-USR	TYPE	CID	RECD	ENQCT	DEQCT	QCT	SENT
NLUTP6P	LUT6						
-C		00000000	0	10	8	2	8
90229/083059							

Example 3 for /DISPLAY NODE command

The following commands illustrate the use of /DISPLAY to monitor changes in the mode table values for a node.

Entry ET:

/DISPLAY NODE LUTYPEP1 MODE

Response ET:

NODE-USR	TYPE	DEF MODETBL	ACT MODETBL
LUTYPEP1	SLUP	DEFRESP	
90179/100206			

Explanation: DEFRESP is the mode table name defined for node LUTYPEP1 at system definition. The session is not active so the ACT MODETBL field is blank.

Entry ET:

/OPN NODE LUTYPEP1

Response ET:

DFS058I OPNDST COMMAND COMPLETED

Entry ET:

/DISPLAY NODE LUTYPEP1 MODE.

Response ET:

NODE-USR	TYPE	DEF MODETBL	ACT MODETBL
LUTYPEP1	SLUP	DEFRESP	DEFRESP
90179/100508			

Explanation: A mode table name was not specified with the /OPNDST command so the default value defined at system definition was used to initiate the session.

Entry ET:

```
/CLS NODE LUTYPEP1
```

Response ET:

```
DFS058I CLSDST COMMAND COMPLETED
```

Entry ET:

```
/DISPLAY NODE LUTYPEP1 MODE
```

Response ET:

```
NODE-USR TYPE  DEF MODETBL  ACT MODETBL
LUTYPEP1 SLUP  DEFRESP
*90179/100630*
```

Explanation: Active mode table name displays as blank at normal session termination.

Entry ET:

```
/OPN NODE LUTYPEP1 MODE ALPHA.
```

Response ET:

```
DFS058I OPNDST COMMAND COMPLETED
```

Entry ET:

```
/DISPLAY NODE LUTYPEP1 MODE
```

Response ET:

```
NODE-USR TYPE  DEF MODETBL  ACT MODETBL
LUTYPEP1 SLUP  DEFRESP      ALPHA
*90179/100805*
```

Explanation: The mode table name specified with the /OPNDST command (ALPHA) is used to initiate the session. The default value specified at system definition (DEFRESP) is overridden by the /OPNDST command.

Example 4 for /DISPLAY NODE command

The following example shows the display of all nodes with the automatic session restart designation.

Entry ET:

```
/DISPLAY NODE AUTOSR
```

Response ET:

NODE-USR	TYPE	CID	RECD	ENQCT	DEQCT	QCT	SENT
WS12	FIN	00000000	0	0	0	0	0 ASR
NODE0005	FIN	00000000	0	0	0	0	0 ASR
NODE0006	FIN	00000000	0	0	0	0	0 ASR
NODE0007	FIN	00000000	0	0	0	0	0 ASR
NTOLUNS	NTO	00000000	0	0	0	0	0 ASR IDLE
NT02741	NTO	00000000	0	0	0	0	0 ASR IDLE
LU6NODE2	LUT6						

-N/A	00000000	0	0	0	0	0 ASR IDLE
-N/A	00000000	0	0	0	0	0 ASR IDLE
-N/A	00000000	0	0	0	0	0 ASR IDLE

90179/101609

Example 5 for /DISPLAY NODE command

Entry ET:

/DISPLAY NODE NODE1 NODE2 QCNT

Response ET:

NODE	GBLQCT
NODE1	100000
NODE2	25

95200/170817

Entry ET:

/DISPLAY NODE NODE1 USER USER1 USER2 QCNT

Response ET:

NODE/USER	GBLQCT
NODE1	
-USER1	10
-USER2	0

95200/170817

Example 6 for /DISPLAY NODE command

Entry ET:

/DISPLAY NODE FPEN0001 EMHQ QCNT

Response ET:

LTERM	GBLQCT
FPEN0001	0

98203/143542

Example 7 for /DISPLAY NODE command

Entry ET:

/DISPLAY NODE DTSLU* DTSLU202 L3270A RECOVERY

Response ET:

NODE-USR	OWNER	SRM	CONV	STSN	FPATH
DTSLU002	IMSA	GLOBAL	Y	Y	Y
DTSLU603					
-IMSUS04	IMSA	LOCAL	Y	Y	Y
DTSLU202	IMSB	GLOBAL	Y	N	N
L3270A	IMSA	LOCAL	Y	N	Y

99240/134730

Related reference:

“Status and attributes for the /DISPLAY command” on page 357

 QUERY NODE command (Commands)

/DISPLAY OASN SUBSYS command

Use the /DISPLAY OASN SUBSYS command to display the outstanding recovery units (Origin Application Schedule Numbers) associated with the external subsystem (not CCTL subsystem) specified by the SUBSYS keyword.

The OASN is assigned by IMS when it schedules an application into a dependent region. The OASN, coupled with the IMS ID, becomes the recovery token for units of work distributed to other subsystems.

Subsections:

- "Environment"
- "Syntax"
- "Examples"

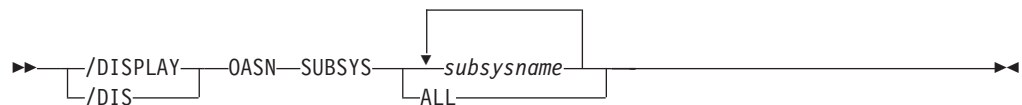
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 206. Valid environments for the /DISPLAY OASN SUBSYS command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DISPLAY	X	X	X
OASN	X	X	X
SUBSYS	X	X	X

Syntax



Examples

Entry ET:

```
/DISPLAY OASN SUBSYS ALL
```

Response ET:

```
SUBSYS  OASN
SSTR
        0000000001
*90207/095627*
```

/DISPLAY OLDS command

Use the /DISPLAY OLDS command to display the system logging status.

The ddnames for the online log data sets that are currently online are listed in the sequence used. That is, the one currently being used is listed first, with the one most recently used listed next, and so on. OLDS status information is displayed with each ddname. The meanings of these status messages is provided. In the case

of dual logging, two lines of status output are displayed per OLDS ID; the first for the primary OLDS and the second for the secondary OLDS.

Subsections:

- “Environment”
- “Syntax”
- “Keywords”
- “Usage notes”
- “Output fields” on page 475
- “Examples” on page 476

Environment

The /DISPLAY OLDS command is valid in DB/DC, DBCTL, and DCCTL environments.

Syntax



Keywords

The following keywords can be specified for the /DISPLAY OLDS command. These keywords specify selection criteria used to select which OLDS are to be included in the display output. All these keywords are optional. If none are specified, ALL is the default action. When multiple keywords are specified, an OLDS that satisfies any one of the specified criteria is included in the output.

ALL

Displays status of each online OLDS.

INUSE

Displays current output OLDS.

BACKOUT

Displays OLDS that contains dynamic backout data for currently active PSTs.

ERROR

Displays OLDS that have encountered error conditions.

STOPPED

Displays stopped OLDS.

Usage notes

/DISPLAY OLDS shows the percentage of the OLDS used (shown under % FULL in the output) and the rate at which it is being filled (shown under RATE in the output). The RATE is the average number of blocks written to the current OLDS since the last /DISPLAY OLDS was issued. If no blocks were written, the RATE is 0, or, if elapsed time is 0, the previous RATE will be displayed.

When the archive status of an OLDS is scheduled or started and DBRC has generated the JCL for the archive job, the archive job name will be included in the output.

Following the detailed OLDS data set information, the dual OLDS state (DUAL, DEGRADED DUAL, NONDEGRADABLE DUAL or SINGLE) and the WADS recording state (DUAL, SINGLE, or NO) are displayed. Also, the DDNAMEs of all available WADS are displayed. The DDNAMEs of the current WADS are preceded by an asterisk (*).

The SLDSREAD status is also displayed. If SLDSREAD ON is displayed, IMS is enabled to retrieve both SLDS and OLDS data. If SLDSREAD OFF is displayed, IMS is not enabled to retrieve SLDS data.

If the backout of one or more active dependent regions would require the SLDS (all of the region's log records are not available from the OLDS), the following text is displayed in front of the SLDSREAD ON or SLDSREAD OFF character string: SLDS REQUIRED FOR BACKOUT - RGN *nnnnn*, where *nnnnn* is the region number of the dependent region that owns the oldest record required for backout.

If there are one or more active dependent regions that could potentially require backout, but the SLDS is not required, the following text is displayed: OLDS REQUIRED FOR BACKOUT - RGN *nnnnn*, where *nnnnn* is the region number of the dependent region that owns the oldest record required for backout.

An OLDS that is stopped or had an I/O error is dynamically deallocated after it is no longer needed for backout.

Restriction: Under the dual logging environment, the number of primary OLDS and secondary OLDS must be the same; otherwise, the status of the OLDS is incorrect.

Output fields

The /DISPLAY OLDS command shows one of the following as the archive status of each OLDS:

NEEDED

This OLDS needs to be archived. It cannot be reused for output logging until it has been archived.

SCHEDULED

An archive job has been generated for this OLDS.

STARTED

A job to archive this OLDS has started execution.

AVAILABLE

Either this OLDS is empty or it has been archived. It can be reused for output logging.

The /DISPLAY OLDS command also shows the following status information for OLDS:

IN USE

This is the current output log OLDS. The display line for this OLDS also has an asterisk (*) in the left margin.

STOPPED

/STOP command entered for this OLDS or the OLDS is being internally stopped because of write errors.

WRT-ERR

A write I/O error occurred on this OLDS data set.

CLSE An error occurred when closing this data set. The Log Recovery utility can be used to correct this condition.

PREV CLSER

The previous OLDS could not be closed because of an I/O error and this OLDS is required by the Log Recovery utility to correct the condition.

NOT USABLE

This data set is not being used for logging. When operating in “Degraded Dual” state, the other data set in this OLDS pair was used for output but this data set was not used because of a previous data set error.

BACKOUT

This OLDS is potentially required for backout.

Examples

Entry ET:

```
/DISPLAY OLDS
```

Response ET:

```
OLDS-DDNAME % FULL RATE ARCH-JOB   ARCH-STATUS  OTHER-STATUS
*DFSOLP00      37    9                AVAILABLE    IN USE
DFSOLP02
DFSOLP01                AVAILABLE
SINGLE OLDS LOGGING, SINGLE WADS LOGGING
AUTOMATIC ARCHIVE = 01
WADS = *DFSWADS0 DFSWADS1
SLDSREAD ON
*89184/141407*
```

/DISPLAY OTMA command

Use the /DISPLAY OTMA command to display the current status for IMS Open Transaction Manager Access (OTMA) clients and servers.

Subsections:

- “Environment”
- “Syntax”
- “Usage notes” on page 477
- “Output fields” on page 477
- “Examples” on page 478

Environment

The /DISPLAY OTMA command is valid in DB/DC and DCCTL environments.

Syntax

```
➤ ——— /DISPLAY ——— OTMA ————— ➤
      |
      |—— /DIS ———|
```

Usage notes

This command is functionally equivalent to the /DISPLAY TMEMBER ALL command.

If a super member is defined, information about the super member is also displayed. Because a super member does not interface with z/OS cross-system coupling facility (XCF), the XCF_STATUS field is left blank. Because super members do not process input messages, OTMA security authorization is not performed. The SECURITY field is also left blank.

Output fields

This command displays the following output fields:

DRUEXIT

The name of any OTMA Destination Resolution exit routine that is associated with the tmember.

GROUP/MEMBER

Each member in each XCF group. The server is always the first member that is displayed.

INPT The maximum number of input messages from this tmember that can be waiting at the same time to be processed. This value is primarily used for send-then-commit or CM1 messages.

MAXTP

The maximum TPIPE limit that is specified in the OTMA client descriptor. If the MAXTP parameter is specified for DFSOTMA in the OTMA client descriptor, the MAXTP limit is displayed for the OTMA server. If there are one or more OTMA clients with the MAXTP limit defined and MAXTP is not specified for DFSOTMA, the highest limit defined among the members is displayed for the OTMA server.

SECURITY

The security status for each member or server. The security status can be one of the following:

- NONE
- CHECK
- FULL
- PROFILE

SMEM

The name of the super member.

TIB For an OTMA target member (tmember), the current number of input messages from this tmember that IMS is processing. For an OTMA server, the total number of input messages from all tmembers that IMS is processing plus the reserved message blocks for message processing. This value is primarily used for send-then-commit or CM1 messages.

T/O The timeout value for OTMA to wait for an ACK or NACK for an OTMA output message.

TPCNT

The current TPIPE count for each OTMA client and IMS server, regardless of whether the MAXTP keyword is specified in the OTMA client descriptor.

USER-STATUS

The user status for each member. The status can be one of the following:

- ACCEPT TRAFFIC
- DISCONNECTED
- FLOOD
- IN SLOWDOWN
- MAX TPIPE
- SERVER
- SERVER+FLOOD
- SMQ BACKEND
- WAIT BID
- WAIT RESPONSE

When MAX TPIPE is displayed for the OTMA server, it means that the MAXTP limit for DFSOTMA was specified in the OTMA client descriptor and that the limit has been reached. Any of the new TPIPE creation requests for any OTMA clients is rejected until the TPIPE count in the system is dropped down to 50% or an user-specified level. However, OTMA messages that use existing TPIPEs will continue to work. IMS automatically attempts to remove TPIPEs after they have been idle for three consecutive system checkpoints. You can issue /CHECKPOINT commands three times to force the TPIPE cleanup.

XCF-STATUS

The XCF status for each member. The status can be one of the following:

- ACTIVE
- CREATED
- FAILED
- NOT DEFINED
- QUIESCED
- STO-INPUT
- UNKNOWN

Examples

The following are examples of the /DISPLAY OTMA command.

Example 1 for /DISPLAY OTMA command

Entry ET:

/DISPLAY OTMA

Response ET:

GROUP/MEMBER	XCF-STATUS DRUEXIT	USER-STATUS T/O	SECURITY	TIB	INPT	SMEM
HARRY						
-IMS1	ACTIVE	SERVER	FULL			
-IMS1	N/A					
-HWS001	ACTIVE	ACCEPT TRAFFIC	FULL	0	0	SM01
-HWS001	HWSYDRU0	5				
-SM01		SUPER MEMBER				SM01
-SM01	N/A					
-MQS001	ACTIVE	ACCEPT TRAFFIC	FULL	0	0	
-MQS001	MQSYDRU0	10				

Explanation: The /DISPLAY OTMA command can be issued to display the status of IMS server and members. This command is functionally equivalent to the /DIS TMEMBER ALL command. The member information is displayed in random order. In the previous example, HARRY is the XCF group name for IMS and its OTMA clients. IMS1 is the server member running with OTMA activated. HWS001 and MQS001 are OTMA client members. The SM01 is an OTMA super member for asynchronous output messages. Each OTMA client has two-line status information.

Example 2 for /DISPLAY OTMA command

Entry ET:

```
/DISPLAY OTMA
```

Response ET:

GROUP/MEMBER	XCF-STATUS	USER-STATUS	SECURITY
HOANG			
-APPL8	NOT DEFINED	SERVER	FULL
-CLIENT1	ACTIVE	ACCEPT TRAFFIC	
94165/165753			

Example 3 for /DISPLAY OTMA Command

Entry ET:

```
/DISPLAY OTMA
```

Response ET:

ROUP/MEMBER	XCF-STATUS	USER-STATUS	SECURITY	TIB	INPT	SMEM
HARRY						
-HWS001	ACTIVE	ACCEPT TRAFFIC	FULL	0	0	SM01
-HWS002	ACTIVE	ACCEPT TRAFFIC	FULL	0	0	SM01
-SM01		SUPER MEMBER				SM01
-HWS003	ACTIVE	ACCEPT TRAFFIC	FULL	0	0	

Explanation: The /DISPLAY OTMA command can be issued to display the status for OTMA clients and servers. This command is functionally equivalent to the /DIS TMEMBER ALL command. The member information is displayed in random order.

Example 4 for /DISPLAY OTMA Command

Entry ET:

```
/DISPLAY OTMA
```

Response ET:

GROUP/MEMBER	XCF-STATUS	USER-STATUS	SECURITY	TIB	INPT	SMEM
	DRUEXIT	T/O TPCNT				
XCFGRP1						
-IMS1	ACTIVE	SERVER	FULL	0	8000	
-IMS1	N/A	0 3000				
-HWS1	ACTIVE	ACCEPT TRAFFIC	FULL	0	5000	
-HWS1		200 500				
-HWS2	ACTIVE	MAX TPIPE	FULL	0	5000	
-HWS2		200 1000				

Explanation: In this example, the TPCNT field indicates the current TPIPE count for each member. For the IMS server, this field indicates the global TPIPE limit, which is the highest TPIPE limit set for the OTMA clients. MAX TPIPE indicates that

the TPIPE count for the OTMA client has reached the limit set. This status is cleared when the global TPIPE count falls below 50%.

Related reference:

“/DISPLAY TMEMBER command” on page 541

/DISPLAY OVERFLOWQ command

Use the /DISPLAY OVERFLOWQ command to display a list of queue names that are in overflow mode for those coupling facility list structures specified (for the STRUCTURE keyword) that are in overflow mode.

It also displays the queue type of the resource for each queue.

Subsections:

- “Environment”
- “Syntax”
- “Keywords”
- “Usage notes”
- “Output fields” on page 481
- “Examples” on page 482

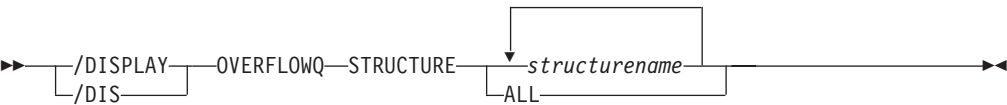
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 207. Valid environments for the /DISPLAY OVERFLOWQ command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DISPLAY	X	X	X
OVERFLOWQ	X		X
STRUCTURE	X		X

Syntax



Keywords

The following keywords can be specified for the /DISPLAY OVERFLOWQ command:

STRUCTURE

Specifies the primary coupling facility list structures to be displayed.

Usage notes

If a specified structure is not defined, the overflow structure name is displayed as NOT-DEFINED.

Queue names displayed might not be defined to the IMS subsystem on which this command is issued. If a queue type is not defined, the type is displayed as UNKNOWN, and the queue name is displayed as the 16-byte queue name (with the queue type as the first byte).

This command is valid only in a shared-queues environment.

If there are OTMA output messages that have been moved to the overflow structure, the /DISPLAY OVERFLOWQ command displays information about those messages. Instead of displaying the queue name that was used to queue the OTMA output messages, the character string 'TMSTMP-' is displayed. If the messages are queued to a regular member, the IMS ID of the IMS subsystem to which the messages have affinity is displayed following the 'TMSTMP-' string. If the messages are queued to a super member, the field following the 'TMSTMP-' string is left blank because output messages queued to a super member do not have affinity to any IMS subsystem. If the command is entered on a system where the TMEMBER and TPIPE are defined, the TMEMBER and TPIPE names are displayed. If the command is entered on a system where the TMEMBER and TPIPE are not defined, the character string 'UNKNOWN' is placed in the TMEMBER and TPIPE fields.

Output fields

The following output fields are displayed by the /DISPLAY OVERFLOWQ command:

APPC The resource type on the overflow structure is an APPC outbound queue. The first eight bytes of the resource name displayed is the unique constant TMSTMP-. The next four bytes are the IMS ID of the IMS subsystem that has the LUNAME and TPNAME defined. If you issue the /DISPLAY OVERFLOWQ command on the system on which the LUNAME and TPNAME are defined, then the LUNAME and TPNAME also display.

When LUNAME and TPNAME cannot be located on the system on which they're defined, UNKNOWN appears under the LUNAME and TPNAME headings in the display output.

BALGRP

The resource type on the overflow structure is a Fast Path PSB name. The resource name displayed is the Fast Path PSB name.

LTERM

The resource type on the overflow structure is an LTERM. The resource name displayed is the LTERM name.

OTMA

The resource type on the overflow structure is an OTMA outbound queue. The first eight bytes of the resource name displayed is the unique constant TMSTMP-. The next four bytes are the IMS ID of the IMS subsystem that has the TMEMBER and TPIPE defined. If you issue the /DISPLAY OVERFLOWQ command on the system on which the TMEMBER and TPIPE are defined, then the TMEMBER and TPIPE are also displayed.

When LUNAME and TPNAME cannot be located on the system on which they're defined, UNKNOWN appears under the LUNAME and TPNAME headings in the display output.

REMOTE

The resource type on the overflow structure is a remote LTERM, remote

transaction, or an MSNAME. The resource name displayed is the remote LTERM name, remote transaction name, or the msname.

SUSPENDTRAN

The resource type on the overflow queue is a suspended transaction and the messages are on the suspend queue. The resource name displayed is the transaction name. If the transaction that is suspended is a serial transaction, or if local affinity has been set for a non-serial transaction, the first eight bytes displayed are the transaction name and the last seven bytes represent the IMS ID of the subsystem that enqueued the message.

SERIALTRAN

The resource type on the overflow queue is a serial transaction. The first eight bytes of the resource name are the transaction name and the last seven bytes represent the IMS ID of the IMS subsystem that inserted the message for the transaction.

TRANSACTION

The resource type on the overflow queue is a transaction. The resource name displayed is the transaction name. If local affinity has been set for the transaction, the first eight bytes displayed are the transaction name and the last seven bytes represent the IMS ID of the IMS subsystem that enqueued the message.

UNKNOWN

The resource type of the resource on the overflow queue is not known to this IMS subsystem. The 16 byte resource name is displayed.

Examples

The following are examples of the /DISPLAY OVERFLOWQ command:

Example 1 for /DISPLAY OVERFLOWQ command

Entry ET:

```
/DISPLAY OVERFLOWQ STRUCTURE ALL
```

Response ET:

STRUC-RSCTYPE	OFLSTRUC-RSCNAME	LUNAME-TMEMBER	TPNAME-TPIPE
IMMSGQ01	IMMSGQ01OFLW		
TRANSACTION	TRANA		
LTERM	LTERMX		
SUSPENDTRAN	TRANA		
APPC	TMSTMP- IMSA	LUNAME1	TPNAME1
SERIALTRAN	TRANABC IMSA		
APPC	TMSTMP- IMSA		
OTMA	TMSTMP- IMSA	TMEMBERA	TPIPEA
APPC	TMSTMP- IMSA	NETWORK2.LUNAME2	TPNM123456789012+ 3456789012345678+ 901234567890
OTMA	TMSTMP- IMSB		
REMOTE	TRANB		
REMOTE	LTERMA		
UNKNOWN	ASIXTEENCHARNAME		
REMOTE	MSNAMEA		
IMSEMHQ01	OVERFLOW STRUCTURE IS NOT DEFINED		
BALGRP	FPPSB1		
LTERM	LTERMY		
BALGRP	FPPSB2		
95200/170817			

Example 2 for /DISPLAY OVERFLOWQ command

Entry ET:

```
/DIS OVERFLOWQ STRUCTURE ALL
```

Response ET:

```
STRUC-RSCTYPE  OFLSTRUC-RSCNAME  LUNAME-TMEMBER  TPNAME-TPIPE
IMMSGQ01      IS NOT IN OVERFLOW MODE
IMSEMHQ01      IMSEMHQ010FLW
BALGRP        DDLTRN14
*04302/165656*
```

Example 3 for /DISPLAY OVERFLOWQ command

Entry ET:

```
/DIS OVERFLOWQ STRUCTURE IMSEMHQ01
```

Response ET:

```
STRUC-RSCTYPE  OFLSTRUC-RSCNAME  LUNAME-TMEMBER  TPNAME-TPIPE
IMSEMHQ01      IMSEMHQ010FLW
BALGRP        DDLTRN14
*04302/165834*
```

Example 4 for /DISPLAY OVERFLOWQ command

Entry ET:

```
/DISPLAY OVERFLOWQ STRUCTURE AL
```

Response ET:

```
STRUC-RSCTYPE  OFLSTRUC-RSCNAME  LUNAME-TMEMBER  TPNAME-TPIPE
IMMSGQ01      IMMSGQ010FLW
OTMA          TMSTMP-          SM01          TPIPE1
OTMA          TMSTMP-          UNKNOWN       UNKNOWN
OTMA          TMSTMP- SYS3      HWS003       TPIPE1
IMSEMHQ01      IS NOT IN OVERFLOW MODE
```

Explanation: This example shows that messages queued to TPIPE1 of super member SM01 have been moved to the overflow structure. Messages queued to TPIPE1 of regular member HWS003 have also been moved to the overflow structure. Messages for a TMEMBER or TPIPE that is unknown to the IMS that processed the command have also been moved to the overflow structure.

/DISPLAY PGM command

Use the /DISPLAY PGM command to display the status of programs.

Subsections:

- “Environment” on page 484
- “Syntax” on page 484
- “Usage notes” on page 484
- “Equivalent IMS type-2 commands” on page 484
- “Output fields” on page 484
- “Examples” on page 484

Environment

The /DISPLAY PGM command is valid in DB/DC, DBCTL, and DCCTL environments.

Syntax



Usage notes

For DBCTL, this command displays the status of BMP programs, DEDB utilities, and CCTL PSBs. Because DBCTL has no knowledge of CICS programs, their status is not displayed.

Equivalent IMS type-2 commands

The following table shows variations of the /DISPLAY PGM command and the IMS type-2 commands that perform similar functions.

Table 208. Type-2 equivalents for the /DISPLAY PGM command.

Task	/DISPLAY PGM command	Similar IMS type-2 command
Displays information about a program.	/DISPLAY PGM <i>pgmname</i>	QRY PGM NAME(<i>pgmname</i>) SHOW(ALL)
		QUERY PGM NAME(<i>pgmname</i>) SHOW(TRAN)

Output fields

The status displayed can be one of the following:

DB-STOPD
I/O PREVEN
LOCK
NOTINIT
STOPPED
TRA

Examples

Entry ET:

```
/DISPLAY PGM APOL1 DBFSAMP3 BMP255
```

Response ET:

PROGRAM	TRAN	TYPE
APOL1	APOL11	TP
	APOL12	
	APOL13	
	APOL14	
	APOL15	
	APOL16	
	APOL17	
	APOL18	
DBFSAMP3	FPSAMP1	FPM

```

BMP255      TRAN255  BMP
              TXCD255
              TXCD255W
*90288/140450*  SYS3

```

Entry ET:

```
/DISPLAY PGM ALL
```

Response ET:

PROGRAM	TRAN	TYPE	
AD2TP	TSTAD2A	TP	NOTINIT
	TSTAD2R1		
APOL1	APOL11	TP	NOTINIT
	APOL12		
A3270	A3270	TP	NOTINIT
	3270S		
BMAAJK41	BHE4	TP	NOTINIT
	NQE4		
	SHE4		
BMP255	TRAN255	BMP	NOTINIT
BTAEJK01		BMP	NOTINIT
BTAPJK01		BMP	NOTINIT
BTAPJK11		BMP	NOTINIT
BTAPJK21		BMP	NOTINIT
BTGGJK01		BMP	NOTINIT
BTGGJK11		BMP	NOTINIT
BTGOJK01		BMP	NOTINIT
BTGRJK05		BMP	NOTINIT
CPGM1V0	CONV11V0	TP	NOTINIT
	CONV12V0		
	CONV13V0		
DBF#FPU0		FPU	
DBFSAMP3	FPSAMP1	FPM	
DBFSAMP4	FPSAMP2	TP	NOTINIT
DBFSAM22	TP1	FPM	
DBFSAM99	TP2	TP	NOTINIT
DCLECH05	DCL	TP	NOTINIT
DDLTP04	TXCDBP04	FPM	
DDLTP05	TXCDBP05	FPM	
DDLTP06	TXCDBP06	FPM	
DDLTP07	TXCDBP07	FPM	NOTINIT
DDLTP08	TXCDBP08	FPM	NOTINIT
DDLTP09	TXCDBP09	FPM	NOTINIT
V2MPPA02	V2MRP01	TP	NOTINIT
	V2MRP02		
V2MPPC01	V2SNS01	TP	
	V2SRS02		
V2MPPC02	V2MRS04	TP	NOTINIT
V2MPPP01	V2SNS02	TP	NOTINIT
	V2SRS03		
	V2SRS04		
V2MPPPP02	V2MRP03	TP	NOTINIT
	V2SRP01		
WTCPLI	TESTPLI	TP	NOTINIT

89184/142553

Related reference:

“Status and attributes for the /DISPLAY command” on page 357

 QUERY PGM command (Commands)

/DISPLAY POOL command

Use the /DISPLAY POOL command to display processor storage utilization statistics for the various IMS storage pools.

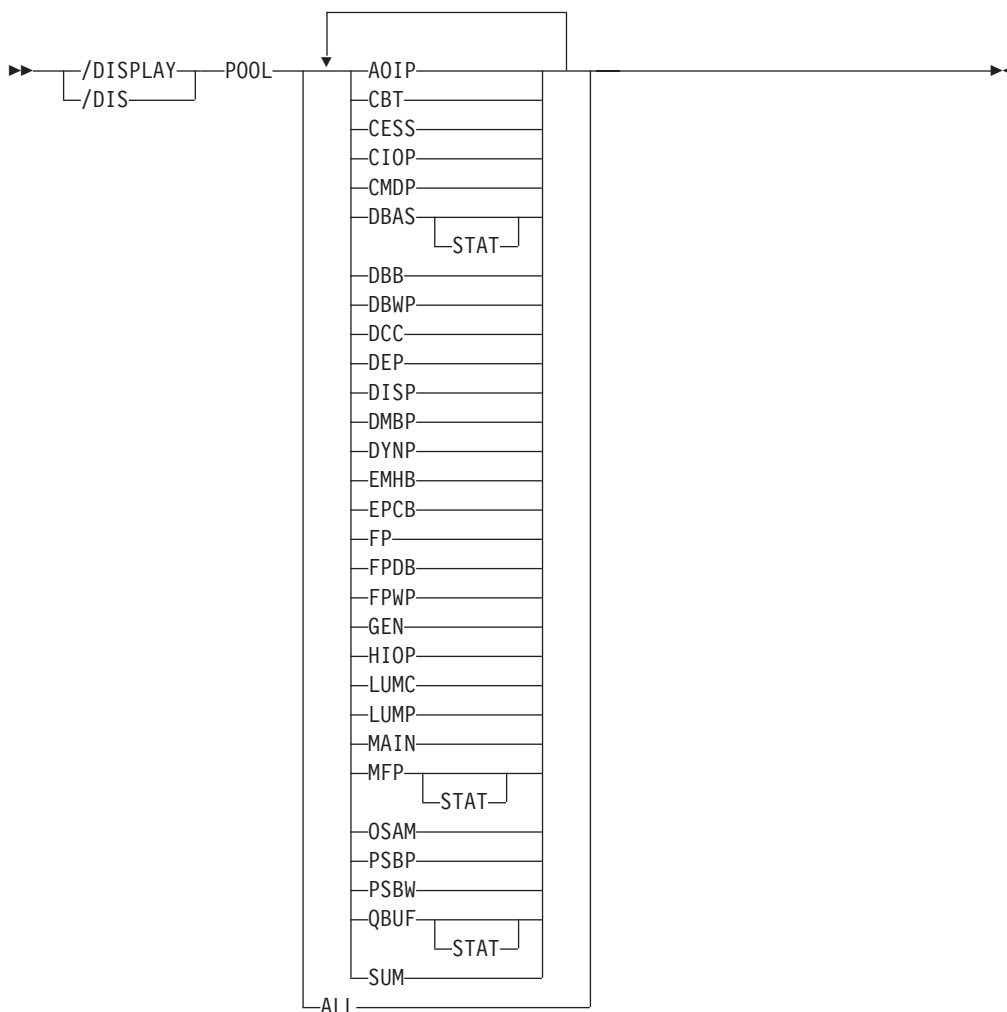
Subsections:

- "Environment"
- "Syntax"
- "Usage notes" on page 487
- "Abbreviations used in the /DISPLAY POOL command" on page 489
- "Examples" on page 495

Environment

The /DISPLAY POOL command is valid in DB/DC, DBCTL, and DCCTL environments.

Syntax



Usage notes

When the /DISPLAY POOL command is issued from a specific environment (such as DBCTL), only the information that is valid for that environment is displayed.

Certain storage utilization statistics can be obtained with the DL/I STAT call.

Control block table (CBT) pools are defined in DFSCBT00 and are grouped into classes for the purposes of the /DISPLAY POOL command. All CBT pools are valid in all environments.

For a list of all of the IMS CBT pools with a brief description of each, see IMS Control Block Table (CBT) Pools (Diagnosis).

The classes and corresponding parameters are:

- CBT** This displays storage for all CBT pools. Use of this operand generates a large amount of display output.
- DBB** This displays database-related storage.
- DCC** This displays storage associated with DC.
- DEP** This displays storage associated with the dependent region structure. This parameter is not supported for an RSR tracking subsystem.
- DISP** This displays dispatcher-related storage.
- FP** This displays Fast Path-related storage.
- GEN** This displays storage that has no particular functional association.
- OSAM** This displays OSAM-related storage.
- SUM** This displays summary statistics for each of the above storage classes.

A CBT class display shows information for each pool in that class. The amount of storage displayed for these pools might change, because the storage is obtained as needed and can be freed when not in use. In addition, a summary of the total current global and local storage in the class and in all CBT pools is displayed.

If SUM is specified, a summary of the total current local and global storage for each CBT class is displayed.

For the following storage pools, the amount of storage obtained is specified during system definition or by way of EXEC statement overrides in the IMS procedure JCL.

- DBAS** Database buffer pools (includes VSAM buffer pools if VSAM is in the system, and also includes buffer space used by sequential buffering).
Statistics for VSAM local shared resource pools are displayed in the order in which the pools are defined. For each local shared resource pool, the statistics of each subpool are displayed in ascending order by buffer size. The smallest buffers are displayed first and the largest buffers are displayed last. If an index subpool exists in the shared resource pool, its statistics follow the data subpool statistics. Index statistics are also displayed in ascending order by buffer size.

Headings for VSAM subpools include the pool ID of the local shared resource pool. They also indicate whether the subpool is a data subpool (type D) or an index subpool (type I).

DBWP

Database working pool.

DMBP

Data management block pool.

EPCB

Fast Path PCB extension pool for MPPs.

FPDB

Fast Path database buffer pool.

MAIN

Working storage pool.

MFP

Message format block pool.

PSBP

Program specification block pool. This parameter is not supported for an RSR tracking subsystem.

PSBW

Program specification block work area. This parameter is not supported for an RSR tracking subsystem.

QBUF

Message queue buffer pool. Parameter QBUF can also be used to indicate how close the system is to automatic shutdown because of message queue buildup. The statistics displayed for each data set are:

- The maximum number of records available before initiation of automatic shutdown. This value is defined by the SHUTDWN parameter of the MSGQUEUE macro. This value is not the total number of records available in the data set.
- The number of records currently in use.
- The percentage of records currently in use to records available before initiation of automatic shutdown. When the value described in this item reaches 100%, an internal checkpoint DUMPQ will automatically be initiated. The number of records in the queue data set might continue to increase during the checkpoint DUMPQ, resulting in percentages greater than 100 being displayed.

The following table shows the environments (DB/DC, DBCTL, or DCCTL) in which each storage pool is valid. If a pool is not valid in an environment, it will not appear when /DISPLAY POOL ALL is issued.

Table 209. Storage pools and their environments

Storage pools	DB/DC	DBCTL	DCCTL
AOIP	X	X	X
CESS	X	X	X
CIOP	X	X	X
CMDP	X	X	X
DBAS	X	X	
DBWP	X	X	
DMBP	X	X	
DYNP	X		X
EMHB	X	X	X
EPCB	X	X	X
FPDB	X	X	

Table 209. Storage pools and their environments (continued)

Storage pools	DB/DC	DBCTL	DCCTL
FPWP	X	X	
HIOP	X		X
LUMC	X		X
LUMP	X		X
MAIN	X	X	X
MFP	X		X
PSBP	X	X	X
PSBW	X	X	X
QBUF	X		X

Note: When the /DISPLAY POOL ALL command is specified for an RSR tracking subsystem, the following pools are not included: DEP, DYNP, LUMC, LUMP, PSBP, PSBW.

Abbreviations used in the /DISPLAY POOL command

The following lists indicate the abbreviations used in the /DISPLAY POOL command for each pool and subpool.

CBT pool display

NAME

Storage pool name

SP Associated MVS user number

CURR The current bytes allocated to the pool

MAX Maximum size in bytes that the pool ever reached

GETS Number of GETMAINs issued

FREES

Number of FREEMAINs issued

Message queue pool

BFRS Number of processor storage queue buffers. In a shared queues environment, the number of buffers can be dynamically expanded from the number originally defined. This field displays the number of buffers currently available.

SIZE Usable size of one queue buffer, excluding the buffer prefix

ENQ Number of message enqueues

DEQ Number of message dequeues

CAN Number of canceled messages

WAIT Number of I/O waits issued

I/O Number of I/O operations. In a shared-queues environment, it is the sum of CQSPUTs and CQSREADs.

ERR Number of I/O errors

Message format pool

SIZE Pool size

SPACE Maximum amount of free space

DIRS Space used by MFS Dynamic Directory

REQ1 Number of block requests from pool

I/O Number of fetch I/O operations

DIR Number of directory I/O operations

WAIT Number of immediate fetch I/O operations

FREE Amount of free space currently in the pool

ERR Number of I/O errors

Database buffer pools

The database buffer pool display consists of the OSAM buffer pool and, if VSAM is in the system, the VSAM buffer subpool. The display also includes information about the buffer space used by sequential buffering within the online IMS subsystem. The information about the sequential buffering buffer space includes:

MAX Maximum amount of space available for sequential buffering

FREE Amount of currently free space for sequential buffering

CUR The current bytes allocated to the pools for sequential buffering

HIGH Highest amount of space ever used in this run for sequential buffering

OSAM buffer subpool

This topic contains Product-sensitive Programming Interface information.

Statistics for each OSAM subpool are displayed separately. The final display provides the statistical summation for all the OSAM subpools in all the shared resource pools.

SIZE Buffer pool size

REQ1 Number of block requests

REQ2 Number of requests satisfied in the pool plus new blocks created

READ Number of read requests issued

BISAM
Number of BISAM reads issued plus QISAM SETLs

WRITES
Number of OSAM writes issued

KEYC Number of retrieve by key calls number

LCYL Number of OSAM format logical cylinder requests

PURG Number of synchronization calls received

OWNRR
Number of release ownership requests

ERRORS

Number of permanent errors now in the pool and largest number of permanent errors during this run

VSAM buffer subpool

This topic contains Product-sensitive Programming Interface information.

Statistics for each VSAM subpool are displayed separately. The final display provides the statistical summation for all the VSAM subpools in all the shared resource pools.

BSIZE The size of the buffers in this VSAM subpool

POOLID

Local shared resource pool ID

TYPE The subpool type: I (Index) or D (Data)

RRBA Number of retrieval requests by RBA

RKEY Number of retrieval requests by key

BFALT

Number of logical records altered

NREC Number of new VSAM logical records created

SYNPTS

Number of system checkpoint requests

NMBUFS

Number of buffers in this VSAM subpool

VRDS Number of VSAM control interval reads (OVFLO indicates that the total overflowed a 4-byte field; that is, the total exceeded 4,294,967,295)

FOUND

Number of control intervals VSAM found in the subpool through lookaside (OVFLO indicates that the total overflowed a 4-byte field; that is, the total exceeded 4,294,967,295)

VWTS

Number of VSAM control interval writes

ERRORS

Total number of permanent errors now in the pool and total number of permanent errors in this run

The BSIZE value in the final display is ALL.

Enhanced OSAM buffer subpool

This topic contains Product-sensitive Programming Interface information.

Each OSAM subpool is displayed separately. The final display provides the statistical summation for all the OSAM subpools.

ID The 4-character POOLID provided at subpool definition time

BSIZE The size of the buffers in this OSAM subpool

NBUF Number of buffers for this subpool

FX= The fix options for this subpool. Y/N indicates whether the DATA BUFFER PREFIX/DATA BUFFERS are fixed.

LCTREQ
Number of LOCATE-type calls for this subpool

ALTREQ
Number of buffer alter calls for this subpool. This count includes NEW BLOCK and BYTALT calls.

PURGRQ
Number of PURGE calls for this subpool

FNDIPL
Number of LOCATE-type calls, for this subpool, where data is already in the OSAM pool

BFSRCH
Number of buffers searched by all LOCATE-type calls for this subpool

RDREQ
Number of READ I/O requests for this subpool

BFSTLW
Number of single block writes initiated by buffer steal routine for this subpool

PURGWR
Number of buffers written by purge

WBSYID
Number of LOCATE calls, for this subpool, that waited because of busy ID

WBSYWR
Number of LOCATE-type calls, for this subpool, that waited because of busy writing

WBSYRD
Number of LOCATE-type calls, for this subpool, that waited due to busy buffer reading

WRLSEO
Number of buffer steal or purge requests, for this subpool, that waited for ownership to be released.

WNOBFR
Number of buffer steal requests, for this subpool, that waited because no buffers were available to be stolen

ERRORS
Total number of I/O errors for this subpool, or the number of the buffers locked in the pool because of write errors for this subpool

CFREAD
Number of blocks read from CF.

CFEXPC
Number of blocks expected but not read.

CFWRPR
Number of blocks written to CF (prime).

CFWRCH
Number of blocks written to CF (changed).

STGCLF

Number of blocks not written (STG CLS full).

XVIINV

Number of XI buffer-invalidate calls.

XICLCT

Number of buffers found invalidated by XI on VECTOR call.

SBSEQR

Number of immediate (SYNC) sequential reads (SB stat).

SBANTR

Number of anticipatory reads (SB stat).

For the summary totals, the POOLID is not shown. BSIZE is set to ALL. NBUF indicates the total number of buffers in the pool. The FX= field is replaced by OSM=, which shows the total size of the OSAM buffer pool.

Enhanced VSAM buffer subpool**This topic contains Product-sensitive Programming Interface information.**

Each VSAM subpool is displayed separately. The final display provides the statistical summation for all the VSAM subpools.

ID The 4-character POOLID provided at subpool definition time

BSIZE The size of the buffers in this VSAM subpool

TYPE identifies the subpool as containing INDEX or DATA buffer

FX= Number of options for this subpool. Y/N is used to indicate whether the INDEX BUFFERS/DATA BUFFER PREFIX/ DATA BUFFERS are fixed.

RRBA Number of retrieval requests by RBA

RKEY Number of retrieval requests by KEY

BFALT

Number of logical records altered

NREC Number of new VSAM logical records created

SYNC PT

Number of system checkpoint (synchronization point) requests

NBUFS

Number of buffers in this VSAM subpool

VRDS Number of VSAM control interval reads (OVERFLOW indicates that the total overflowed a 4-byte field; that is, the total exceeded 4,294,967,295)

FOUND

Number of control intervals VSAM found in the subpool through lookaside (OVERFLOW indicates that the total overflowed a 4-byte field; that is, the total exceeded 4,294,967,295)

VWTS

Number of VSAM control interval writes

HSR-S

Number of successful VSAM reads from Hiperspace™ buffers

HSW-S

Number of successful VSAM writes to Hiperspace buffers

HS NBUFS

Number of Hiperspace buffers defined for this subpool

HS R/W-FAIL

Number of failed VSAM reads/writes from or to Hiperspace buffers. This indicates the number of times a VSAM READ/WRITE request from or to Hiperspace resulted in DASD I/O.

ERRORS

Number of permanent write errors now in the subpool, or the largest number of errors in this execution

The BSIZE value in the final display is the total size of all the VSAM subpool buffers. BSIZE is set to ALL. For the summary totals, the POOLID is not shown. The TYPE and FX= fields are replaced by VS=, which is the total size of the VSAM subpool in virtual storage, and HS=, which is the total size of the VSAM subpool in Hiperspace.

Fast Path database buffer pool**AVAIL**

Number of available page-fixed database buffers

WRITING

Number of page-fixed database buffers being written to disk, including the buffers being filled with sequential dependent segments

PGMUSE

Number of page-fixed buffers allocated to PSTs

UNFIXED

Number of available buffers for starting a new region

POOLNAME

Name of the private buffer pool for the area. This name is specified in the VSPEC member.

CISIZE

Control interval size of the private pool for the area.

PBUF Size allocated for the primary pool (specified in the VSPEC member).

SBUF Size allocated for the secondary pool (specified in the VSPEC member).

MAX Maximum number of buffers for the private pool (specified in the VSPEC member).

CURRENT

Total number of buffers currently in the pool, including both primary and secondary allocations.

LK Y indicates that buffer lookaside is active for the pool; N indicates that it is not.

HITS Percentage of searches of the pool for which a buffer was found. Only displayed for lookaside pools.

VALID

Percentage of times a buffer found in the pool had valid data. An Invalid buffer is read from DASD and the pool copy is replaced. Only displayed for lookaside pools.

You use the percentages displayed for HITS and VALID together.

Example: If HITS is 40%, and VALID is 75%, a buffer was found in the pool 40% of the time, and of that 40%, 75% of the buffers found had valid data, that is, 30% of the HITS had valid data. So, IMS had to read data from DASD approximately 70% of the time.

PSBP, DMBP, PSBW, DBWP, EPCB, and MAIN buffer pools

SIZE pool size

FREE amount of currently free space

HIGH Highest amount of space ever used in this run

AOIP, CESS, CIOP, CMDP, DYNP, EMHB, FPWP, HIOP, LUMC, and LUMP buffer pools

During the execution of IMS, the AOIP, CESS, CIOP, CMDP, DYNP, EMHB, FPWP, HIOP, LUMC, and LUMP buffer pools can dynamically expand and contract.

Internally, each dynamic pool has one or more blocks of storage that are not contiguous, each divided into fixed-length buffers. By obtaining new blocks and releasing unused blocks, a buffer pool can expand or contract during the execution of IMS. The number of blocks needed for each pool depends on several factors such as the number of buffer requests from the pool, buffer size, and block size.

SIZE Pool size

HIGH Maximum size since last checkpoint

LIMIT

Upper expansion limit

OVERFLOW

Size of the oversized chain

Examples

The following are examples of the /DISPLAY POOL command.

For a list of all of the IMS CBT pools with a brief description of each, see IMS Control Block Table (CBT) Pools (Diagnosis).

Example 1 for /DISPLAY POOL command

Entry ET:

/DISPLAY POOL ALL

Response ET:

NAME	SP#	CURR	MAX	GETS	FREES
IOSB	228	28K	28K	3	0
GIOB	228	0K	0K	0	0
OSWA	228	8K	8K	1	0
GOWA	228	0K	0K	0	0
PST	231	52K	56K	14	1
DPST	231	40K	44K	11	1
SAP	231	132K	132K	32	0
GQMW	231	16K	16K	4	0
LQMW	0	324K	324K	81	0
D1WA	228	8K	8K	2	0

	DL2W	0	8K	8K	2	0
	DG2W	231	4K	4K	1	0
	QSAV	231	4K	16K	3	2
	VRPL	231	16K	16K	4	0
	LSAV	0	808K	808K	201	1
	AWE	231	112K	112K	28	0
	PDIR	231	36K	36K	1	0
	DDIR	231	28K	28K	1	0
	LCRE	241	4K	4K	1	0
	PCIB	0	0K	0K	0	0
	SIDX	241	4K	4K	1	0
	RRE	241	4K	4K	1	0
	SMB	231	62K	62K	1	0
	BCPT	231	4K	4K	1	0
	GESE	241	0K	0K	0	0
	EPST	231	208K	208K	20	0
	IDT	241	0K	0K	0	0
	DBRC	231	0K	0K	0	0
	TTAB	231	224K	224K	56	0
	EZS	241	0K	0K	0	0
	FNCB	231	0K	0K	0	0
	TCBT	231	4K	4K	1	0
	CMWU	231	12K	12K	3	0
	FSRB	228	4K	4K	1	0
	KLSD	0	0K	0K	0	0
	IRLM	231	0K	0K	0	0
	STTR	231	52K	52K	13	0
	BQEL	231	0K	0K	0	0
	USMU	229	0K	0K	0	0
	RCTE	231	3K	3K	1	0
	SLOG	231	4K	4K	1	0
	ADSC	228	0K	0K	0	0
	FPCP	231	0K	0K	0	0
	AESL	231	0K	0K	0	0
	XPST	231	16K	16K	4	0
	BXQE	231	16K	16K	4	0
	SRBC	228	8K	8K	2	0
	MSGP	241	4K	4K	1	0
	LPST	251	8K	8K	2	0
	CULE	231	4K	4K	1	0
	RPST	241	4K	4K	1	0
	VTGB	251	18K	18K	0	0
	RECA	0	19K	19K	1	0
	GSAV	231	0K	0K	0	0
	FEIB	231	0K	0K	0	0
	IEQE	0	0K	0K	0	0
	L56X	231	4K	4K	1	0
	X124	241	4K	4K	1	0
	STAT	241	4K	4K	1	0
	EQEL	241	0K	0K	0	0
	TT24	231	24K	24K	6	0
	LGWA	231	104K	104K	26	0
	VWA	231	8K	8K	2	0
	LGWX	0	0K	0K	0	0
	LQB	251	104K	104K	0	0
	RCNT	251	2K	2K	0	0
	DDRE	0	0K	0K	0	0
	CCB	0	0K	0K	0	0
	LGND	251	8K	8K	2	0
	USRD	251	4K	4K	1	0
	LS24	0	2K	2K	1	0
	GS24	231	0K	0K	0	0
	CLLE	231	64K	64K	16	1
	QMBA	0	8K	8K	1	0
	AHDR	251	0K	0K	0	0
	XMCI	241	180K	180K	45	1
	DBPB	231	0K	0K	0	0

```

LG24 0 12K 12K 3 0
IAFP 231 0K 0K 0 0
RACW 231 0K 0K 0 0
LUB 251 0K 0K 0 0
TIB 251 28K 28K 1 0
DESC 251 0K 0K 0 0
PF62 251 0K 0K 0 0
QAB 251 0K 0K 0 0
LCLL 0 436K 436K 109 0
CBLK 251 0K 0K 0 0
SVPG 231 24K 24K 6 0
SVPL 0 148K 148K 37 0
SOPB 0 0K 0K 0 0
CBT POOLS GBL 1541K LCL 2236K
MESSAGE QUEUE POOL: BFRS/SIZE 20/2112
ENQ 6 DEQ 6 CAN 30 WAIT 0 I/O 15 ERR 0
QBLKS: MAX # RECORDS AVAIL 1332 CUR IN USE 3 = 0 %
MSGQ: MAX # RECORDS AVAIL 5940 CUR IN USE 4 = 0 %
LMSGQ: MAX # RECORDS AVAIL 1350 CUR IN USE 4 = 0 %
MESSAGE FORMAT POOL: SIZE 49152 SPACE 48576 DIRS 9011
REQ1 2 I/O 2 DIR 4
WAIT 2 FREE 48432 ERR 0
SEQUENTIAL BUFFERING: STATUS = NOT INIT
MAX N.A. FREE N.A. CURR 0K HIGH 0K
OSAM DB BUFFER POOL: ID 004K BSIZE 4K NBUF 1000 FX=Y/Y
LCTREQ 1765296 NEWBLK 0 ALTREQ 340800
PURGRQ 39371 FNDIPL 1370897 BFSRCH 1987604
RDREQ 378355 BFSTLW 0 PURGWR 150284
WBSYID 1431 WBSYWR 0 WBSYRD 0
WRLSEO 296 WNOBFR 0 ERRORS 00000/00000
OSAM DB BUFFER POOL: ID 008K BSIZE 8K NBUF 100 FX=Y/Y
LCTREQ 228080 NEWBLK 0 ALTREQ 0
PURGRQ 0 FNDIPL 204190 BFSRCH 316566
RDREQ 23891 BFSTLW 0 PURGWR 0
WBSYID 0 WBSYWR 0 WBSYRD 0
WRLSEO 0 WNOBFR 0 ERRORS 00000/00000
OSAM DB BUFFER POOL: ID 012K BSIZE 12K NBUF 100 FX=Y/Y
LCTREQ 83282 NEWBLK 0 ALTREQ 6896
PURGRQ 4384 FNDIPL 70743 BFSRCH 81395
RDREQ 7622 BFSTLW 0 PURGWR 6118
WBSYID 0 WBSYWR 0 WBSYRD 0
WRLSEO 0 WNOBFR 0 ERRORS 00000/00000
OSAM DB BUFFER POOL: BSIZE ALL NBUF 1200 OSM= 6000K
LCTREQ 2076667 NEWBLK 0 ALTREQ 347697
PURGRQ 43755 FNDIPL 1645837 BFSRCH 2385576
RDREQ 409869 BFSTLW 0 PURGWR 156402
WBSYID 1431 WBSYWR 0 WBSYRD 0
WRLSEO 296 WNOBFR 0 ERRORS 00000/00000
VSAM DB BUFFER POOL: ID VLP1 BSIZE 2K TYPE D FX=N/Y/N
RRBA 0 RKEY 0 BFALT 0
NREC 0 SYNC PT 29446 NBUFS 500
VRDS 1253 FOUND 0 VWTS 68
HSR-S 0 HSW-S 0 HS NBUFS 0
HS R/W-FAIL 000000/000000 ERRORS 000000/000000
VSAM DB BUFFER POOL: ID VLP1 BSIZE 4K TYPE D FX=N/Y/N
RRBA 370 RKEY 187583 BFALT 0
NREC 10750 SYNC PT 29446 NBUFS 1000
VRDS 145632 FOUND 0 VWTS 9771
HSR-S 0 HSW-S 50 HS NBUFS 50
HS R/W-FAIL 000000/000000 ERRORS 000000/000000
VSAM DB BUFFER POOL: ID VPL1 BSIZE 8K TYPE D FX=N/Y/N
RRBA 7375 RKEY 6704 BFALT 0
NREC 0 SYNC PT 29446 NBUFS 100
VRDS 7362 FOUND 0 VWTS 0
HSR-S 0 HSW-S 0 HS NBUFS 0
HS R/W-FAIL 000000/000000 ERRORS 000000/000000
VSAM DB BUFFER POOL: BSIZE ALL VS= 5800K HS= 200K

```

RRBA	7745	RKEY	194287	BFALT	0
NREC	10752	SYNC PT	29446	NBUFS	1600
VRDS	154247	FOUND	0	VWTS	9839
HSR-S	0	HSW-S	50	HS NBUFS	50
HS R/W-FAIL 000000/000000 ERRORS 000000/000000					

DMPB BUFFER POOL:
 SIZE 200K FREE 200K HIGH 0K

PSBP BUFFER POOL:
 SIZE 80K FREE 80K HIGH 0K

DPSB BUFFER POOL:
 SIZE 160K FREE 160K HIGH 0K

CIOP BUFFER POOL:
 SIZE 14K HIGH 65K LIMIT NONE OVERFLOW 0K

MAIN BUFFER POOL:
 SIZE 40K FREE 39K HIGH 1K

SPAP BUFFER POOL:
 SIZE 0K HIGH 0K LIMIT 9999K OVERFLOW 0K

PSBW BUFFER POOL:
 SIZE 600K FREE 600K HIGH 0K

DBWP BUFFER POOL:
 SIZE 80K FREE 80K HIGH 0K

HIOP BUFFER POOL:
 SIZE 214K HIGH 420K LIMIT 9999K OVERFLOW 0K

FPDB BUFFER POOL:
 AVAIL = 60 WRITING = 0 PGMUSE = 0 UNFIXED = 90

POOLNAME	CISIZE	PBUF	SBUF	MAX	CURRENT	LK	HITS	VALID
1024	01024	00064	00016	00256	00064	N	NA	NA
2048	02048	00064	00016	00256	00064	N	NA	NA

CESS BUFFER POOL:
 POOL IS NOT AVAILABLE FOR STATISTICS

EMHB BUFFER POOL:
 SIZE 0K HIGH 0K LIMIT NONE OVERFLOW 0K

FPWP BUFFER POOL:
 SIZE 0K HIGH 0K LIMIT NONE OVERFLOW 0K

EPCB BUFFER POOL:
 SIZE 300K FREE 300K HIGH 0K

LUMP BUFFER POOL:
 SIZE 68K HIGH 68K LIMIT NONE OVERFLOW 0K

LUMC BUFFER POOL:
 SIZE 0K HIGH 32K LIMIT NONE OVERFLOW 0K

AOIP BUFFER POOL:
 SIZE 82K HIGH 82K LIMIT NONE OVERFLOW 0K

CMDP BUFFER POOL:
 SIZE 0K HIGH 0K LIMIT NONE OVERFLOW 0K

DYNP BUFFER POOL:
 SIZE 42K HIGH 42K LIMIT NONE OVERFLOW 0K

92120/134306

Example 2 for /DISPLAY POOL command

Entry ET:

/DISPLAY POOL AOIP

Response ET:

AOIP BUFFER POOL:							
SIZE	32K	HIGH	32K	LIMIT	NONE	OVERFLOW	0K
92280/095545							

Example 3 for /DISPLAY POOL command

For a list of all of the IMS CBT pools with a brief description of each, see IMS Control Block Table (CBT) Pools (Diagnosis).

Entry ET:

/DISPLAY POOL CBT

Response ET:

NAME	SP#	CURR	MAX	GETS	FREES
IOSB	228	20K	20K	1	0
GIOB	228	0K	0K	0	0
OSWA	228	8K	8K	1	0
GOWA	228	0K	0K	0	0
PST	231	52K	56K	14	1
DPST	231	40K	44K	11	1
SAP	231	28K	28K	6	0
GQMW	231	12K	12K	3	0
LQMW	0	40K	40K	10	0
D1WA	228	8K	8K	2	0
DL2W	0	8K	8K	2	0
DG2W	231	4K	4K	1	0
QSAV	231	4K	12K	2	1
VRPL	231	16K	16K	4	0
LSAV	0	68K	72K	17	1
AWE	231	12K	12K	3	0
PDIR	231	36K	36K	1	0
DDIR	231	28K	28K	1	0
LCRE	241	4K	4K	1	0
PCIB	0	0K	0K	0	0
SIDX	241	4K	4K	1	0
RRE	241	4K	4K	1	0
SMB	231	61K	61K	1	0
BCPT	231	4K	4K	1	0
GESE	241	0K	0K	0	0
EPST	231	144K	144K	20	0
IDT	241	0K	0K	0	0
DBRC	231	0K	0K	0	0
TTAB	231	184K	184K	46	0
EZS	241	0K	0K	0	0
FNCB	231	0K	0K	0	0
TCBT	231	4K	4K	1	0
CMWU	231	8K	8K	2	0
FSRB	228	4K	4K	1	0
KLSD	0	0K	0K	0	0
IRLM	231	0K	0K	0	0
STTR	231	52K	52K	13	0
BQEL	231	0K	0K	0	0
USMU	229	0K	0K	0	0
RCTE	231	3K	3K	1	0
SLOG	231	4K	4K	1	0
ADSC	228	0K	0K	0	0
FPCP	231	0K	0K	0	0
AESL	231	0K	0K	0	0
XPST	231	16K	16K	4	0
BXQE	231	16K	16K	4	0
SRBC	228	8K	8K	2	0
MSGP	241	4K	4K	1	0
LPST	251	8K	8K	2	0
CULE	231	152K	152K	1	0
RPST	241	4K	4K	1	0
VTCT	251	305K	305K	0	0
RECA	0	19K	19K	1	0
GSAV	231	0K	0K	0	0
FEIB	231	0K	0K	0	0
IEQE	0	0K	0K	0	0
L56X	231	4K	4K	1	0
X124	241	4K	4K	1	0
STAT	241	4K	4K	1	0
EQEL	241	0K	0K	0	0
TT24	231	24K	24K	6	0
LGWA	231	104K	104K	26	0

VWA	231	8K	8K	2	0
LGWX	0	0K	0K	0	0
LQB	251	104K	104K	0	0
RCNT	251	4K	4K	0	0
DDRE	0	0K	0K	0	0
CCB	0	0K	0K	0	0
LGND	251	8K	8K	2	0
USRD	251	4K	4K	1	0
LS24	0	2K	2K	1	0
GS24	231	0K	0K	0	0
CLLE	231	60K	64K	16	1
QMBA	0	8K	8K	1	0
AHDR	251	0K	0K	0	0
XMCI	241	32K	36K	9	1
DBPB	231	0K	0K	0	0
LG24	0	12K	12K	3	0
IAFP	231	0K	0K	0	0
RACW	231	0K	0K	0	0
LUB	251	0K	0K	0	0
TIB	251	28K	28K	1	0
DESC	251	4K	4K	1	0
PF62	251	0K	0K	0	0
QAB	251	0K	0K	0	0
LCLL	0	36K	36K	9	0
CBLK	251	0K	0K	0	0
CBT POOLS		GLBL	1187K	LCL	658K

91057/132506

Example 4 for /DISPLAY POOL command

Entry ET:

/DISPLAY POOL CIOP SPAP HIOP CESS EMHB FPWP LUMP LUMC

Response ET:

```

CIOP BUFFER POOL:
  SIZE      16K HIGH      96K LIMIT      999K OVERFLOW      0K
SPAP BUFFER POOL:
  SIZE      0K HIGH      0K LIMIT      9999K OVERFLOW      0K
HIOP BUFFER POOL:
  SIZE     128K HIGH     128K LIMIT      9999K OVERFLOW      0K
CESS BUFFER POOL:
  POOL IS NOT AVAILABLE FOR STATISTICS
EMHB BUFFER POOL:
  SIZE      0K HIGH      0K LIMIT      9999K OVERFLOW      0K
FPWP BUFFER POOL:
  SIZE      0K HIGH      0K LIMIT      9999K OVERFLOW      0K
LUMP BUFFER POOL:
  SIZE      32K HIGH      32K LIMIT      NONE OVERFLOW      0K
LUMC BUFFER POOL:
  SIZE      0K HIGH      32K LIMIT      NONE OVERFLOW      0K
*91051/161116*

```

Example 5 for /DISPLAY POOL command

Entry ET:

/DISPLAY POOL DBAS

Response ET:

```

SEQUENTIAL BUFFERING:  STATUS = NOT INIT
  MAX  N.A.  FREE  N.A.  CURR  0K HIGH  0K
OSAM DB BUFFER POOL:  ID  BSIZE  2K NBUF  4 FX=N/N
  LCTREQ      0      NEWBLK  0  ALTREQ  0
  PURGRQ      0      FNDIPL  0  BFSRCH  0

```

```

RDREQ      0      BFSTLW      0      PURGWR      0
WBSYID     0      WBSYWR      0      WBSYRD      0
WRLSEO     0      WNOBFR      0      ERRORS 00000/00000
OSAM DB BUFFER POOL: ID BSIZE 6K NBUF 4 FX=N/N
LCTREQ     0      NEWBLK      0      ALTREQ      0
PURGRQ     0      FNDIPL      0      BFSRCH      0
RDREQ      0      BFSTLW      0      PURGWR      0
WBSYID     0      WBSYWR      0      WBSYRD      0
WRLSEO     0      WNOBFR      0      ERRORS 00000/00000
OSAM DB BUFFER POOL: ID BSIZE 8K NBUF 4 FX=N/N
LCTREQ     0      NEWBLK      0      ALTREQ      0
PURGRQ     0      FNDIPL      0      BFSRCH      0
RDREQ      0      BFSTLW      0      PURGWR      0
WBSYID     0      WBSYWR      0      WBSYRD      0
WRLSEO     0      WNOBFR      0      ERRORS 00000/00000
OSAM DB BUFFER POOL: BSIZE ALL NBUF 12 OSM= 64K
LCTREQ     0      NEWBLK      0      ALTREQ      0
PURGRQ     0      FNDIPL      0      BFSRCH      0
RDREQ      0      BFSTLW      0      PURGWR      0
WBSYID     0      WBSYWR      0      WBSYRD      0
WRLSEO     0      WNOBFR      0      ERRORS 00000/00000
VSAM DB BUFFER POOL: ID XXXX BSIZE 1K TYPE D FX=N/N/N
RRBA       0      RKEY       0      BFALT       0
NREC       0      SYNC PT    0      NBUFS       8
VRDS       0      FOUND      0      VWTS        0
HSR-S      0      HSW-S      0      HS NBUFS    0
HS R/W-FAIL 000000/000000 ERRORS 000000/000000
VSAM DB BUFFER POOL: ID XXXX BSIZE 2K TYPE D FX=N/N/N
RRBA       0      RKEY       0      BFALT       0
NREC       0      SYNC PT    0      NBUFS       4
VRDS       0      FOUND      0      VWTS        0
HSR-S      0      HSW-S      0      HS NBUFS    0
HS R/W-FAIL 000000/000000 ERRORS 000000/000000
VSAM DB BUFFER POOL: ID XXXX BSIZE 8K TYPE D FX=N/N/N
RRBA       0      RKEY       0      BFALT       0
NREC       0      SYNC PT    0      NBUFS       4
VRDS       0      FOUND      0      VWTS        0
HSR-S      0      HSW-S      0      HS NBUFS    0
HS R/W-FAIL 000000/000000 ERRORS 000000/000000
VSAM DB BUFFER POOL: BSIZE ALL VS= 48K HS= 0K
RRBA       0      RKEY       0      BFALT       0
NREC       0      SYNC PT    0      NBUFS      16
VRDS       0      FOUND      0      VWTS        0
HSR-S      0      HSW-S      0      HS NBUFS    0
HS R/W-FAIL 000000/000000 ERRORS 000000/000000
*92120/134346*

```

Example 6 for /DISPLAY POOL command

Entry ET:

/DISPLAY POOL DBB

Response ET:

```

NAME SP#    CURR    MAX    GETS    FREES
PDIR 231    36K     36K      1       0
DDIR 231    28K     28K      1       0
SMB  231    61K     61K      1       0
BQEL 231     0K      0K        0       0
IEQE  0      0K      0K        0       0
EQEL 241     0K      0K        0       0
DDRE  0      0K      0K        0       0
CLASS = DBB    GLBL    125K  LCL     0K
CBT POOLS      GLBL    1187K  LCL    662K
*91051/161027*

```

Example 7 for /DISPLAY POOL command

Entry ET:

/DISPLAY POOL DCC

Response ET:

NAME	SP#	CURR	MAX	GETS	FREES
PCIB	0	0K	0K	0	0
VTGB	251	305K	305K	0	0
RECA	0	19K	19K	1	0
LGND	251	16K	16K	4	0
AHDR	251	0K	0K	0	0
IAFP	231	0K	0K	0	0
RACW	231	0K	0K	0	0
LUB	251	0K	0K	0	0
TIB	251	28K	28K	1	0
DESC	251	0K	0K	0	0
PF62	251	0K	0K	0	0
QAB	251	0K	0K	0	0
CBLK	251	0K	0K	0	0
CLASS =	DCC	GLBL	0K	LCL	368K
CBT POOLS		GLBL	1187K	LCL	662K

91051/161038

Example 8 for /DISPLAY POOL command

Entry ET:

/DISPLAY POOL FPDB

Response ET:

POOLNAME	CISIZE	PBUF	SBUF	MAX	CURRENT	LK	HITS	VALID
V\$CFSTRUCTURE1	04096	00100	00010	00500	00100	N	000%	NA
POOL4	04096	00010	00010	00500	00010	Y	NA	NA

Example 9 for /DISPLAY POOL command

Entry ET:

/DISPLAY POOL MFP

Response ET:

MESSAGE	FORMAT	POOL:	SIZE	49152	SPACE	48576	DIRS	9011
REQ1		2	I/O	2	DIR	4		
WAIT		2	FREE	48432	ERR	0		

91051/172502

Example 10 for /DISPLAY POOL command

Entry ET:

/DISPLAY POOL MFP CIOP MAIN

Response ET:

MESSAGE	FORMAT	POOL:	SIZE	49152	SPACE	48576	DIRS	9011
REQ1		2	I/O	2	DIR	4		
WAIT		2	FREE	48432	ERR	0		
CIOP BUFFER POOL:								
SIZE		96K	HIGH	96K	LIMIT	999K	OVERFLOW	0K
MAIN BUFFER POOL:								
SIZE		40K	FREE	40K	HIGH	5K		

91051/160913

Example 11 for /DISPLAY POOL command

Entry ET:

/DISPLAY POOL MFP STAT

Response ET:

```
MFBP BUFFER POOL:
0170 00000000 00000002 00000002 00000000 00000004 00000000 00000000 00000002
0190 00000000 00000000 00000000 00000002 00000000 00000000 00000000 00000000
01B0 00000000 00000001
*91051/172508*
```

Example 12 for /DISPLAY POOL command

Entry ET:

/DISPLAY POOL PSBP

Response ET:

```
PSBP BUFFER POOL:
SIZE      80K FREE      80K HIGH      0K
DPSB BUFFER POOL:
SIZE     160K FREE     160K HIGH      0K
*91051/161048*
```

Example 13 for /DISPLAY POOL command

Entry ET:

/DISPLAY POOL QBUF

Response ET:

```
MESSAGE QUEUE POOL:  BFRS/SIZE 20/2112          SYS3
ENQ   18 DEQ   18 CAN    52 WAIT    0 I/O    15 ERR   0
QBLKS: MAX # RECORDS AVAIL    5 CUR IN USE    3 = 60 %
MSGQ:  MAX # RECORDS AVAIL 262167 CUR IN USE    4 =  0 %
LMSGQ:  MAX # RECORDS AVAIL 524293 CUR IN USE    2 =  0 %
*91051/172432*
```

Example 14 for /DISPLAY POOL command

Entry ET:

/DISPLAY POOL QBUF STAT

Response ET:

```
QBUF BUFFER POOL:
0054 00000000 00000005E 00000126 00000001 00000000 00000000 00000007 00000008
0074 00000008 00000000 00000000 00000000 00000000 00000000 00000000 00000000
0094 00000000 00000000 00000000 00000019 00000323 00000000 00000013 00000013
00B4 00000035 00000003 00000004 00000002
*91051/172440*  SYS3
```

Example 15 for /DISPLAY POOL command

Entry ET:

/DISPLAY POOL SUM

Response ET:

CBT POOLS	GLBL	1187K	LCL	662K
CLASS = OSAM	GLBL	28K	LCL	0K
CLASS = GEN	GLBL	724K	LCL	54K
CLASS = DEP	GLBL	216K	LCL	0K
CLASS = DISP	GLBL	88K	LCL	128K
CLASS = DBB	GLBL	125K	LCL	0K
CLASS = DCC	GLBL	0K	LCL	368K
CLASS = FP	GLBL	7K	LCL	0K

91051/161003

Related concepts:

 [Monitoring VSAM buffers \(Database Administration\)](#)

Related reference:

 [QUERY POOL command \(Commands\)](#)

/DISPLAY PSB command

Use the /DISPLAY PSB command to display the status of PSBs, which transactions these PSBs are processing, any routing code associated with the transactions, the databases being accessed, and the type of access.

Subsections:

- “Environment”
- “Syntax”
- “Usage notes”
- “Equivalent IMS type-2 commands”
- “Examples” on page 505

Environment

The /DISPLAY PSB command is valid in DB/DC, DBCTL, and DCCTL environments.

Syntax



Usage notes

For HSSP PSBs, the letter H is appended to the access intent under the ACCESS heading.

For DBCTL, the status of CCTL PSBs is displayed.

Equivalent IMS type-2 commands

The following table shows variations of the /DISPLAY PSB command and the IMS type-2 commands that perform similar functions.

Table 210. Type-2 equivalents for the /DISPLAY PSB command.

Task	/DISPLAY PSB command	Similar IMS type-2 command
Displays transactions, routing codes, and databases associated with a PSB.	/DISPLAY PSB <i>psbname</i>	QUERY PGM NAME(<i>pgmname</i>) SHOW(DB)
		QUERY PGM NAME(<i>pgmname</i>) SHOW(RTC)
		QUERY PGM NAME(<i>pgmname</i>) SHOW(TRAN)

Examples

Entry ET:
/DISPLAY PSB DDLTLM06 DDLTLM07

Response ET:

PSB-NAME	TRANCODE	RTCODE	DBD-NAME	ACCESS
DDLTL06	TXCDLM06	TXCDLM06	MSDBLM01	R/W
			MSDBLM02	R/W
			MSDBLM03	R/W
			MSDBLM01	R/W
			MSDBLM04	R/W
			MSDBLM04	R/W
			MSDBLM05	R/W
			MSDBLM05	R/W
			MSDBLM06	R/W
			MSDBLM06	R/W
			MSDBLM06	R/W
			MSDBLM06	R/O
DDLTL07	TXCDLM07	TXCDLM07	MSDBLM01	R/W
			MSDBLM02	R/W
			MSDBLM03	R/W
			MSDBLM01	R/O
			MSDBLM04	R/W
			MSDBLM04	R/W
			MSDBLM05	R/W
			MSDBLM05	R/W
			MSDBLM06	R/W
			MSDBLM06	R/W
			MSDBLM06	R/W
			MSDBLM06	R/O
			MSDBLM07	R/W

91068/111601

Related reference:
 QUERY PGM command (Commands)

/DISPLAY PTERM command

Use the /DISPLAY PTERM command to display physical terminals with specific attributes. The /DISPLAY PTERM command can be specified without an associated LINE keyword on /DISPLAY when PTERM is used with the special “attribute” parameter.

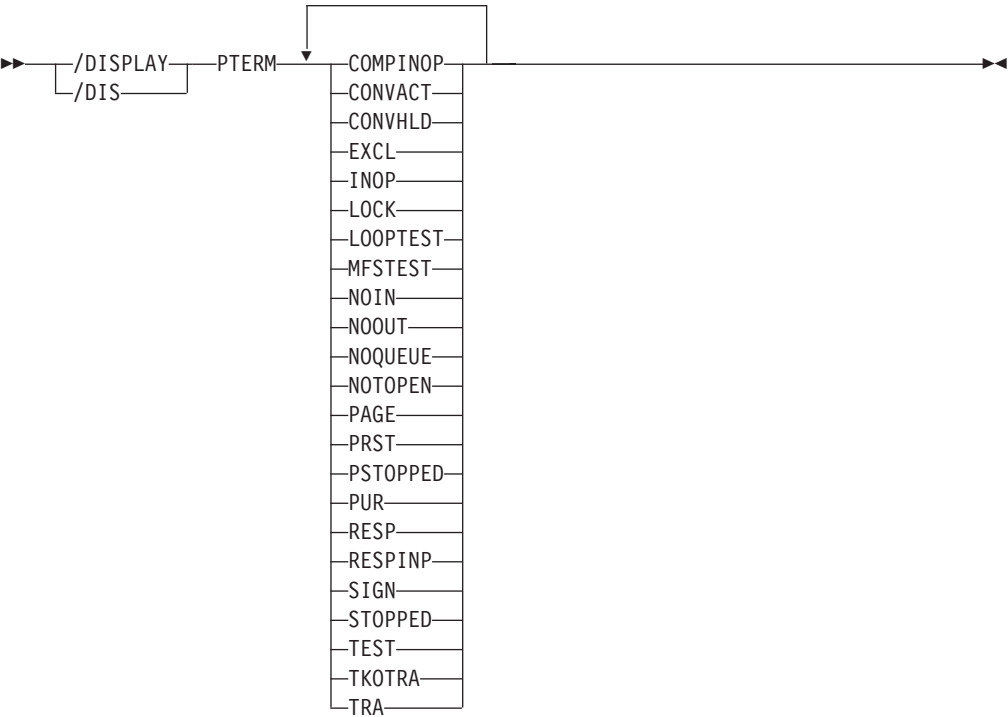
- Subsections:
- “Environment” on page 506
 - “Syntax” on page 506
 - “Usage notes” on page 506

- “Examples” on page 507

Environment

The /DISPLAY PTERM command is valid in DB/DC and DCCTL environments.

Syntax



Usage notes

Physical terminals are selected for display based on the attribute or attributes specified. The attribute display format is the same as the standard LINE/PTERM display. Attributes usually correspond to the conditions displayed for line/physical terminals.

The attributes that can be specified with the PTERM keyword are listed in the following table. For example, /DISPLAY PTERM TRACE displays all physical terminals that are currently being traced.

Table 211. /DISPLAY PTERM command attributes

COMPINOP	CONVACT (Corresponds to the NODE condition CONV-ACT)
CONVHLD (Corresponds to the NODE condition CONV-HLD)	EXCL
INOP	LOCK
LOOPTEST	MFSTEST
NOIN	NOOUT
NOQUEUE	NOTOPEN
PAGE	PRST
PSTOPPED	PUR

Table 211. /DISPLAY PTERM command attributes (continued)

RESP	RESPINP
SIGN	STOPPED
TEST	TKOTRA
TRA	

Examples

This example shows the display of all physical terminals that are being traced.

Entry ET:

```
/DISPLAY PTERM TRA
```

Response ET:

```

LIN/PTE TYPE ADDR RECD ENQCT DEQCT QCT SENT IMS1
2- 1 RDR/PTR **** 0 0 0 0 0 STOPPED INOP NOTOPEN TRA
*13128/111659*
```

/DISPLAY Q command

Use the /DISPLAY Q command to display the message queues according to classes and priority levels.

Subsections:

- “Environment”
- “Syntax”
- “Keywords” on page 508
- “Examples” on page 508

Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

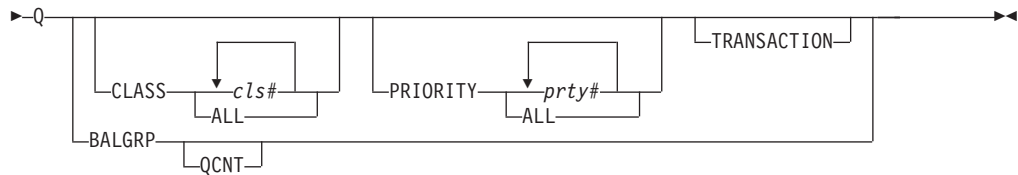
Table 212. Valid environments for the /DISPLAY Q command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DISPLAY	X	X	X
BALGRP	X		X
CLASS	X		X
Q	X		X
PRIORITY	X	X	X
TRANSACTION	X		X

Syntax

```

➤➤ [ /DISPLAY ]
    [ /DIS ]
```



Keywords

The following keywords can be specified for the /DISPLAY Q command:

BALGRP

Displays queue counts of the Fast Path load balancing group queues.

CLASS

Displays queues for specified classes.

PRIORITY

Displays queues for specified priorities.

QCNT

Specifies that global queue count information is to be displayed for Fast Path load balancing groups. If QCNT is not specified, only local queue counts are displayed; when it is specified, no local queue counts are displayed.

This keyword is valid only in a shared-queues environment.

TRANSACTION

Displays queues for transactions that are ready to run. DFSCPIC is displayed as psbname for CPI Communications driven transactions that have not issued a DL/I call to allocate a PSB.

Combinations of the CLASS, PRIORITY, and TRANSACTION keywords enable classes, priority levels within classes, transactions within priority levels, and message counts to be displayed on an as-needed basis.

Examples

The following are examples of the /DISPLAY Q command.

Example 1 for /DISPLAY Q command

Entry ET:

```
/DISPLAY Q
```

Response ET:

```
CLS CT  PTY CT  MSG CT  TRAN CT
  3      5      28      8
*90253/103811*
```

Entry ET:

```
/DISPLAY Q BALGRP
```

Response ET:

```
BALGRP  NO.RGNS  MSG CT  ENQ COUNT  DEQ COUNT
DDLTM06      1      1      2      1
DDLTM07      1      0      0      0
*91068/112000*
```

Explanation: In a shared-queues environment, the DEQ COUNT column shows the number of messages processed by the local IMS. This can be a message that is entered by the local IMS system or a sharing IMS system in the IMSplex.

Entry ET:

```
/DISPLAY Q BALGRP QCNT
```

Response ET:

BALGRP	GBLQCT
SMQFP1	2
SMQFP2	3

96197/174618

Entry ET:

```
/DISPLAY Q CLASS ALL
```

Response ET:

CLS	PTY CT	MSG CT	TRAN CT
1	1	2	1
2	1	2	1
3	1	4	1

90253/103855

Entry ET:

```
/DISPLAY Q CLASS 1 2
```

Response ET:

CLS	PTY CT	MSG CT	TRAN CT
1	1	2	1
2	1	2	1

90253/103913

Entry ET:

```
/DISPLAY Q PRIORITY ALL
```

Response ET:

CLS	PTY	MSG CT	TRAN CT
1	9	2	1
2	1	2	1
3	5	4	1

90253/103945

Entry ET:

```
/DISPLAY Q PRIORITY 10
```

Response ET:

CLS	PTY	MSG CT	TRAN CT
4	10	18	3

*90253/1104016

Entry ET:

```
/DISPLAY Q CLASS 4 PRIORITY 10
```

Response ET:

CLS	PTY	MSG CT	TRAN CT
4	10	18	3

90309/122418

Entry ET:

/DISPLAY Q TRANSACTION

Response ET:

CLS	PTY	MSG	CT	TRAN	PSBNAME
3	10	3		CLOSE	DFSSAM05
4	10	2		ADDPART	DFSSAM04
4	10	4		PART	DFSSAM02
5	7	1		ADDINV	DFSSAM04
5	10	5		DLETINV	DFSSAM04

90243/110324

Entry ET:

/DISPLAY Q CLASS 3 5 TRANSACTION

Response ET:

CLS	PTY	MSG	CT	TRAN	PSBNAME
3	10	3		CLOSE	DFSSAM05
5	7	1		ADDINV	DFSSAM04
5	10	5		DLETINV	DFSSAM04

90243/110332

Entry ET:

/DISPLAY Q CLASS 4 PRIORITY 10 11 TRANSACTION

Response ET:

CLS	PTY	MSG	CT	TRAN	PSBNAME
4	10	2		ADDPART	DFSSAM04
4	10	4		PART	DFSSAM02

90243/110343

Entry ET:

/DISPLAY Q CLASS 1 2 3 PRIORITY 1

Response ET:

CLS	PTY	MSG	CT	TRAN	CT
1	1		2		1
2	1		2		1
3	1		4		1

90253/104321

Example 2 for /DISPLAY Q command

Entry ET:

/DISPLAY QUEUE TRANSACTION

Response ET:

CLS	PTY	MSG	CT	TRAN	PSBNAME
20	5	2		TPN1	DFSCPIC
20	2	5		TPN2	SAAPSB1
22	3	7		TPN3	SAAPSB2

90332/114253

/DISPLAY QCNT command

Use the /DISPLAY QCNT command to display global queue information for the specified resource type.

The resource type can be APPC, BALGRP, LTERM, OTMA, REMOTE, or TRANSACTION. This command displays all the queues for the resource type with at least one message whose message age is greater than the message age value specified.

The `/DISPLAY QCNT OTMA` command displays the global queue counts for all OTMA outbound queues, including those messages that are queued on a transaction pipe that is defined to a super member. Instead of displaying the queue name that was used to queue the OTMA output messages, the character string 'TMSTMP-' is displayed. If the member is a regular member, the IMS ID of the IMS to which the messages have affinity is displayed following the 'TMSTMP-' character string. If the member is a super member, the IMS ID field is left blank since messages queued to the super member do not have affinity to any IMS.

This count represents the message counts of messages that can be processed by the IMS system where the command is issued. This count includes messages that can be processed by any IMS system (messages with no affinity), plus messages that can be processed by the IMS system where the command is issued (messages with an affinity to the IMS system that issued the command).

Subsections:

- “Environment”
- “Syntax”
- “Keywords” on page 512
- “Usage notes” on page 512
- “Equivalent IMS type-2 commands” on page 512
- “Output fields” on page 513
- “Examples” on page 513

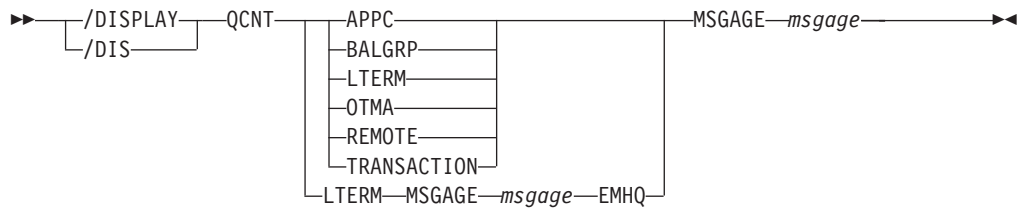
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 213. Valid environments for the `/DISPLAY QCNT` command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
<code>/DISPLAY</code>	X	X	X
APPC	X		X
BALGRP	X		X
LTERM	X		X
MSGAGE	X		X
OTMA	X		X
QCNT	X		X
REMOTE	X		X
TRANSACTION	X		X

Syntax



Keywords

The following list describes the resource types allowed:

APPC Specifies that global information for all APPC outbound queues is to be displayed.

For messages that are placed on the shared queues using a side information entry name, the side information entry name is returned in the LUNAME field and the character string, DFSSIDE, is returned in the TPNAME field.

BALGRP

Specifies that global information for LTERMs and MSNAMEs is to be displayed.

LTERM

Specifies that global information for LTERMs and MSNAMEs is to be displayed.

MSGAGE

Specifies the message age in number of days (0-365). Only those queues with messages older than or equal to the value are displayed. The resource name and the time when the message was placed on the shared queues are displayed.

If you specify MSGAGE 0, all resources (queues) are displayed.

OTMA

Specifies that global information for all OTMA outbound queues is to be displayed.

REMOTE

Specifies that global information for remote transactions and remote LTERMs is to be displayed.

TRANSACTION

Specifies that global information for transactions is to be displayed, not including transactions that are suspended.

Usage notes

This command is valid only in a shared-queues environment.

Recommendation: When you issue this command, IMS reads every message for the resource type. To minimize the performance impact, issue this command only when necessary.

Equivalent IMS type-2 commands

The following table shows variations of the /DISPLAY QCNT command and the IMS type-2 commands that perform similar functions.

Table 214. Type-2 equivalents for the /DISPLAY QCNT command

Task	/DISPLAY QCNT command	Similar IMS type-2 command
Displays lterms with messages that are older than the specified age (shared queues).	/DISPLAY QCNT LTERM MSGAGE <i>x</i>	QUERY LTERM MSGAGE(<i>x</i>)

Output fields

The output fields are displayed by the /DISPLAY QCNT command:

QUEUENAME

1-8 byte queue name.

If the output is the result of a /DISPLAY QCNT APPC MSGAGE or a /DISPLAY QCNT OTMA MSGAGE command, the value displayed for the queue name is the character string 'TMSTMP' followed by the IMSID (or the first seven bytes of the RSENAME if XRF capable) of the IMS to which the output messages have affinity.

QCNT-TOTAL

Total count of messages on the queue.

QCNT-AGED

Count of messages with a message age greater than or equal to the message age specified. This count does not include messages whose age is less than the message age specified.

TSTMP-OLD

The time stamp of the oldest message for the queue name on the shared queue.

TSTMP-NEW

The time stamp of the newest message for the queue name on the shared queue.

Note: The time stamp is the time when the message is put on the shared queues by CQS. These time stamps can be used to select records from the CQS log or the IMS log. Because this is a CQS generated time stamp, it might not correspond to the time stamp for the same message on the IMS log as logging a message in IMS and logging the same message in CQS are separate events.

Examples

The following are examples of the /DISPLAY QCNT command.

Example 1 for the /DISPLAY QCNT command

Entry ET:

```
/DISPLAY QCNT LTERM MSGAGE 5
```

Response ET:

QUEUENAME	QCNT-TOTAL	QCNT-AGED	TSTMP-OLD	TSTMP-NEW
TESTLTER	1	1	95280/132006	95280/132006
LTERMABC	4	4	95274/083000	95275/091836
LTERMA	100	100	95275/080000	95281/212224
95290/132006				

Example 2 for the /DISPLAY QCNT command

Entry ET:

```
/DIS QCNT APPC MSGAGE 0
```

Response ET:

QUEUENAME	QCNT-TOTAL	QCNT-AGED	TSTMP-OLD	TSTMP-NEW
TMSTMP- SYS3	16	16	02192/080833	02192/080928
LUNAME: L62MVS1				
TPNAME: TPNAME123				
TMSTMP- IMS2	12	12	02192/080620	02192/080658
LUNAME: NETWRKID.L62IMS1				
TPNAME: ABCDEFGHIJKLMNOPQRSTUVWXYZ				
02192/081543				

Example 3 for the /DISPLAY QCNT command

Entry ET:

```
/DISPLAY QCNT TRANSACTION MSGAGE 5
```

Response ET:

QUEUENAME	QCNT-TOTAL	QCNT-AGED	TSTMP-OLD	TSTMP-NEW
TRANA	20	20	95200/132006	95280/132006
TRANBBB	4	4	95274/083000	95275/091836
TRANSACA	220	220	95275/080000	95281/212224
TRANSDDD	13	0	95290/101455	95290/101456
TRANSEEE	55	13	95277/152118	95290/114317
95290/132006				

Example 4 for the /DISPLAY QCNT command

Entry ET:

```
/DIS QCNT OTMA MSGAGE 0
```

Response ET:

QUEUENAME	QCNT-TOTAL	QCNT-AGED	TSTMP-OLD	TSTMP-NEW
TMSTMP- SYS3	24	24	05038/083745	05038/083745
TMEMBER: HWS003				
TPIPE: TPIPE1				
TMSTMP-	2	2	05038/084022	05038/084022
TMEMBER: SM01				
TPIPE: TPIPE1				
TMSTMP-	5	5	05038/092537	05038/092537
TMEMBER: SM01				
TPIPE: TPIPE2				
TMSTMP-	16	16	05038/072311	05038/072311
TMEMBER: SM01				
TPIPE: TPIPE3				
02192/083757				

Explanation: In this example, 24 messages are queued on TPIPE1 for member HWS003. For super member SM01, two messages are queued on TPIPE1, five messages are queued on TPIPE, and sixteen messages are queued on TPIPE3.

Example 5 for the /DISPLAY QCNT command

Entry ET:

```
/DIS QCNT LTERM MSGAGE 0 EMHQ
```


Response ET:

QUEUE NAME		QCNT-TOTAL	QCNT-AGED	TSTMP-OLD
TSTMP-NEW	SYS3			
IMSUS01		1	1	04309/103912
04309/103912	SYS3			
IMSUS02		1	1	04309/105127
04309/105127	SYS3			
04310/132127	SYS3			

Related reference:

 [QUERY LTERM command \(Commands\)](#)

/DISPLAY RECOVERY command

Use the /DISPLAY RECOVERY command to display the recovery process in progress.

It also displays the list of database data sets and areas being recovered by an online database recovery service. The database data sets and areas are displayed as part of a recovery list, which is a set of database data sets, areas, or both processed by an online database recovery service in a single recovery instance. The /DISPLAY RECOVERY command also shows the status of one or all of the recovery lists that exist.

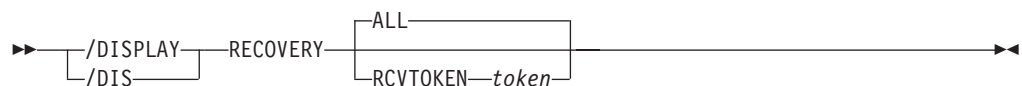
Subsections:

- “Environment”
- “Syntax”
- “Keywords”
- “Usage notes” on page 516
- “Recovery list information” on page 516
- “Recovery progress information” on page 517
- “Recovery list entry information” on page 517
- “Output fields” on page 518
- “Examples” on page 518

Environment

The /DISPLAY RECOVERY command is valid in DB/DC and DBCTL environments.

Syntax



Keywords

The following keywords can be specified for the /DISPLAY RECOVERY command

ALL

An optional parameter that displays all the recovery list information and the recovery progress information. No recovery list entry information is displayed.

RCVTOKEN

An optional parameter that displays the recovery token associated with the specific recovery list. The recovery list information and recovery progress information for the specific list display with the recovery list entry information, including the database data set and areas contained in the recovery list.

token

Specifies the unique recovery token associated with the recovery list. This token can be up to eight characters in length. If RCVTOKEN is specified, *token* must be supplied.

Usage notes

If an online database recovery service is executing in an IMS DB/DC control region, the /DISPLAY RECOVERY command can be issued from LTERMs, automated operator (AO) application programs, the IMS Master Terminal (MTO), or the z/OS master console and secondary console.

If an online database recovery service is running in an IMS DBCTL region, the /DISPLAY RECOVERY command can be issued by programs using the IMS DBCTL AOI or the z/OS master console and secondary console.

Recovery list information

This section displays the status of one or more recovery lists. The status includes the following information:

TOKEN

This shows the recovery list token. If /DIS RECOVERY ALL is issued and no recovery lists exist, NO LISTS is displayed. If IMS is unable to obtain recovery list information from the recovery facility, UNAVAIL is displayed.

STATUS

The current status of the recovery list. The status is one of the following:

FORMING

A /RECOVER START command has not been issued.

STARTED

A /RECOVER START command has been issued. Recovery processing started but has not completed.

UNKNOWN

No list with the given token can be found.

STOPPING

A /REC STOP ALLENT command was issued.

ERROR

The choices are ABORT or CONT. These are the action options in case an error is encountered.

REC TYPE

Indicates the type of recovery being processed. The type is one of the following:

FULL A full recovery is processing.

TSR A time stamp recovery is processing. This occurs when RCVTIME was specified on the /RECOVER START command, but PITR was not specified.

PITR A time-stamp recovery is processing with the point-in-time recovery (PITR) option. This occurs when RCVTIME is specified on the /RECOVER START command with PITR.

N/A Recovery has not been started. The type is undefined.

PROC The values that may appear reflect the recovery progress in two phases of processing: reading log data sets and restoring image copy data. The format of the entries are as follows:

- nnnn of mmmm LOGS READ
- nnnn of mmmm RESTORED
- COMPLETE - this state will only appear for a few seconds following the completion of restoration of the last DBDS and termination of the recovery list.
- NOT STARTED - The recovery list is ready for processing or for additional updates.
- routing time - if an online database recovery service is being used.

IC# Indicates the primary image copy will be used if an image copy is to be used during recovery.

SOURCE

The primary copy as contained in the RECON is used for recovery.

Recovery progress information

This section displays status of the recovery in progress, if there is one. The section is omitted if no recovery is in progress. The status includes the following information:

TOKEN

The recovery list token.

LAST PROCESSED

The time stamp of the last log record processed by the recovery. The time is displayed in local time.

RCVTIME

The RCVTIME value specified on the /RECOVER START command or N/A if none was specified. The time is displayed in local time.

Recovery list entry information

This section displays the list of database data sets and areas in the given recovery list. The status includes the following information:

DATABASE DATA SET

For full function, this is the DB name and DD name of the database data set. For Fast Path, it is the area name. If there are multiple area data sets for the area, the string '(MADS)' will also be displayed.

START OPTION

This shows the start option that was specified on the /RECOVER ADD or /RECOVER START command or taken from the system default. The values can be **STALOCAL**, **STAGLOBAL**, or **OFFLINE**.

STATUS

This indicates the status of the database data set or area. The status can be one of the following:

FAILED

An error occurred for this database data set or area during recovery.

STOPPED

A /RECOVER STOP command was entered to stop recovery processing for the database data set or area.

NORMAL

Recovery is in progress or pending for the database data set or area.

INVALID

DBRC no longer contains information about this database data set or area.

AUTH SSID

A list of SSIDs that are still authorized to the database data set or area.

NONE displays if no IMS is authorized to the database data set or area. If recovery is in progress, **N/A** displays.

Output fields

The /DISPLAY RECOVERY command output is divided into three sections.

- Recovery List Information
- Recovery Progress Information
- Recovery List Entry Information

Examples

The following are examples of the /DISPLAY RECOVERY command.

Example 1 for /DISPLAY RECOVERY command

In this example, a /DISPLAY RECOVERY command is issued before a /RECOVER START for RCVTOKEN RECOV1 is issued.

Entry ET:

```
/DISPLAY RECOVERY RCVTOKEN RECOV1
```

Response ET:

```
**** RECOVERY LIST INFORMATION ****
TOKEN   STATUS   ERROR- REC TYPE  PROC  IC#  SOURCE
RECOV1  FORMING   N/A    N/A      N/A    N/A
**** RECOVERY LIST ENTRY INFORMATION ****
DATABASE DATA SET  START OPTION  STATUS  AUTH SSID
DB23AR1             STAGLOBAL    NORMAL  NONE
DB23AR2             OFFLINE     NORMAL  NONE
DB23AR3             STAGLOBAL    NORMAL  NONE
DB23AR4             STALOCAL    NORMAL  NONE
DB23AR5             STALOCAL    NORMAL  NONE
DHSVNTZ02 HIDAM     STAGLOBAL    NORMAL  NONE
DIVNTZ02 DBHVSAM1   OFFLINE     NORMAL  NONE
DXVNTZ02 XDLBT04I   STALOCAL    NORMAL  NONE
*03127/153515*
```

Example 2 for /DISPLAY RECOVERY command

In Example 2, a /DISPLAY RECOVERY command is issued before a /RECOVER START for RCVTOKEN RECOV1 is issued. Some of the database data sets in the recovery list are still authorized to two IMS systems.

Entry ET:

```
/DISPLAY RECOVERY RCVTOKEN RECOV1
```

Response ET:

```
**** RECOVERY LIST INFORMATION ****
TOKEN  STATUS  ERROR- REC TYPE  PROC  IC#  SOURCE
RECOV1  FORMING  N/A    N/A      N/A    N/A
**** RECOVERY LIST ENTRY INFORMATION ****
DATABASE DATA SET  START OPTION  STATUS  AUTH SSID
DB23AR1             STAGLOBAL    NORMAL  NONE
DB23AR2             OFFLINE     NORMAL  NONE
DB23AR3             STAGLOBAL    NORMAL  NONE
DB23AR4             STALOCAL    NORMAL  NONE
DB23AR5             STALOCAL    NORMAL  NONE
DHSVNTZ02 HIDAM     STAGLOBAL    NORMAL  IMS1
                    IMS2
DIVVNTZ02 DBHVSAM1  OFFLINE     NORMAL  IMS1
                    IMS2
DXVNTZ02 XDLBT04I  STALOCAL    NORMAL  IMS1
                    IMS2      *03127/153515*
```

Example 3 for /DISPLAY RECOVERY command

In this example, a /DISPLAY RECOVERY command is issued after a /RECOVER START RCVTOKEN RECOV1 ERRORCONT command was issued when the IMS Database Recovery Facility is the recovery product being used. In this case, all logs have been processed and three of the eight data sets have been restored.

Entry ET:

```
/DISPLAY RECOVERY RCVTOKEN RECOV1
```

Response ET:

```
**** RECOVERY LIST INFORMATION ****
TOKEN  STATUS  ERROR- REC TYPE  PROC  IC#  SOURCE
RECOV1  STARTED  CONT  FULL    RTDB  0    PRI
**** RECOVERY PROGRESS INFORMATION ****
TOKEN  PROGRESS INFORMATION  RCVTIME
RECOV1  0003 OF 0008 RESTORED  N/A
**** RECOVERY LIST ENTRY INFORMATION ****
DATABASE DATA SET  START OPTION  STATUS  AUTH SSID
DB23AR1             STAGLOBAL    NORMAL  N/A
DB23AR2             OFFLINE     NORMAL  N/A
DB23AR3             STAGLOBAL    NORMAL  N/A
DB23AR4             STALOCAL    NORMAL  N/A
DB23AR5             STALOCAL    NORMAL  N/A
DHSVNTZ02 HIDAM     STAGLOBAL    NORMAL  N/A
DIVVNTZ02 DBHVSAM1  OFFLINE     NORMAL  N/A
DXVNTZ02 XDLBT04I  STALOCAL    NORMAL  N/A  *03127/153515*
```

Example 4 for /DISPLAY RECOVERY command

In the following example, a /DISPLAY RECOVERY command is issued after a /RECOVER START ERRORCONT command was issued. Also a /RECOVER STOP command was issued for DHSVNTZ02, and DB23AR2 failed during a recovery.

Entry ET:

/DISPLAY RECOVERY RCVTOKEN RECOV1

Response ET:

```
**** RECOVERY LIST INFORMATION ****
TOKEN   STATUS   ERROR- REC TYPE  PROC  IC#  SOURCE
RECOV1  STARTED  CONT   FULL    RTDB   0   PRI
**** RECOVERY PROGRESS INFORMATION ****
TOKEN   PROGRESS INFORMATION      RCVTIME
RECOV1  2000.251 07:57:00.3      N/A
**** RECOVERY LIST ENTRY INFORMATION ****
DATABASE DATA SET  START OPTION  STATUS  AUTH SSID
DB23AR1             STAGLOBAL   NORMAL  N/A
DB23AR2             OFFLINE    FAILED  N/A
DB23AR3             STAGLOBAL   NORMAL  N/A
DB23AR4             STALOCAL   NORMAL  N/A
DB23AR5             STALOCAL   NORMAL  N/A
DHSVNTZ02 HIDAM     STAGLOBAL   STOPPED N/A
DIVNTZ02 DBHVSAM1   OFFLINE    NORMAL  N/A
DXVNTZ02 XDLBT04I   STALOCAL   NORMAL  N/A  *03127/153515*
```

Example 5 for /DISPLAY RECOVERY command

In this example, a /DISPLAY RECOVERY ALL command is issued after three lists are created using the IMS Database Recovery Facility recovery product. In this case, the IMS Database Recovery Facility has processed 76 of the 126 logs that will need to be read. One of the lists (RECOV2) is undergoing TSR.

Entry ET:

/DISPLAY RECOVERY ALL

Response ET:

```
**** RECOVERY LIST INFORMATION ****
TOKEN   STATUS   ERROR- REC TYPE  PROC  IC#  SOURCE
RECOV1  FORMING  N/A    N/A      N/A    N/A
RECOV2  STARTED  CONT   TSR      RTDB   0   PRI
RECOV3  FORMING  N/A    N/A      N/A    N/A
**** RECOVERY PROGRESS INFORMATION ****
TOKEN   PROGRESS INFORMATION      RCVTIME
RECOV2  0076 OF 0125 LOGS READ  2003.127 08:30:00.0
**** RECOVERY LIST ENTRY INFORMATION ****
DATABASE DATA SET  START OPTION  STATUS  AUTH SSID
DB23AR1             STAGLOBAL   NORMAL  N/A
DB23AR2             OFFLINE    NORMAL  N/A
DB23AR3             STAGLOBAL   NORMAL  N/A
DB23AR4             STALOCAL   NORMAL  N/A
DB23AR5             STALOCAL   NORMAL  N/A
DHSVNTZ02 HIDAM     STAGLOBAL   NORMAL  N/A
DIVNTZ02 DBHVSAM1   OFFLINE    NORMAL  N/A
DXVNTZ02 XDLBT04I   STALOCAL   NORMAL  N/A  *03127/153515*
```

Example 6 for /DISPLAY RECOVERY command

In this example, a /DISPLAY RECOVERY command is issued after three lists are created. No other parameters are specified.

Entry ET:

/DISPLAY RECOVERY ALL

Response ET:

```

**** RECOVERY LIST INFORMATION ****
TOKEN   STATUS   ERROR- REC TYPE  PROC  IC#  SOURCE
RECOV1  FORMING  N/A    N/A      N/A    N/A
RECOV2  FORMING  N/A    N/A      N/A    N/A
RECOV3  FORMING  N/A    N/A      N/A    N/A
*03127/153515*

```

Example 7 for /DISPLAY RECOVERY command

In this example, a /DISPLAY RECOVERY ALL command is issued when no recovery lists exist.

Entry ET:

```
/DISPLAY RECOVERY ALL
```

Response ET:

```

**** RECOVERY LIST INFORMATION ****
TOKEN   STATUS   ERROR- REC TYPE  PROC  IC#  SOURCE
**** RECOVERY LIST INFORMATION ****
TOKEN   STATUS   ERROR- REC TYPE  PROC  IC#  SOURCE
NO LISTS
*03127/153515*

```

Example 8 for /DISPLAY RECOVERY command

In this example, a /DISPLAY RECOVERY RCVTOKEN RECOV3 is issued when the RCVTOKEN does not exist.

Entry ET:

```
/DISPLAY RECOVERY RCVTOKEN RECOV3
```

Response ET:

```

**** RECOVERY LIST INFORMATION ****
TOKEN   STATUS   ERROR- REC TYPE  PROC  IC#  SOURCE
**** RECOVERY LIST INFORMATION ****
TOKEN   STATUS   ERROR- REC TYPE  PROC  IC#  SOURCE
RECOV3  UNKNOWN  N/A    N/A      *03127/153515*

```

/DISPLAY RTCODE command

Use the /DISPLAY RTCODE command to display the status of Fast Path routing codes, the PSB using the routing code, and the region, if any.

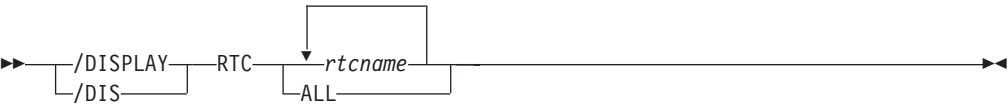
Subsections:

- “Environment”
- “Syntax” on page 522
- “Equivalent IMS type-2 commands” on page 522
- “Output fields” on page 522
- “Examples” on page 522

Environment

The /DISPLAY RTCODE command is valid in DB/DC and DCCTL environments.

Syntax



Equivalent IMS type-2 commands

The following table shows variations of the /DISPLAY RTC command and the IMS type-2 commands that perform similar functions.

Table 215. Type-2 equivalents for the /DISPLAY RTC command

Task	/DISPLAY RTC command	Similar IMS type-2 command
Displays information about one or more Fast Path routing codes.	/DISPLAY RTC <i>rtcname1...rtcnamen</i> ALL	QUERY RTC NAME(<i>rtcname1,...rtcnamen</i> *) SHOW(ALL)

Output fields

The status displayed can be one of the following:

NOTINIT
NOTSCHED
STOPPED

Examples

Entry ET:

/DISPLAY RTCODE ALL

Response ET:

RTCODE	PROGRAM	STATUS
DCL	EMHPSB	NOTSCHED,STOPPED
EMHCOBOL	EMHCOBOL	NOTSCHED,STOPPED
EMHPLI	EMHPLI	NOTSCHED,STOPPED
EMHTX	EMHPSB	NOTSCHED,STOPPED
TXCDLM06	DDLTLMO6	STOPPED
TXCDLM07	DDLTLMO7	STOPPED
91068/114840		

Related reference:

 QUERY RTC command (Commands)

/DISPLAY SHUTDOWN STATUS command

Use the /DISPLAY SHUTDOWN STATUS command to display system activity during a shutdown type of checkpoint.

Subsections:

- “Environment” on page 523
- “Syntax” on page 523
- “Usage notes” on page 523
- “Output fields” on page 524
- “Examples” on page 525

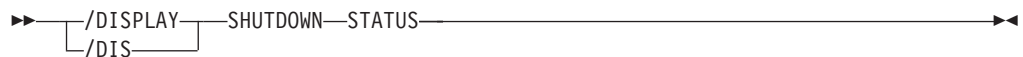
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 216. Valid environments for the /DISPLAY SHUTDOWN command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DISPLAY	X	X	X
SHUTDOWN	X	X	X
STATUS	X	X	X

Syntax



Usage notes

When issuing the `/DISPLAY SHUTDOWN STATUS` command from a specific environment (such as `DBCTL`), only the information that is valid for that environment is displayed. For example, in a `DBCTL` environment, only the number of IMS threads is displayed.

In an LU 6.2 environment, the /DISPLAY SHUTDOWN STATUS command indicates the dependent regions that have active CPI Communications driven transaction programs. These regions must be terminated before shutdown is completed. In addition, the command also displays LU 6.2 conversations that hang the shutdown processing.

In a shared-queues environment, the `/DISPLAY SHUTDOWN STATUS` command displays the CQS job name that needs to be restarted if IMS shutdown hangs because COS is inactive.

If a /DISPLAY SHUTDOWN STATUS command is issued while a database is being recovered with the Online Recovery Services, the response DB RECOVERY IN PROGRESS is returned in addition to the other responses. The /DISPLAY SHUTDOWN STATUS command displays a line with the count of active and indoubt ODBA threads that are active.

One of the following commands can be used to close the VTAM node:

- /CHECKPOINT (except simple checkpoint)
- /CLSDST
- /IDLE NODE (only after a /CLDST command has been tried first)
- /QUIESCE (for session type 6 nodes only)
- /STOP NODE

The /STOP DC command or the /CHECKPOINT (other than simple checkpoint) command can be issued to close the VTAM ACB.

If a checkpoint purge is in progress and messages are in the output queues, an orderly shutdown can be initiated by entering the `/CLSDST` command or the

/STOP command. This allows termination after the next output message is sent, but might be insufficient for display terminals or terminals in input mode. If a node is hung, the following can be done:

1. A /CLSDST FORCE command can be issued.
2. If that fails, then the /IDLE command can be issued.

If any messages are queued for PTERM1 (system console) or the master terminal, they must be requested and received before the purge is completed. The /STOP and /IDLE commands are ineffective against these terminals. When using ISC parallel sessions, one line of information is displayed for each applicable session of the node. The user name is also displayed.

In addition to /DISPLAY SHUTDOWN STATUS command, use the following commands to get more information during shutdown:

- Use /DISPLAY CCTL command for all coordinator controllers.
- Use /DISPLAY UOR command for displaying status information about units of work for protected resources that are managed by z/OS Resource Recovery Services (RRS).

Output fields

The status displayed when the /DISPLAY SHUTDOWN STATUS command is issued can include the following information:

COMMIT *x* TMEMBER=*membername* TPIPE=*tpipename*

The commit mode for the transaction and which OTMA client (member) and TPIPE is currently in progress and thus preventing completion of shutdown. COMMIT *x* can be either of the following:

- 0 Commit-Then-Send
- 1 Send-Then-Commit

Master Terminal Status

The following text is displayed for the primary master, secondary master, or system console:

```
PRIMARY MSTR
SECOND MSTR      ACTIVE , MESSAGES WAITING
SYS CONSOLE
```

ACTIVE indicates the terminal is in the following states:

```
OPERABLE
ALLOWING INPUT
ALLOWING OUTPUT
NOT STOPPED FOR QUEUEING
NOT LOCKED
NOT IN TEST MODE
```

MESSAGES WAITING indicates that there are system messages (Q3) waiting to be sent, thus preventing shutdown from completing.

MSG-IN *x* MSG-OUT *y*

The message totals, where *x* is the total number of input messages and *y* is the total number of output messages.

OTMA PHASE=*x*

The current phase of IMS Open Transaction Manager Access (OTMA) processing. The shutdown phases are:

- 1 OTMA shutdown processing has begun.

- 2 Dependent regions have terminated. DFS1970 messages have been sent to OTMA clients for all inflight Send-then-Commit (commit mode 1) transactions.
- 3 OTMA is waiting for termination of all client-processing-related activities.
- 4 OTMA shutdown is complete.

SYSTEM PURGING

The checkpoint is the result of a /CHECKPOINT PURGE command.

TERMINAL USER STATUS

The header for the portion of the display output that shows active terminals, whose status can be one of the following:

```
INPUT IN PROCESS
OUTPUT IN PROCESS
AWAITING RESPONSE
XX MSGS IN QUEUE
```

If there is no terminal activity, the status can be one of the following:

```
NO INPUTTING LINES
NO OUTPUTTING LINES
```

If the system-defined MSC LNB is active, the following message is displayed:

```
LINK SYS      OUTPUT IN PROCESS
```

xx MSG PROCESSING REGION(S) ACTIVE

Where *xx* is the number of BMP, TP, and FP regions that are active. If the checkpoint has already been posted, this is the only status displayed.

For DBCTL, a count of active CCTL threads is included.

xxx ODBA THREADS, yyy INDOUBT ODBA THREADS ACTIVE

Where *xxx* is the number of active ODBA threads and *yyy* is number of indoubt ODBA threads active in the system

xxxxxxx PROCESSING REGION(S) ACTIVE

Active regions, where *xxxxxxx* is one of the following types:

```
BMP MSG
TP  MSG
FP
```

If status of a line or link shows input or output in progress and immediate shutdown is desired, the /IDLE command can be used.

Examples

The following are examples of the /DISPLAY SHUTDOWN STATUS command.

Example 1 for /DISPLAY SHUTDOWN STATUS command

Entry ET:

```
/DISPLAY SHUTDOWN STATUS
```

Response ET:

```
DFS134 SHUTDOWN CHECKPOINT NOT IN PROGRESS,
CANNOT PROCESS COMMAND
```

Entry ET:

/DISPLAY SHUTDOWN STATUS

Response ET:

SYSTEM PURGING

TERMINAL	USER	STATUS
5-	1	INPUT IN PROCESS
5-	2	INPUT IN PROCESS
11-	1	OUTPUT IN PROCESS

TERMINAL	USER	STATUS
LINK	10	OUTPUT IN PROCESS
MSG-IN	2	MSG-OUT 2
MASTER ACTIVE		
91111/222226		

Entry ET:

/DISPLAY SHUTDOWN STATUS

Response ET:

TERMINAL	USER	STATUS
NSLUTP6	SPOOLA	AWAITING RESPONSE
NSLUTP6	SPOOLB	5 MSGS IN QUEUE
NSLUTP6	SPOOLC	INPUT IN PROCESS
NSLUTP6	SPOOLD	OUTPUT IN PROCESS
91111/222226		

Example 2 for /DISPLAY SHUTDOWN STATUS command

Entry ET:

/DISPLAY SHUTDOWN STATUS

Response ET:

TERMINAL	USER	STATUS
5-	1	INPUT IN PROCESS
5-	2	INPUT IN PROCESS
11-	1	OUTPUT IN PROCESS

TERMINAL	USER	STATUS
LINK	10	OUTPUT IN PROCESS
MSG-IN	2	MSG-OUT 2
MASTER ACTIVE		
CPI TRAN TRNCODE1 ACTIVE IN REGID 1		
CPI TRAN TRNCODE2 ACTIVE IN REGID 4		
IMSLU=L62IMS #APPC-CONV= 8 ENABLED		
LUNAME		STATUS
LUNAME1		3 CONVERSATIONS(S) IN PROCESS
LUNAME1		1 OUTPUT IN PROCESS
LUNAME2		4 CONVERSATIONS(S) IN PROCESS
90332/114253		

Entry ET:

/DISPLAY SHUTDOWN STATUS

Response ET:

TERMINAL	SUBPOOL	STATUS
5-	1	INPUT IN PROCESS
5-	2	INPUT IN PROCESS
11-	1	OUTPUT IN PROCESS

TERMINAL	SUBPOOL	STATUS
LINK	10	OUTPUT IN PROCESS
MSG-IN	2	MSG-OUT 2
MASTER ACTIVE		

```

CPI TRAN TRNCODE1 ACTIVE IN REGID1
CPI TRAN TRNCODE2 ACTIVE IN REGID4
IMSLU=SYS1.IMSLUNME      #APPC-CONV=      8  ENABLED
LUNAME      STATUS
NETWORK1.LUNAME1      3 CONVERSATION(S) IN PROCESS
NETWORK1.LUNAME1      1 OUTPUT IN PROCESS
NID2.LUNAME2      4 CONVERSATION(S) IN PROCESS
*92232/114253*

```

Example 3 for /DISPLAY SHUTDOWN STATUS command

Entry ET:

```
/DISPLAY SHUTDOWN STATUS
```

Response ET:

```

TERMINAL USER      STATUS
1- 1      INPUT IN PROCESS
TERMINAL USER      STATUS
NO OUTPUTTING LINES
MSG-IN 1      MSG-OUT 0
MASTER ACTIVE
OTMA PHASE=2
COMMIT 0 TMBER=CLIENT1      TPIPE=TPIPE1
*94298/174604*

```

Example 4 for /DISPLAY SHUTDOWN STATUS command

Entry ET:

```
/DISPLAY SHUTDOWN STATUS
```

Response ET:

```

TERMINAL USER      STATUS
1- 1      INPUT IN PROCESS
TERMINAL USER      STATUS
NO OUTPUTTING LINES
MSG-IN 1      MSG-OUT 0
PRIMARY MSTR SECOND MSTR ACTIVE, MESSAGES WAITING
IMSLU=N/A.N/A      #APPC-CONV=      0  DISABLED
OTMA PHASE=0
0 ODBA THREADS, 1 INDOUBT ODBA THREADS ACTIVE
*06031/135629*

```

Example 5 for /DISPLAY SHUTDOWN STATUS command

Entry ET:

```
/DISPLAY SHUTDOWN STATUS
```

Response ET:

```

TERMINAL USER      STATUS
1- 1      INPUT IN PROCESS
TERMINAL USER      STATUS
LINK SYS      OUTPUT IN PROCESS
MSG-IN 1      MSG-OUT 1
MASTER ACTIVE
IMSLU=L62IMS      #APPC-CONV=      3  PURGING
LUNAME      STATUS
IMSNET.L62MVS1      3 CONVERSATION(S) IN PROCESS
OTMA PHASE=0
*04292/112920*

```

/DISPLAY STATUS command

Use the /DISPLAY STATUS command to display the output for all the IMS resources.

Subsections:

- “Environment”
- “Syntax”
- “Usage notes” on page 529
- “Equivalent IMS type-2 commands” on page 530
- “Output fields” on page 530
- “Examples” on page 531

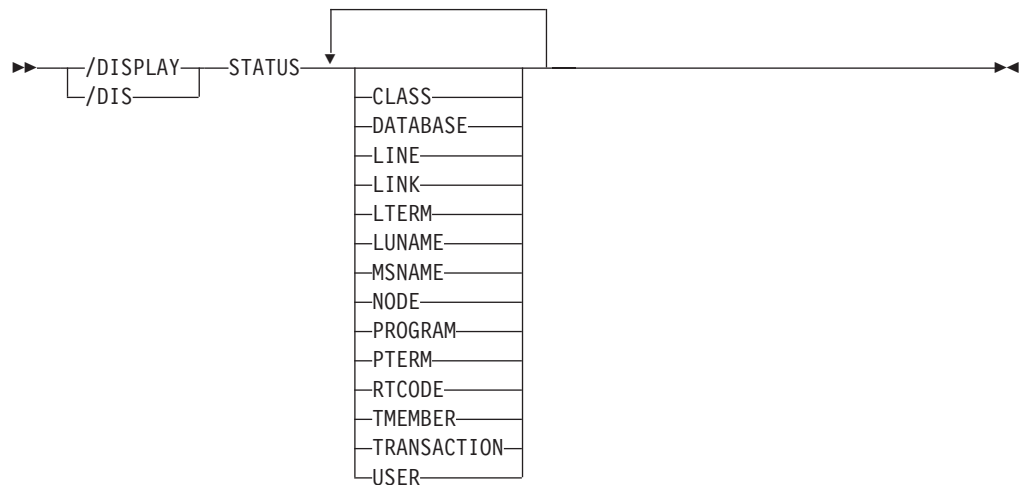
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 217. Valid environments for the /DISPLAY STATUS command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DISPLAY	X	X	X
CLASS	X		X
DATABASE	X	X	
LINE	X		X
LINK	X		X
LTERM	X		X
LUNAME	X		X
MSNAME	X		X
NODE	X		X
PROGRAM	X	X	X
PTERM	X		X
RTCODE	X		X
STATUS	X	X	X
TMEMBER	X		X
TRANSACTION	X		X
USER	X		X

Syntax



Usage notes

Any combination of the indicated keywords can be used to display the associated resources. If no exceptional conditions are found for any of the resources specified by the individual keywords, STATUS UNRESTRICTED is displayed.

For Fast Path databases, the `/DISPLAY STATUS DATABASE` command shows the area and ADS exceptions as well as the database status. Each area with exceptions is displayed on a separate line after the database line. Each ADS with exceptions is displayed on a separate line after the area line.

The `/DISPLAY STATUS USER` command provides the status of a user. The ALLOC status is followed by the node name to which the user is allocated or signed onto in parenthesis.

Attention: In an IMSplex, if `NODE`, `LTERM`, or `USER` is specified with the `/DISPLAY STATUS` command, it will result in extensive accesses to the Resource Manager for global information, and their use should be carefully considered.

In a DBCTL environment, `/DISPLAY STATUS` displays only database and program information.

In a DCCTL environment, `/DISPLAY STATUS` does not display database information.

For `/DISPLAY STATUS TRANSACTION`, DFSCPIC is displayed as the PSB name for CPI Communications driven transactions that have not issued a DL/I APSB call to allocate a PSB.

A status of NOINIT will appear in the output of a `/DISPLAY STATUS TRANSACTION` command when IMS is unable to initialize a transaction resource during restart processing.

For a DB/DC RSR tracking subsystem, `/DISPLAY STATUS` displays only DATABASE, LINE, LTERM, NODE, PTERM, and USER information.

The /DISPLAY STATUS DATABASE and /DISPLAY STATUS commands show the status of online forward recovery (OFR) for those databases in an RSR tracking subsystem that have OFR in progress.

The /DISPLAY STATUS LUNAME command can indicate that a command such as /STO LUNAME ALL INPUT or /STO LUNAME ALL OUTPUT was entered before the /DISPLAY that applies to all future LU 6.2 inbound or outbound conversations.

The /DISPLAY STATUS TMEMBER command displays the IMS Open Transaction Manager Access (OTMA) transaction pipes that are stopped. If a transaction pipe is not stopped, its status is UNRESTRICTED. The command output includes information about stopped transaction pipes that are defined to super members and the super member name if a super member is used to manage the hold queue of a regular member.

Equivalent IMS type-2 commands

The following table shows variations of the /DISPLAY STATUS command and the IMS type-2 commands that perform similar functions.

Table 218. Type-2 equivalents for the /DISPLAY STATUS command

Task	/DISPLAY STATUS command	Similar IMS type-2 command
Displays information about databases with the specified status.	/DISPLAY STATUS DB	QUERY DB STATUS(ALLOC, ALLOC, BACKOUT, EEQE, LOCK, NOTINIT, NOTOPEN, OFR, OLR, OPEN, RECALL, RECOV, RNL, STOSCHD, STOUPLDS)
Displays status.	/DISPLAY STATUS LTERM	QUERY LTERM SHOW(STATUS)
Displays logical terminals with specified status.	/DISPLAY STATUS LTERM	QUERY LTERM STATUS(status) SHOW(STATUS)
Displays nodes with specified status.	/DISPLAY STATUS NODE	QUERY NODE STATUS(status)
Displays all programs that have status and what that status is.	/DISPLAY STATUS PGM	QUERY PGM STATUS(DB-NOTAVL, IOPREV, LOCK, NOTINIT, STOSCHD, TRACE)
Displays all Fast Path routing codes that have status and what that status is.	/DISPLAY STATUS RTC	QUERY RTC STATUS(ACTIVE, NOTINIT, NOTSCHD, STOQ)
Displays information about transactions with the specified status.	/DISPLAY STATUS TRANSACTION	QUERY TRAN NAME(tranname) STATUS (IOPREV, LCK, QERR, SUSPEND, STOQ, STOSCHD, USTO)
Displays users with specified status.	/DISPLAY STATUS USER	QUERY USER STATUS(status)

Output fields

IMS resources that can be listed by the /DISPLAY STATUS command include resources in the states listed in the following table. The /DISPLAY STATUS command displays only conditions that require operator intervention.

Table 219. /DISPLAY STATUS resource states displayed

Resource	State
CLASS	STOPPED

Table 219. /DISPLAY STATUS resource states displayed (continued)

Resource	State
DATABASE	ALLOCF, BACKOUT, EEQE, INQONLY, LOCK, NOTINIT, NOTOPEN
DATABASE ADS	PRE-OPEN FAILED, SEVERE-ERROR, UNAVAILABLE, COPY-PHASE, FORMAT-PHASE
DATABASE AREA	RECOVERY NEEDED, STOPPED
LINE	IDLE, NOIN, NOOUT, NOQUEUE, NOTOPEN, PSTOPPED, PUR, RESP, RESP-INP, STOPPED
LINK	ACTV, COLD, ERE, IDLE, NOTIDLE-A, NOTIDLE-B, NOTIDLE-Cxx, NOTOPEN, NRE, N/A, PSTOPPED
LTERM/MSNAME	LOCK, PSTOPPED, PUR, QERROR, QLOCK, STOPPED
LUNAME	STO, STO-INP, STO-OUTP
NODE	CLSDST, CONV-HLD, C1INOP, C2INOP, C3INOP, C4INOP, DEACTIVATED, DISCONNECTED, FORCE, INOP, LOCK, LOST, OPNDST, QUIESCED, RESP, RESP-INP, RESP-INP-FP, RESYNC, SHUT, STOPPED
PROGRAM	DB-STOPD, I/O PREVENT, LOCK, NOTINIT, STOPPED
PTERM	COMPINOP, CONV-HLD, EXCL, INOP, LOCK, LOOPTEST, NOIN, NOTOPEN, NOOUT, NOQUEUE, PSTOPPED, PUR, RESP, RESP-INP, STOPPED, TEST
RTCODE	NOTINIT, STOPPED
TMEMBER	STO
TRAN	LOCK, NOTINIT, PSTOPPED, PUR, QERROR, QSTP, SPND, STOPPED, USTOPPED
USER	CONV-HLD, DEADQ, RESP, RESP-INP, RESP-INP-FP, STOPPED

Examples

The following are examples of the /DISPLAY STATUS command.

Example 1 for /DISPLAY STATUS command

Entry ET:

```
/DISPLAY STATUS
```

Response ET:

```
**TRAN****PSBNAME
STATUS UNRESTRICTED
**DATABASE**
BMACC1    NOTOPEN,NOTINIT,STOPPED
DEDB01
-AREA01    RECOVERY-NEEDED
DEDEB03
-AREA02
  ADS01    PRE-OPEN FAILED
DEDB04    NOTOPEN,STOPPED
-AREA01    RECOVERY-NEEDED
  ADS01    UNAVAILABLE
**PROGRAM***
HIMASN01  STOPPED
SWITCH    STOPPED
```

```

**NODE****
CT3275    DISCONNECTED
CT3277A   DISCONNECTED
CT3277B   SHUT
W612      DISCONNECTED
**LINE*****
4         STOPPED,IDLE
5         STOPPED,IDLE,NOTOPEN
8         STOPPED,IDLE
10        STOPPED,IDLE,NOTOPEN
**PTERM*****
3         1 INOP, STOPPED
3         2 INOP, STOPPED
4         2 INOP, PSTOPPED
5         1 INOP, STOPPED
5         2 INOP, STOPPED
6         1 INOP, STOPPED
**LTERM*****
LU6A      STOPPED
VA01      QLOCK
**CLASS*****
2         STOPPED
**RTCODE*****
STATUS UNRESTRICTED
**LINK*****
1         PSTOPPED,IDLE,NOTOPEN
3         PSTOPPED,IDLE,COLD
4         PSTOPPED,IDLE,N/A
5         PSTOPPED,IDLE,NOTOPEN
**MSNAME*****
STATUS UNRESTRICTED
**USER*****
STATUS UNRESTRICTED
**LUNAME**TPNAME****
STATUS UNRESTRICTED
*92198/132223*

```

Example 2 for /DISPLAY STATUS command

Entry ET:

/DISPLAY STATUS DATABASE

Response ET:

```

**DATABASE**
DEDB01
-AREA01    STOPPED
DEDB02
-AREA02    NOTOPEN
-AREA03
ADS03      PRE-OPEN FAILED
DEDB03
-AREA05    STOPPED,NOTOPEN
ADS03      PRE-OPEN FAILED
ADS08      UNAVAILABLE
DEDB04     STOPPED
DEDB05     NOTOPEN,NOTINIT
-AREA01    STOPPED
-AREA08    STOPPED,NOTOPEN
DEDB06     STOPPED
-AREA03
ADS03      UNAVAILABLE
DEDB0777  NOTOPEN,LOCK

```

```

-AREA0555 STOPPED,NOTOPEN
ADS03333 SEVERE ERROR
ADS08888 UNAVAILABLE
*90263/092128*

```

Example 3 for /DISPLAY STATUS command

Entry ET:

```
/DISPLAY STATUS LUNAME
```

Response ET:

```

**LUNAME/TPNAME**
LU2
-TPN2          STO
LU5
-TPNAME1234567890+ STO
1234567890
LU3            STO-INP
LU4            STO-OUTP
LU1            STO-INP, STO-OUTP
*95229/155100*

```

Entry ET:

```
/DISPLAY STATUS LUNAME
```

Response ET:

```

**LUNAME/TPNAME**
LU2            STO-INP, STO-OUTP
-TPN2          STO
LU5            STO-INP, STO-OUTP
-TPN5          STO
-TPNAME1234567890+ STO
1234567890
LU3            STO-INP, STO-OUTP
LU4            STO-INP, STO-OUTP
LU1            STO-INP, STO-OUTP
FUTURE INPUT: STO
FUTURE OUTPUT: STO
*95229/155146*

```

Example 4 for /DISPLAY STATUS command

Entry ET:

```
/DISPLAY STATUS NODE
```

Response ET:

```

**NODE*****
NLUTP6S DISCONNECTED
NLU1     STOPPED, DISCONNECTED
NLUTP6P
-A        HELD
-N/A      STOPPED, DISCONNECTED
-E        FORCE
-C
*90231/040059*

```

Entry ET:

```
/DISPLAY STATUS RTCODE
```

Response ET:

```

**RTCODE***
DCL          STOPPED
EMHCOBOL     STOPPED
EMHPLI       STOPPED
EMHTX        STOPPED
TXCDBP04     STOPPED
TXCDBP05     STOPPED
TXCDBP06     STOPPED
*91068/114900*

```

Example 5 for /DISPLAY STATUS command

Entry ET:

```
/DISPLAY STATUS TMEMBER
```

Response ET:

```

**TMEMBER/TPIPE**
CLIENT1
-TPIPE1          ST0
*94168/095431*

```

Example 6 for /DISPLAY STATUS command

Entry ET:

```
/DISPLAY STATUS TRANSACTION
```

Response ET:

```

**TRAN****PSBNAME
TPN4      DFSCPIC  PUR
TPN5      DFSCPIC  STOPPED
TPN6      DFSCPIC  I/O PREVEN
TPN7      DFSCPIC  USTOPPED
TRAN1     LU2PGM1  PSTOPPED
TRAN2     LU2PGM2  PSTOPPED
*90332/114253*

```

Example 7 for /DISPLAY STATUS command

Entry ET:

```
/DISPLAY STATUS TMEMBER
```

Response ET:

```

**TMEMBER/TPIPE**
HWS001          SM01
-TPIPE1          ST0
-TPIPE3          ST0
SM01            SM01
-TPIPE1          ST0
-TPIPE2          ST0
-TPIPE3          ST0
HWS003
-TPIPE1          ST0
*05049/095431*

```

Explanation: HWS001 is a regular member whose hold queue output is managed by super member SM01. HWS001 has two transaction pipes that are stopped. SM01 is a super member with three transaction pipes that are stopped. HWS003 also has a stopped transaction pipe. HWS003 is a regular member that manages its own hold queue output.

Related reference:

“Status and attributes for the /DISPLAY command” on page 357

- ➡ QUERY DB command (Commands)
- ➡ QUERY LTERM command (Commands)
- ➡ QUERY NODE command (Commands)
- ➡ QUERY PGM command (Commands)
- ➡ QUERY RTC command (Commands)
- ➡ QUERY TRAN command (Commands)
- ➡ QUERY USER command (Commands)

/DISPLAY STRUCTURE command

Use the /DISPLAY STRUCTURE command to display the status of one or more coupling facility list queue structures used by IMS. This command displays the queue structure name, type, and status.

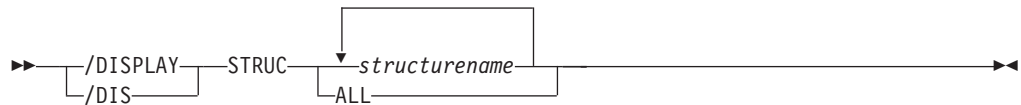
Subsections:

- “Environment”
- “Syntax”
- “Usage notes”
- “Output fields”
- “Examples” on page 536

Environment

The /DISPLAY STRUCTURE command is valid in DB/DC and DCCTL environments.

Syntax



Usage notes

This command is valid only in a shared-queues environment.

Output fields

The following output fields are displayed for the /DISPLAY STRUCTURE command:

STATUS

The status conditions that can be displayed. Possible status values are:

AVAILABLE

The structure is available to be used by IMS.

CONNECTED

IMS is connected to the structure.

DISCONNECTED

IMS is not connected to the structure.

IN-OVERFLOW

The structure is in overflow mode.

REBLD-INPROG

A rebuild is in progress for the structure.

SHUTDOWN-STRCHKPT

A structure checkpoint will be taken by CQS for the structure during a CQS normal shutdown.

STRCHKPT-INPROG

A structure checkpoint is in progress for the structure.

UNAVAILABLE

The structure is not available to be used by IMS.

STRUCTURE NAME

Indicates the name of the list structure.

TYPE Returns the list structure type, which can be either of the following:

MSGQ

Indicates a MSGQ primary or overflow structure.

EMHQ

Indicates an EMHQ primary or overflow structure.

Examples

Entry ET:

```
/DISPLAY STRUCTURE ALL
```

Response ET:

STRUCTURE NAME	TYPE	STATUS
MSGQ1	MSGQ	CONNECTED, AVAILABLE, SHUTDOWN-STRCHKPT
EMHQ1	EMHQ	CONNECTED, AVAILABLE, IN-OVERFLOW
95200/170817		

Entry ET:

```
/DISPLAY STRUCTURE MSGQ111 EMHQ1
```

Response ET:

STRUCTURE NAME	TYPE	STATUS
MSGQ111	IS	INVALID
EMHQ1	EMHQ	DISCONNECTED
*95201/121800		

/DISPLAY SUBSYS command

Use the /DISPLAY SUBSYS command to display information about an external subsystem that is not a coordinator controller (CCTL) subsystem.

Subsections:

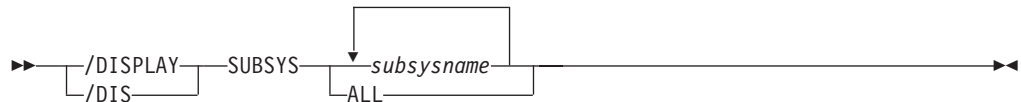
- “Environment” on page 537
- “Syntax” on page 537

- “Usage notes”
- “Output fields”
- “Examples” on page 539

Environment

The `/DISPLAY SUBSYS` command is valid in DB/DC, DBCTL, and DCCTL environments.

Syntax



Usage notes

When used without the OASN keyword, the SUBSYS keyword displays the status of the connection between IMS and the external subsystem (not CCTL), as well as all application programs communicating with the external subsystem (not CCTL). The OASN keyword is used with the SUBSYS keyword to display all OASNs associated with the specified external subsystem. The external subsystem is not a CCTL subsystem. See “`/DISPLAY OASN SUBSYS` command” on page 473 for more information.

Output fields

Subsystem status terms can be generated by the `/DISPLAY SUBSYS` command. Dependent region status terms can be generated by the `/DISPLAY SUBSYS` or `/DISPLAY ACTIVE` command.

Subsystem status terms

CONN

The IMS control region has successfully completed a host system IDENTIFY request to the external subsystem, making the two subsystems aware of each other's existence so they can begin a normal dialog.

NOT CONN

The external subsystem is in an idle state; that is, the external subsystem has not been the object of the `/STOP SUBSYS` command, or the external subsystem initialization exit indicated not to issue the IDENTIFY REQUEST (connect)

CONN IN PROGRESS

The connection process for the specified subsystem is in progress

STOPPED

The specified subsystem has been successfully stopped using the `/STOP SUBSYS` command and all region connections to the specified external subsystem have been terminated

STOP IN PROGRESS

The `/STOP SUBSYS` command is in progress. Before it successfully completes, all active connections to the specified subsystem from all IMS regions must be quiesced.

TERM IN PROGRESS

An internal termination of the subsystem connection is underway. This type of termination was instigated by IMS abnormal condition processing, an external subsystem exit, or the external subsystem (the error message The exact reason). IMS shutdown will not cause this condition.

INVALID SUBSYSTEM NAME = XXXX

The specified subsystem name has not been defined in the IMS subsystem PROCLIB member

SUBSYSTEM XXXX NOT DEFINED BUT RECOVERY OUTSTANDING

The specified subsystem name has not been defined to IMS in the external subsystem PROCLIB member, but IMS still has outstanding recovery elements from a previous execution when the indicated subsystem was known

The command recognition character will also be displayed for the external subsystem.

START-AF

The specified subsystem that is attached by the DB2 z/OS Resource Recovery Services (RRS) attachment facility has been successfully started by using the /START command, and dependent region connections to this system will be permitted.

STOP-AF

The specified subsystem which was attached by the DB2 z/OS Resource Recovery Services (RRS) attachment facility has been successfully stopped by using the /STOP command, and no more dependent region connections to this system will be permitted.

Dependent region status terms**CONN**

An IMS dependent region has successfully completed a host system IDENTIFY request to the external subsystem as a result of an application having been scheduled into the dependent region. In an MPP, the application does not have to issue an external subsystem call to cause a connection.

CONN, ACTIVE

An IMS application program has established communication with an external subsystem (for example, has issued at least one external subsystem call). At this point a thread exists between the IMS application program and the external subsystem.

The absence of a PSB name for a thread indicates that a connection to the external subsystem exists but an application program is not currently occupying the region. The presence or absence of an LTERM name indicates whether a region is message driven.

LTERM is the name of the terminal. LUNAME is displayed in place of LTERM when the originating terminal is LU6.2 or OTMA unless the LUNAME information is in transition, in which case, the literal UNKNOWN will be displayed.

Examples

The following are examples of the /DISPLAY SUBSYS command.

Example 1 for /DISPLAY SUBSYS command

Entry ET:

```
/DISPLAY SUBSYS ALL
```

Response ET:

```
SUBSYS  CRC REGID PROGRAM  LTERM  STATUS
SSTR    ?
          1 DDLTLM17 PTERM01 CONN, ACTIVE
          2 DDLTLM06 PTERM02 CONN
*89202/065933*
```

Example 2 for /DISPLAY SUBSYS command

Entry ET:

```
/DISPLAY SUBSYS XXX1 XXX3
```

Response ET:

```
SUBSYS  CRC REGID PROGRAM  LTERM  STATUS
XXX1    1
XXX3    3
*90083/154241*
```

/DISPLAY SYSID TRANSACTION command

Use the /DISPLAY SYSID TRANSACTION command to display the IDs of the local and remote systems associated with the transaction. Values displayed for the local and remote IDs can range from 1 to 2036.

Subsections:

- “Environment”
- “Syntax”
- “Examples” on page 540

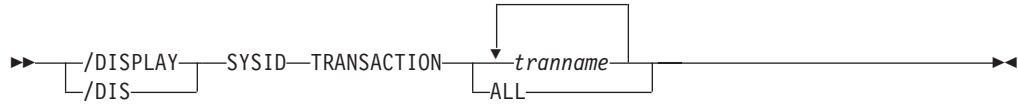
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 220. Valid environments for the /DISPLAY SYSID TRANSACTION command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DISPLAY	X	X	X
SYSID	X		X
TRANSACTION	X		X

Syntax



Examples

Entry ET:

```
/DISPLAY SYSID TRANSACTION SKS1 SKS2 SKS3 SKS4
```

Response ET:

TRAN	PSBNAME	RID	LID
SKS1	DFSDDL1	21	11
SKS2	DFSDDL2	NA	11
SKS3	DFSDDL3	NA	11
SKS4	DFSDDL4	32	12

89184/142436

/DISPLAY TIMEOVER command

Use the /DISPLAY TIMEOVER command to display all nodes that have been waiting for a response for a longer time than specified in the /TRACE SET ON TIMEOUT command.

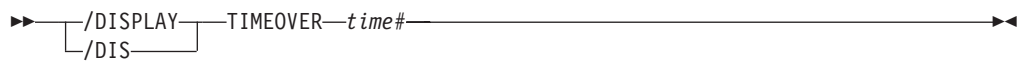
Subsections:

- "Environment"
- "Syntax"
- "Usage notes"
- "Examples" on page 541

Environment

The /DISPLAY TIMEOVER command is valid in DB/DC and DCCTL environments.

Syntax



Keywords

The following keywords can be specified for the /DISPLAY TIMEOVER command:

time#

Specifies the time period in minutes. This parameter is required. The number of minutes must be between 1 and 60.

Usage notes

If no nodes are found that have been waiting longer than *time#* minutes, then the message NO NODE WITH TIMEOVER time# FOUND is displayed. An error message is displayed and the command is rejected if the timeout trace facility failed during

IMS initialization. User names are displayed for ISC nodes, but non-ISC nodes show N/A.

Examples

Entry ET:

```
/DISPLAY TIMEOVER 10
```

Response ET:

NODE	USER	TYPE	LAST OUTPUT	START TIME
SLU1A	N/A	SLU1	88118/095914	
LU6NDPC	LU6SPC	LUT6	88118/095921	
SLU1C	N/A	SLU1	88118/095929	
SLU1B	N/A	SLU1	88118/095937	
SLU1D	N/A	SLU1	88118/095943	
LU6NDPA	LU6SPA	LUT6	88118/095949	
88118/101150				

/DISPLAY TMEMBER command

Use the /DISPLAY TMEMBER command to display the current target member status for IMS Open Transaction Manager Access (OTMA) clients and servers.

Subsections:

- “Environment”
- “Syntax”
- “Keywords” on page 542
- “Usage notes” on page 543
- “Output fields” on page 543
- “Examples” on page 547

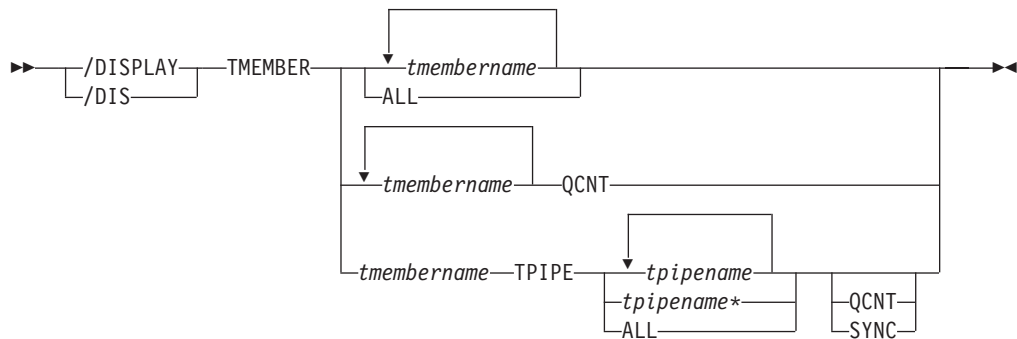
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 221. Valid environments for the /DISPLAY TMEMBER command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DISPLAY	X	X	X
QCNT	X		X
TMEMBER	X		X
TPIPE	X		X

Syntax



Keywords

The following keywords can be specified for the /DISPLAY TMEMBER command.

QCNT

The /DISPLAY TMEMBER command with the QCNT parameter specifies that global queue count information is to be displayed. If the member specified is a super member, global queue count information is displayed for the super member. If the member specified is a regular member whose hold queue output is managed by a super member, the name of the super member is displayed along with the global queue count information for the regular member.

This count represents the message counts of messages that can be processed by the IMS system where the command is issued. This count includes messages that can be processed by any IMS system (messages with no affinity), plus messages that can be processed by the IMS system where the command is issued (messages with an affinity to the IMS system that issued the command).

The /DISPLAY TMEMBER QCNT form of the command is valid only in a shared-queues environment.

TPIPE

The /DISPLAY TMEMBER TPIPE command can be issued to display transaction pipe status for a member. If the member specified is a super member, transaction pipe status is displayed for the super member. If the member specified is a regular member whose hold queue output is managed by a super member, the name of the super member is displayed along with the queue count information.

The tpipe name can be ended with a generic character (*). This generic form of tpipe name can also be used with QCNT or SYNC keywords. The tpipe name with a generic character cannot be mixed with other tpipe names. The valid formats for using a tpipe name with the generic character are:

```

/DIS TMEMBER membername TPIPE tpipe name*
/DIS TMEMBER membername TPIPE tpipe name* QCNT
/DIS TMEMBER membername TPIPE tpipe name* SYNC
  
```

QCNT

The /DISPLAY TMEMBER TPIPE command with the QCNT parameter specifies that global queue count information is to be displayed. If the member specified is a super member, global queue count information is displayed for the transaction pipes associated with the super member. If the member specified is a regular member whose hold queue output is managed by a super member, the name of the super member is displayed along with the global queue count information.

The /DISPLAY TMEMBER TPIPE QCNT form of the command is valid only in a shared-queues environment.

SYNC

The /DISPLAY TMEMBER TPIPE SYNC command displays:

- The number of active synchronous callout messages
- The number of synchronous callout messages waiting for response
- The resume tpipe option
- The resume tpipe mode
- The tpipe status

The /DISPLAY TMEMBER TPIPE SYNC command can be considered as a superset of the /DISPLAY TMEMBER TPIPE command.

Usage notes

The /DISPLAY TMEMBER command includes four variations: /DISPLAY TMEMBER QCNT, /DISPLAY TMEMBER TPIPE, /DISPLAY TMEMBER TPIPE QCNT, and /DISPLAY TMEMBER TPIPE SYNC.

In a shared-queues environment, use the QCNT keyword to obtain the current message queue counts on the shared queues structure. The local queue counts (ENQCT, DEQCT, and QCT) value that is returned on this command when the QCNT keyword is not specified represents the messages being processed by the IMS system where this command is issued. Do not use local queue counts for queue evaluation purposes.

Output fields

The following output fields are displayed for the /DISPLAY TMEMBER command:

DEQCT

Total number of messages that are dequeued from the OTMA tpipe for this member. If the OTMA hold queue is used for a client that is capable of the OTMA hold queue, such as IMS Connect, the number of the messages in the hold queue of this tpipe is also included. In a shared-queues environment, this field shows only the messages dequeued for the local subsystem.

DRUEXIT

The name of any OTMA Destination Resolution exit routine associated with the tmember.

ENQCT

Total number of messages that are enqueued on the OTMA tpipe for this member. If the OTMA hold queue is used for a client that is capable of the OTMA hold queue, such as IMS Connect, the number of the messages in the hold queue of this tpipe is also included. In a shared-queues environment, this field shows only the messages enqueued for the local subsystem.

GROUP/MEMBER

Each member in each z/OS cross-system coupling facility (XCF) group.

When you issue /DISPLAY TMEMBER ALL, the server is always the first member displayed.

INPT The maximum concurrent input message count for this member that can be waiting at the same time to be processed. If the YTIBs reach the INPT

value, an OTMA FLOOD condition exists and the subsequent input messages from the member will be rejected.

MAXTP

The maximum TPIPE limit that is specified in the OTMA client descriptor. If the MAXTP parameter is specified for DFSOTMA in the OTMA client descriptor, the MAXTP limit is displayed for the OTMA server. If there are one or more OTMA clients with the MAXTP limit defined and MAXTP is not specified for DFSOTMA, the highest limit defined among the members is displayed for the OTMA server.

MODE

The resume tpipe mode, which can be one of the following:

- S - Synchronous callout messages
- B - Both asynchronous messages and synchronous callout messages
- A - Asynchronous messages

NO-COT

The current number of ICAL messages received for this tpipe. If the number is greater than or equal to 65535, it will be reset to 1.

OPT The resume tpipe option, which can be one of the following:

- N - No auto flow of messages. When a client issues a resume tpipe call and no message is present, the resume tpipe call ends.
- S - Single message. When a client issues a resume tpipe call, if multiple messages are present, only one message is retrieved. If no message is present, the call ends.
- A - Auto flow of messages. The client retrieves one message at a time. If no messages exist in the tpipe, the client waits for subsequent messages from the hold queue.
- W - Single message with wait option. The client will retrieve only one message. If there are no messages in the hold queue, the client will wait until a message arrives, then the call ends. Only one message is retrieved regardless of how many messages are in the hold queue.

This option is specified in the IRM_F5 field of the IRM prefix in the messages that are sent to IMS Connect.

QCT Total number of messages that are still in the queue for OTMA tpipe for this member. If the OTMA hold queue is used for a client that is capable of the OTMA hold queue, such as IMS Connect, the number of the messages in the hold queue of this tpipe is also included. In a shared-queues environment, this field shows only the messages enqueued for the local subsystem.

RTQ The number of queued resume tpipe requests to be processed. This field is displayed only for the command issued with the SYNC keyword.

SECURITY

The security status for each member or server

The security status can be one of the following:

- NONE
- CHECK
- FULL
- PROFILE

SYNCOT

The number of active synchronous callout messages.

TIB The number of current input messages processed by OTMA for this member. This number will be incremented when a new transaction is received, and it will be decremented after OTMA enqueues a CM0 input transaction or OTMA completes a CM1 transaction. There are cases where orphaned transaction instance blocks (YTIBs) are created. These YTIBs will not be deleted until IMS is cold started.

TPCNT

The current TPIPE count for each OTMA client and IMS server, regardless of whether the MAXTP keyword is specified in the OTMA client descriptor.

T/O The timeout value for OTMA send-then-commit message responses.

USER-STATUS

The user status for each member.

The status can be one of the following:

- ACCEPT TRAFFIC
- DISCONNECTED
- IN SLOWDOWN
- MAX TPIPE: MAX TPIPE indicates that the OTMA member's TPIPE count has reached the limit set. This status is cleared when the global TPIPE count falls below 50%.
- SERVER
- SUPER MEMBER
- WAIT BID
- WAIT RESPONSE

If the member specified is a regular member whose member name is displayed as part of the command output. If the member specified is a super member, the character string 'SUPER MEMBER' is displayed for the user status. Since a super member does not interface with XCF, the XCF-STATUS field is left blank. Since super members do not process input messages, OTMA security authorization is not performed.

When MAX TPIPE is displayed for the OTMA server, it means that the MAXTP limit for DFSOTMA was specified in the OTMA client descriptor and that the limit has been reached. Any of the new TPIPE creation requests for any OTMA members is rejected until the TPIPE count in the system is dropped down to 50% or an user-specified level. However, OTMA messages that use existing TPIPEs will continue to work. IMS automatically attempts to remove TPIPEs after they have been idle for three consecutive system checkpoints. You can issue /CHECKPOINT commands three times to force the TPIPE cleanup.

XCF-STATUS

The XCF status for each member.

The status can be one of the following:

- ACTIVE
- CREATED
- FAILED
- FLOOD
- NOT DEFINED
- QUIESCED

- STO-INPUT
- UNKNOWN

If the server leaves the XCF group (for example, because of a /STOP OTMA command), then the XCF status is displayed as NOT DEFINED.

The output from the /DISPLAY TMEMBER QCNT or /DISPLAY TMEMBER TPIPE QCNT command includes the following:

AFFINITY

The IMSID (or the first 7 bytes of the RSENAME, if XRF capable) of the IMS to which the output messages have affinity.

GBLQCT

The total number of OTMA output messages on the global queue. The global queue count includes messages that were placed on the global queue before the latest cold start of the owning IMS. Synchronous and asynchronous OTMA output messages are included in the global queue count. Messages on an OTMA asynchronous hold queue for IMS Connect are also included in the global queue count.

MEMBER/TPIPE

OTMA member name. If the TPIPE keyword is specified, the transaction pipe name is also displayed. The first line displays the OTMA member name. The second and subsequent lines display the names of the transaction pipes associated with the OTMA member.

One of the following status terms is displayed for the /DISPLAY TMEMBER command specified with the TPIPE keyword:

DQF Dequeue request for OTMA REPresynch command failed.

FLOOD

Input from this tmember is suppressed because of a message flood condition.

INPCT

The current number of input messages received for this tpipe.

REP IMS is waiting for an OTMA REPresynch command from the client.

REQ IMS is sending an OTMA REQresynch command to the client.

RSF Reset request failed for an OTMA REPresynch command.

STO The transaction pipe is stopped.

STO-INPUT

Input from this tmember is stopped.

SYN The transaction pipe is being synchronized.

TBR IMS is waiting for an OTMA TBResynch command from the client.

TMP The transaction pipe is temporary.

TRA The transaction pipe is being traced.

WAIT_A

The transaction pipe is waiting for an ACK or NAK for a commit-then-send (CM0) output response.

WAIT_H

The transaction pipe is waiting for an ACK or NAK for a commit-then-send (CM0) output response from the asynchronous hold queue.

WAIT_S

The transaction pipe is waiting for an ACK or NAK for a synchronous callout message.

Examples

The following are examples of the /DISPLAY TMEMBER command.

Example 1 for /DISPLAY TMEMBER command

Entry ET:

```
/DISPLAY TMEMBER ALL
```

Response ET:

GROUP/MEMBER	XCF-STATUS DRUEXIT	USER-STATUS T/O	SECURITY	TIB	INPT	SMEM
HARRY						
IMS1	ACTIVE	SERVER	FULL			
HWS001	ACTIVE	ACCEPT TRAFFIC	FULL	0	0	SM01
HWS001	HWSYDRU0	5				
SM01		SUPER MEMBER				SM01
MQS001	ACTIVE	ACCEPT TRAFFIC	FULL	0	0	
MQS001	MQSYDRU0	10				

Explanation: The /DISPLAY TMEMBER ALL command can be issued to display the current status of IMS server and members. This command is functionally equivalent to the /DIS OTMA command. The member information is displayed in random order. In the above example, HARRY is the XCF group name for IMS and its OTMA members. IMS1 is the server running with OTMA activated. HWS001 and MQS001 are OTMA client members. The SM01 is an OTMA super member for asynchronous output messages. Each OTMA member has two-line status information

Example 2 for /DISPLAY TMEMBER command

Entry ET:

```
/DISPLAY TMEMBER MQS001
```

Response ET:

GROUP/MEMBER	XCF-STATUS DRUEXIT	USER-STATUS T/O	SECURITY	TIB	INPT	SMEM
MQS001	ACTIVE	ACCEPT TRAFFIC	FULL	0	0	
MQS001	MQSYDRU0	10				

Explanation: In the above example, MQS001 is an OTMA member without using super member function. There are two-line status information for the MQS001.

Example 3 for /DISPLAY TMEMBER command

Entry ET:

```
/DISPLAY TMEMBER HWS001 HWS002 HWS003
```

Response ET:

GROUP/MEMBER	XCF-STATUS DRUEXIT	USER-STATUS T/O	SECURITY	TIB	INPT	SMEM
HWS001	ACTIVE	ACCEPT TRAFFIC	FULL	0	0	SM01
HWS001	HWSYDRU0	5				
HWS002	ACTIVE	ACCEPT TRAFFIC	FULL	0	0	SM01
HWS002	HWSYDRU1	5				
HWS003	ACTIVE	ACCEPT TRAFFIC	FULL	0	0	
HWS003	HWSYDRU2	5				

Explanation: In the above example, HWS001, HWS002 and HWS003 are all regular OTMA members. OTMA hold queue output for HWS001 and HWS002 is managed by super member SM01. HWS003 manages its own OTMA hold queue output without using the super member.

Example 4 for /DISPLAY TMEMBER command

Entry ET:

/DISPLAY TMEMBER HWS001 SM01

Response ET:

GROUP/MEMBER	XCF-STATUS	USER-STATUS	SECURITY	TIB	INPT	SMEM
HWS001	ACTIVE	ACCEPT TRAFFIC	FULL	0	0	SM01
SM01		SUPER MEMBER				SM01

Explanation: HWS001 is a regular member whose hold queue output is managed by super member SM01. SM01 is a super member. The XCF-STATUS field and the SECURITY field are left blank. The super member name is repeated in the SMEM field.

Example 5 for /DISPLAY TMEMBER command

Entry ET:

/DISPLAY TMEMBER CLIENT1 TPIPE ALL

Response ET:

MEMBER/TPIPE	ENQCT	DEQCT	QCT	STATUS
CLIENT1				TRA
-TPIPE1	0	0	0	TRA,STO
-TPIPE2	2	2	0	TRA,STO
-TPIPE3	1	0	1	TRA,STO

94165/170756

Example 6 for /DISPLAY TMEMBER command

Entry ET:

/DIS TMEMBER CLIENT1 QCNT

Response ET:

MEMBER/TPIPE	GBLQCT	AFFINITY
CLIENT1	34	SYS3

03203/124035

Example 7 for /DISPLAY TMEMBER command

Entry ET:

/DIS TMEMBER CLIENT1 TPIPE TPIPE3 TPIPE1 QCNT

Response ET:

MEMBER/TPIPE	GBLQCT	AFFINITY
CLIENT1		
-TPIPE3	16	SYS3
-TPIPE1	8	SYS3

03202/143253

Example 8 for /DISPLAY TMEMBER command

Entry ET:

/DIS TMEMBER CLIENT1 TPIPE ALL QCNT

Response ET:

MEMBER/TPIPE	GBLQCT	AFFINITY
CLIENT1		
-TPIPE3	16	SYS3
-TPIPE2	16	SYS3
-TPIPE1	2	SYS3

03202/143253

Example 9 for /DISPLAY TMEMBER command

Entry ET:

/DIS TMEMBER HWS001 QCNT

Response ET:

MEMBER/TPIPE	GBLQCT	AFFINITY	SMEM
HWS001	1	SYS3	SM01

03203/124035

Explanation: HWS001 is a regular member whose hold queue output is managed by super member SM01. There is one CM0 output message on the OTMA output queue for member HWS001. That message has affinity to SYS3. The /DIS TMEMBER QCNT command can be issued with the super member name (SM01) specified as the member name to determine the number of messages on the super member's output queue.

Example 10 for /DISPLAY TMEMBER command

Entry ET:

/DIS TMEMBER SM01 QCNT

Response ET:

MEMBER/TPIPE	GBLQCT	AFFINITY	SMEM
SM01	46		SM01

03203/124035

Explanation: SM01 is a super member. There are 46 CM0 output messages on the output queue for SM01. These messages do not have affinity to any IMS subsystem. Any member whose hold queue output is managed by SM01 can retrieve the output messages.

Example 11 for /DISPLAY TMEMBER command

Entry ET:

/DISPLAY TMEMBER HWS003 TPIPE TPIPE1

Response ET:

MEMBER/TPIPE	ENQCT	DEQCT	QCT	STATUS	SMEM
HWS003					
-TPIPE1	3	2	1	TRA	

Explanation: HWS003 is a regular member that manages its own hold queue output. There is one output message queued for TPIPE1. This message is either on the I/O PCB output queue or the hold queue.

Example 12 for /DISPLAY TMEMBER command

Entry ET:

/DISPLAY TMEMBER HWS001 TPIPE TPIPE1

Response ET:

MEMBER/TPIPE	ENQCT	DEQCT	QCT	STATUS	SMEM
HWS001					SM01
-TPIPE1	0	0	0	TRA	

Explanation: HWS001 is a regular member whose hold queue output is managed by super member SM01. There are no output messages queued to HWS001, but there might be some messages queued to the hold queue of super member SM01.

Example 13 for /DISPLAY TMEMBER command

Entry ET:

/DISPLAY TMEMBER SM01 TPIPE TPIPE1 TPIPE2

Response ET:

MEMBER/TPIPE	ENQCT	DEQCT	QCT	STATUS	SMEM
SM01					SM01
-TPIPE1	3	2	1	TRA	
-TPIPE2	2	2	0	TRA	

Explanation: SM01 is a super member with transaction pipes defined for TPIPE1 and TPIPE2. Local queue count information is displayed for TPIPE1 and TPIPE2. There is one output message on the hold queue for TPIPE1.

Example 14 for /DISPLAY TMEMBER command

Entry ET:

/DIS TMEMBER SM01 TPIPE ALL QCNT

Response ET:

MEMBER/TPIPE	GBLQCT	AFFINITY	SMEM
SM01			SM01
-TPIPE1	2		
-TPIPE2	5		
-TPIPE3	16		
03202/143253			

Explanation: SM01 is a super member. There are 23 CM0 output messages on the output queues for SM01. Two messages are queued for TPIPE1, five for TPIPE2 and sixteen for TPIPE3. These messages do not have affinity to any IMS subsystem. Any member whose hold queue output is managed by super member SM01 can retrieve the output messages.

Example 15 for /DISPLAY TMEMBER command

Entry ET:

```
/DIS TMEMBER HWS1 TPIPE ALL SYNC
```

Response ET:

(screen 1)

MMR/TPIP	ENQCT	DEQCT	QCT	INPCT	OPT	MODE
HWS1						
-TPIPE1	0	0	0	0	W	S

(scrolled to the right, screen 2)

SYNCOT	NO-COT	RTQ	STATUS	SMEM	IMS1
1	1	1	WAIT_S		IMS1

Explanation: HWS1 is a regular member with a transaction pipe defined for TPIPE1. The resume tpipe call is to retrieve only synchronous callout messages from the hold queue ("S" for MODE). The request message (from the hold queue) has been sent to the client, IMS Connect, which in turn will send the message to the application client as a result of the resume tpipe call with MODE of "S" and OPT of "W". This accounts for the count of 1 under the column heading SYNCOT. The count of 1 under the column heading NO-COT indicates that the accumulated ICAL count for this OTMA tpipe is 1. Because OTMA is waiting for ACK or NAK, WAIT_S is displayed under column heading STATUS.

To extend the processing, assuming that the client application sends an ACK, the WAIT_S under column heading STATUS will no longer be displayed, and the count of 1 under column heading NO-COT will still be displayed. This output indicates that OTMA has processed one ICAL message for the IMS callout application. Once the OTMA has received the message response and passed it back to the IMS callout application, SYNCOT will show 0, and NO-COT will still show 1. And, when OTMA has completed processing the message response, the resume tpipe call ends, and the output display should show OPT='-', MODE='-', SYNCOT=0, NO-COT=1, and STATUS=' '.

The number of queued tpipe requests is 1.

Entry ET:

```
/DISPLAY TMEMBER HWS1 TPIPE TPIPE1
```

Response ET:

MEMBER/TPIPE	ENQCT	DEQCT	QCT	INPCT	STATUS	SMEM	IMS1
HWS1							
-TPIPE1	0	0	0	0	WAIT_S		IMS1

Explanation: TPIPE1 is waiting for a NAK or ACK for a synchronous callout message.

Example 16 for /DISPLAY TMEMBER command

Entry ET:

```
/DISPLAY TMEMBER HWS1
```

Response ET:

GROUP/MEMBER INPT SMEM	XCF-STATUS	USER-STATUS	SECURITY	TIB
	DRUEXIT	T/O TPCNT MAXTP		
XCFGRP1				
-HWS1	ACTIVE	ACCEPT TRAFFIC	FULL	0
5000				
-HWS1		200 500 0		

Explanation: In this example, the TPCNT field indicates that the current TPIPE count for member HWS1 is 500 and that there is no MAX TPIPE limit set for this member in the OTMA client descriptor.

Example 17 for /DISPLAY TMEMBER command

Entry ET:
/DISPLAY TMEMBER HWS2

Response ET:

GROUP/MEMBER INPT SMEM	XCF-STATUS	USER-STATUS	SECURITY	TIB
	DRUEXIT	T/O TPCNT MAXTP		
XCFGRP1				
-HWS2	ACTIVE	ACCEPT TRAFFIC	FULL	0
5000				
-HWS2		200 500 10000		

Explanation: In this example, the TPCNT field indicates that the current TPIPE count for member HWS2 is 500 and that there is a MAX TPIPE limit of 10000 set for this member.

Related reference:
 “Status and attributes for the /DISPLAY command” on page 357
 “/DISPLAY OTMA command” on page 476

/DISPLAY TRACE command

Use the /DISPLAY TRACE command to display the status and options of the current IMS traces. TRACE must be followed by one or more keywords or by the ALL parameter. There is no default.

- Subsections:
- “Environment”
 - “Syntax” on page 553
 - “Keywords” on page 553
 - “Usage notes” on page 554
 - “Equivalent IMS type-2 commands” on page 554
 - “Output fields” on page 554
 - “Examples” on page 555

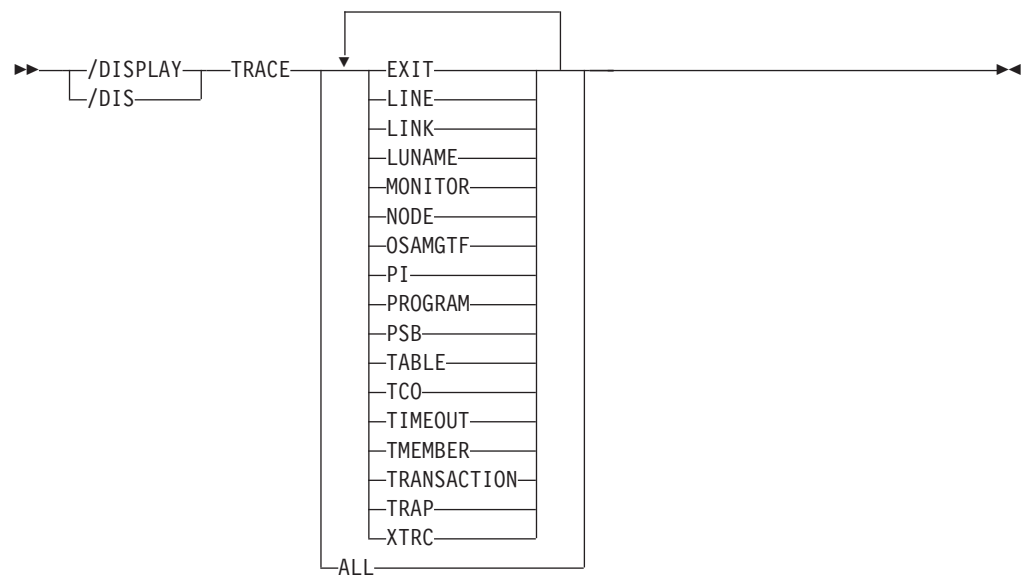
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 222. Valid environments for the /DISPLAY TRACE command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DISPLAY	X	X	X
EXIT	X		X
LINE	X		X
LINK	X		X
LUNAME	X		X
MONITOR	X	X	X
NODE	X		X
OSAMGTF	X	X	
PI	X	X	
PROGRAM	X	X	X
PSB	X	X	X
TABLE	X	X	X
TCO	X	X	X
TIMEOUT	X		X
TMEMBER	X		X
TRACE	X	X	X
TRANSACTION	X		X
TRAP	X		X
XTRC	X	X	X

Syntax



Keywords

The following keywords are valid for the /DISPLAY TRACE command:

ALL

In a DBCTL system, ALL displays only DB-related traces. It does not show DC-related traces such as LINE, LUNAME, LINK, NODE, TRANSACTION, TRAP, or TIMEOUT.

In a DCCTL system, ALL displays only DC-related traces. It does not show DB-related traces such as OSAMGTF or PI.

For a DB/DC RSR tracking subsystem, ALL displays only LINE, NODE, PSB, TABLE, and TRAP information.

The display shows which external data set is active and whether the OLDS is being traced for trace logging. The command also indicates whether XTRC is usable and the status of the XTRC data sets.

For other keywords, see the descriptions for corresponding output fields under "Output fields."

Usage notes

The /DISPLAY TRACE ALL and /DISPLAY TRACE TMEMBER commands can be used to display IMS OTMA transaction pipes that are currently being traced for a OTMA client. The command output includes transaction pipes that are defined to super members. The super member name is displayed if the member is a super member or if the member is a regular member whose hold queue output is managed by a super member.

Equivalent IMS type-2 commands

The following table shows variations of the /DISPLAY TRACE command and the IMS type-2 commands that perform similar functions.

Table 223. Type-2 equivalents for the /DISPLAY TRACE command

Task	/DISPLAY TRACE command	Similar IMS type-2 command
Displays nodes with trace status.	/DISPLAY TRACE NODE	QUERY NODE STATUS(TRACE)

Output fields

The following output fields are displayed by the /DISPLAY TRACE command:

EXIT Displays user exit tracing. Currently, only tracing for the DFSMSCE0 user exit is supported. The following table lists the display exit entry points.

Table 224. Display exit entry points for tracing

LRDI	LRIN	LRLT	LRTR
PRCH	PRGU	PRIS	TR62
TRBT	TROT	TRVT	

Note: The display indicates the status of each exit entry point. If the status is ON, the trace is active for the selected entry point. If the status is OFF, the trace is inactive for the selected entry point. If the status is N/A, the specified DFSMSCE0 trace entry point does not exist in the IMS.

LINE The relative line number and line type of all traced lines.

LINK The link number and link partner for all logical links.

LUNAME

All LU 6.2 application programs that are being traced.

OSAMGTF

Whether the OSAM Buffer Trace facility is active or inactive.

MONITOR

The status of the IMS Monitor, and if active, the options that are specified for it.

NODE

The VTAM node name and node type. If the node is defined for a parallel session, each traced user of that node is displayed. If the users are not active, an N/A is displayed.

PI

The status of the program isolation trace, and if active, the status of the options and the volume level.

PROGRAM

The traced program name.

PSB

The PSB name and trace option for each traced PSB.

TABLE

The trace status, logging status, total number of entries in each trace table, and the volume level.

For a DL/I trace, the volume level is displayed in the subcategories.

For an RSR tracking subsystem, TABLE does not show information about the LUMI, QMGR, RETR, SCHD, SQTT, or SUBS table traces.

In an IMSplex, the OCMD, RM, and SCI table traces are included in the table traces displayed.

TCO

Displays whether tracing is active for the Time Controlled Operation (TCO).

TIMEOUT

The status of the IMS VTAM I/O Timeout Detection Facility, including the specifications given when the /TRACE SET ... TIMEOUT command was issued. The /DISPLAY TRACE TIMEOUT command will show active or inactive status, the timeout value in minutes, and the action to be taken when timeout occurs (AUTO, MSG, or no action). Option and Timeout values will be displayed only when the facility is active.

TMEMBER

The IMS Open Transaction Manager Access (OTMA) transaction pipes that are currently being traced for the OTMA client.

TRANSACTION

The name of the transaction and the applicable PSB name for each trace.

TRAP

The trap that is currently set, either 1 or 2; that trap is enabled for MFS serviceability aids.

XTRC

External trace status. Whether XTRC is usable and the status of the XTRC data sets are also displayed.

Examples

The following are examples of the /DISPLAY TRACE command.

Example 1 for /DISPLAY TRACE command

Entry ET:

/DISPLAY TRACE ALL

Response ET:

IMS ACTIVE TRACES

LINE	TYPE
1	CONSOLE
4	3270 R

LINK	PARTNER
2	AC

NODE	TYPE	USERS
SLUP1	SLUP	
LU6NDPA	LUT6	N/A
VAT11	3277	N/A

NO PSB TRACES FOUND

MONITOR IS INACTIVE

TRAN CODE	PSB-NAME
ADDINV	DFSSAM04

PROGRAM NAME

APOL1
DEBS
TACP1

TABLE	TRACE	LOGGING	ENTRIES	VOLUME	SYS3
RETR	ON	N/A	128/PST	N/A	SYS3
DL/I		OFF	2268		SYS3
DL/I	ON			HIGH	SYS3
LOCK	ON			HIGH	SYS3
PI	OFF			OFF	SYS3
LATC	ON	OFF	3024	MEDIUM	SYS3
DISP	ON	OFF	1260	MEDIUM	SYS3
SCHD	ON	OFF	630	MEDIUM	SYS3
SUBS	OFF	OFF	504	OFF	SYS3
DLOG	ON	OFF	756	MEDIUM	SYS3
FAST	OFF	OFF	252	OFF	SYS3
STRG	ON	OFF	1260	MEDIUM	SYS3
IDC0	OFF	OFF	2268	OFF	SYS3
LUMI	OFF	OFF	1512	OFF	SYS3
OTMT	OFF	OFF	1008	OFF	SYS3
QMGR	ON	OFF	1008	MEDIUM	SYS3
ORTT	OFF	OFF	1008	OFF	SYS3
OCMD	OFF	OFF	1008	OFF	SYS3
CSLT	OFF	OFF	1008	OFF	SYS3
RRST	OFF	OFF	1512	OFF	SYS3
MSCT	OFF	OFF	1260	OFF	SYS3
FPTT	OFF	OFF	1008	OFF	SYS3
DIAG	ON	ON	8064	MEDIUM	SYS3
ODBA	ON	OFF	1008	MEDIUM	SYS3

Example 2 for /DISPLAY TRACE command

Entry ET:

/DISPLAY TRACE LINE LINK NODE

Response ET:

IMS ACTIVE TRACES

```
LINE      TYPE
   1  CONSOLE
  30  3270 R
  30  3270 R
LINK      PARTNER
   4      RF
NODE      TYPE  USERS
L3270A    3277
LU6NDPA   LUT6   N/A   N/A   N/A
LEVEL: 4   MODULE: ALL
*90290/143519*
```

Example 3 for /DISPLAY TRACE command

Entry ET:

```
/DISPLAY TRACE LUNAME
```

Response ET:

```
IMS ACTIVE TRACES

LUNAME    TPNAME
LUNAME3
LUNAME3   TPNAME1      INPUT
LUNAME3   TPNAME7890123456+ OUTPUT
          789END
LUNAME4
*90332/114253*      INPUT
```

Entry ET:

```
/DISPLAY TRACE LUNAME
```

Response ET:

```
IMS ACTIVE TRACES

LUNAME/TPNAME
NET1.LU1      INP
-TPN1
NET2.LU1      OUTP
-TPN2         OUTP
LU3           INP, OUTP
-TPN3         OUTP
-TPN4         OUTP
NET4.LU3      OUTP
NET5.LU5      INP
*93069/114435*
```

Example 4 for /DISPLAY TRACE command

Entry ET:

```
/DISPLAY TRACE OSAMGTF
```

Response ET:

```
IMS ACTIVE TRACES
OSAMGTF TRACE IS INACTIVE
*92107/090819
```

Entry ET:

```
/TRACE SET ON OSAMGTF
```

Response ET:

DFS058I 09:08:32 TRACE COMMAND COMPLETED

Entry ET:

/DISPLAY TRACE OSAMGTF

Response ET:

IMS ACTIVE TRACES
OSAMGTF TRACE IS ACTIVE
92107/090841

Example 5 for /DISPLAY TRACE command

Entry ET:

/DISPLAY TRACE MONITOR

Response ET:

IMS ACTIVE TRACES
MONITOR IS ACTIVE: LA SCHD APMQ APDB
APDB dbname/partition-name/area-name ...
REGION reg# ... region-name ...
INTERVAL #seconds EXPIRING hh:mm:ss.tt
98029/114114

Example 6 for /DISPLAY TRACE command

Entry ET:

/TRACE SET ON TABLE QMGR
/TRACE SET ON TABLE SQTT
/DISPLAY TRACE TABLE

Response ET:

	IMS ACTIVE TRACES	SYS3S	Volume	SYS3	
	SYS3	N/A	128/PST	N/A	SYS3
TABLE	TRACE	LOGGING	ENTRIES	VOLUME	SYS3
RETR	ON	N/A	128/PST	N/A	SYS3
DL/I		OFF	2268		SYS3
DL/I	ON			HIGH	SYS3
LOCK	ON			HIGH	SYS3
PI	OFF			OFF	SYS3
LATC	ON	OFF	3024	MEDIUM	SYS3
DISP	ON	OFF	1260	MEDIUM	SYS3
SCHD	ON	OFF	630	MEDIUM	SYS3
SUBS	OFF	OFF	504	OFF	SYS3
DLOG	ON	OFF	756	MEDIUM	SYS3
FAST	OFF	OFF	252	OFF	SYS3
STRG	ON	OFF	1260	MEDIUM	SYS3
IDC0	OFF	OFF	2268	OFF	SYS3
LUMI	OFF	OFF	1512	OFF	SYS3
OTMT	OFF	OFF	1008	OFF	SYS3
QMGR	ON	OFF	1008	MEDIUM	SYS3
ORTT	OFF	OFF	1008	OFF	SYS3
OCMD	OFF	OFF	1008	OFF	SYS3
CSLT	OFF	OFF	1008	OFF	SYS3
RRST	OFF	OFF	1512	OFF	SYS3
MSCT	OFF	OFF	1260	OFF	SYS3
FPTT	OFF	OFF	1008	OFF	SYS3
DIAG	ON	ON	8064	MEDIUM	SYS3
ODBA	ON	OFF	1008	MEDIUM	SYS3
	04197/152006	SYS3			

Example 7 for /DISPLAY TRACE command

Entry ET:

/DISPLAY TRACE TCO

Response ET:

IMS ACTIVE TRACES

TCO IS NOT ACTIVE

89100/170509

Example 8 for /DISPLAY TRACE command

Entry ET:

/DISPLAY TRACE TIMEOUT

Response ET:

IMS ACTIVE TRACES

VTAM I/O TIMEOUT FACILITY IS INACTIVE

89033/170200

Example 9 for /DISPLAY TRACE command

Entry ET:

/DISPLAY TRACE TIMEOUT

Response ET:

IMS ACTIVE TRACES

VTAM I/O TIMEOUT FACILITY IS ACTIVE
OPTION = NONE TIMEOUT VALUE = 0

89110/131429

Example 10 for /DISPLAY TRACE command

Entry ET:

/DISPLAY TRACE TIMEOUT

Response ET:

IMS ACTIVE TRACES

VTAM I/O TIMEOUT FACILITY IS ACTIVE
OPTION = AUTO TIMEOUT VALUE = 10

89033/170200

Example 11 for /DISPLAY TRACE command

Entry ET:

/DISPLAY TRACE TIMEOUT

Response ET:

```

IMS ACTIVE TRACES

VTAM I/O TIMEOUT FACILITY IS ACTIVE
  OPTION = MSG      TIMEOUT VALUE = 60

*89033/131630*

```

Example 12 for /DISPLAY TRACE command

```

Entry ET:
  /DISPLAY TRACE TMEMBER

```

```

Response ET:
IMS ACTIVE TRACES

TMEMBER/TPIPE      TYPE
CLIENT1
-TPIPE1             TRA
*94168/095325*

```

Example 13 for /DISPLAY TRACE command

```

Entry ET:
  /DISPLAY TRACE XTRC

```

```

Response ET:
IMS ACTIVE TRACES

IMS EXTERNAL TRACE IS  USABLE
  SYS3
XTRC DDNAME  ALLOC STATUS      STATUS
DFSTRA01    DYNA  UNALLOCATED  CLOSED
DFSTRA02    DYNA  UNALLOCATED  CLOSED
DFSTRA0T    DYNA  UNALLOCATED  CLOSED

*91091/124215*

```

Example 14 for /DISPLAY TRACE command

```

Entry ET:
  /DIS TRACE EXIT

```

```

Response ET:
55/DIS TRACE EXIT

IEE600I REPLY TO 55 IS;/DIS TRACE EXIT
DFS000I      IMS ACTIVE TRACES  IMS3
DFS000I      IMS3
DFS000I      EXIT      FUNC  STATUS  IMS3
DFS000I      DFSMSCE0  TRBT   ON      IMS3
DFS000I      DFSMSCE0  TRVT   ON      IMS3
DFS000I      DFSMSCE0  TR62   OFF     IMS3
DFS000I      DFSMSCE0  TROT   OFF     IMS3
DFS000I      DFSMSCE0  LRTR   ON      IMS3
DFS000I      DFSMSCE0  LRLT   ON      IMS3
DFS000I      DFSMSCE0  LRDI   ON      IMS3
DFS000I      DFSMSCE0  LRIN   ON      IMS3
DFS000I      DFSMSCE0  PRCH   ON      IMS3

```

```

| DFS000I      DFSMSCE0      PRIS      N/A      IMS3
| DFS000I      DFSMSCE0      PRGU      ON      IMS3
| DFS000I      *99096/103002*      IMS3
| 56 DFS996I *IMS READY*      IMS3

```

Response ET:

```

| 39/DIS TRACE EXIT
| IEE600I REPLY TO 39 IS;/DIS TRACE EXIT
| DFS000I      IMS ACTIVE TRACES      IMS3
| DFS000I      IMS3
| DFS000I      EXIT      FUNC      STATUS      IMS3
| DFS000I      DFSMSCE0      TRBT      N/A      IMS3
| DFS000I      DFSMSCE0      TRVT      N/A      IMS3
| DFS000I      DFSMSCE0      TR62      N/A      IMS3
| DFS000I      DFSMSCE0      TROT      N/A      IMS3
| DFS000I      DFSMSCE0      LRTR      N/A      IMS3
| DFS000I      DFSMSCE0      LRLT      N/A      IMS3
| DFS000I      DFSMSCE0      LRDI      N/A      IMS3
| DFS000I      DFSMSCE0      LRIN      N/A      IMS3
| DFS000I      DFSMSCE0      PRCH      N/A      IMS3
| DFS000I      DFSMSCE0      PRIS      N/A      IMS3
| DFS000I      DFSMSCE0      PRGU      N/A      IMS3
| DFS000I      *99105/222611*      IMS3
| 46 DFS996I *IMS READY*      IMS3

```

Example 15 for /DISPLAY TRACE Command

Entry ET:

/DISPLAY TRACE TMEMBER

Response ET:

IMS ACTIVE TRACES

TMEMBER/TPIPE	TYPE	SMEM
HWS001		SM01
-TPIPE1	TRA	
SM01		SM01
-TPIPE1	TRA	
-TPIPE2	TRA	
HWS003		
-TPIPE1	TRA	
05049/095325		

Explanation: HWS001 is a regular member whose hold queue output is managed by super member SM01. HWS001 has one transaction pipe that is being traced. SM01 is a super member with two transaction pipes that are being traced. HWS003 also has a transaction pipe that is being traced. HWS003 is a regular member that manages its own hold queue output.

Example 16 for /DISPLAY TRACE command

Entry ET:

/DISPLAY TRACE TABLE

Response ET:

```

| IMS ACTIVE TRACES SYS3S Volume SYS3
| SYS3 N/A 128/PST N/A SYS3
| TABLE TRACE LOGGING ENTRIES VOLUME SYS3
| RETR ON N/A 128/PST N/A SYS3
| DL/I OFF 2268 SYS3
| DL/I ON HIGH SYS3

```

LOCK	ON			HIGH	SYS3
PI	OFF			OFF	SYS3
LATC	ON	OFF	3024	MEDIUM	SYS3
DISP	ON	OFF	1260	MEDIUM	SYS3
SCHD	ON	OFF	630	MEDIUM	SYS3
SUBS	OFF	OFF	504	OFF	SYS3
DLOG	ON	OFF	756	MEDIUM	SYS3
FAST	OFF	OFF	252	OFF	SYS3
STRG	ON	OFF	1260	MEDIUM	SYS3
IDC0	OFF	OFF	2268	OFF	SYS3
LUMI	OFF	OFF	1512	OFF	SYS3
OTMT	OFF	OFF	1008	OFF	SYS3
QMGR	ON	OFF	1008	MEDIUM	SYS3
ORTT	OFF	OFF	1008	OFF	SYS3
OCMD	ON	OFF	1008	ERROR	SYS3
CSLT	OFF	OFF	1008	OFF	SYS3
RRST	OFF	OFF	1512	OFF	SYS3
MSCT	OFF	OFF	1260	OFF	SYS3
FPTT	OFF	OFF	1008	OFF	SYS3
DIAG	ON	ON	8064	MEDIUM	SYS3
ODBA	ON	OFF	1008	MEDIUM	SYS3
04197/152006 SYS3					

Related reference:

 [QUERY NODE command \(Commands\)](#)

/DISPLAY TRACKING STATUS command

In an RSR complex, use the /DISPLAY TRACKING STATUS command to display the status of a tracking subsystem. The /DISPLAY TRACKING STATUS command is valid on active and RSR tracking subsystems.

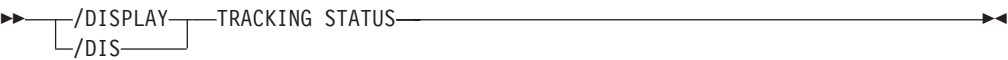
Subsections:

- “Environment”
- “Syntax”
- “Output fields: /DISPLAY TRACKING STATUS on an active subsystem”
- “Output fields: /DISPLAY TRACKING STATUS on a tracking subsystem” on page 564
- “Examples” on page 569

Environment

The /DISPLAY TRACKING STATUS command is valid in DB/DC, DBCTL, and DCCTL environments.

Syntax



Output fields: /DISPLAY TRACKING STATUS on an active subsystem

/DISPLAY TRACKING STATUS on an active subsystem displays the following:

- Subsystem IMSID
- The global service group (GSG)
- The service group (SG)

- The service group status
- The status of the conversation with log router

/DISPLAY TRACKING STATUS on an active subsystem shows the following information:

ACTIVE SUBSYSTEM

The IMSID, global service group, service group, and service group status of the active subsystem

IMSID

The IMSID of the active subsystem.

GSG-NAME

The 1- to 8-character global service group (GSG) name. The global service group is the collection of all IMS subsystems in an RSR complex (such as online IMS, utilities, and so on) that access a particular set of databases. An active subsystem can only be defined as part of one global service group.

SG-NAME

The name of the service group (SG) of which the active subsystem is a part. The service group name is 1 to 8 characters long.

SG-STATUS

The service group status, which can be one of the following:

IDENTIFICATION IN PROGRESS

An the IMS logger is in the process of identifying to the Transport Manager Subsystem (TMS) but has not yet completed.

IDENTIFIED

The IMS logger has identified to the TMS. A status of IDENTIFIED appears as long as the logger is connected or identified to the TMS. This status also appears after a /START SERVGRP command.

LOST The IMS logger's connection to the TMS is gone because of TMS or VTAM failure.

NO LOG ROUTER SG DEFINED

There is an error and logger has no knowledge of a log router with which to communicate. There is no Log Router Service Group defined to DBRC.

NOT IDENTIFIED

The IMS logger has never identified to the TMS (that is, is in its initial state) or the IMS logger has not been able to identify since the most recent /STOP SERVGRP command.

STOPPED

The /STOP SERVGRP command was issued. If there is an active conversation, /STOP SERVGRP causes it to be terminated.

At each OLDS switch, the logger no longer attempts to establish a conversation with the log router. Logs are no longer sent to the tracking subsystem. A /START SERVGRP command is required to undo the STOPPED condition.

ACTIVE'S CONVERSATIONS WITH LOG ROUTERS

Status of the conversations between the active and tracking subsystems.

SG-NAME

The name of the service group (SG) of which the tracking subsystem is a part.

RECORDS-NOT-SENT

The number of log records that have not yet been sent to the tracker. The number of records is a number in the form of *nnnK*, where K represents 1024 records. The number is rounded off to the nearest K. If the number of records exceeds 999K, then >999K is displayed.

This field applies only if the conversation status is SENDING LOGS. Otherwise, N/A is displayed.

CONVERSATION STATUS

The conversation status, which can be one of the following:

ACCEPT IN PROGRESS

A log router is in the process of accepting a conversation request, but has not yet allocated the conversation.

ALLOCATION IN PROGRESS

Indicates a conversation is in the process of being allocated.

DEALLOCATION IN PROGRESS

A conversation is in the process of being deallocated.

NO ACTIVE CONVERSATION

Indicates there is no active conversation between the logger and the log router. Although there is no conversation, the logger does know about the log router.

At each OLDS switch, the logger will attempt to establish a conversation with the log router until it is successful. A /START SERVGRP command can be issued to cause the logger to attempt to establish a conversation with the log router before the next OLDS switch.

SENDING LOGS

The logger has an active conversation with the log router and is sending logs to the tracking site.

SUSPENDED LOGS

The logger has an active conversation with the log router but has suspended sending logs to the tracking site because of resource shortage. The conversation is still intact.

Output fields: /DISPLAY TRACKING STATUS on a tracking subsystem

When issued on a tracking subsystem, /DISPLAY TRACKING STATUS displays the following:

- Subsystem IMSID
- Readiness level
- Global service group (GSG)
- Service group (SG)
- Service group status

- Tracking status
- Tracking activity
- Gaps
- Isolated log sender status
- Online forward recovery (OFR) status
- The current and restart milestone indexes
- DL/I tracking status
- Fast Path tracking status

/DISPLAY TRACKING STATUS shows the same information for an IMS DB/DC tracking subsystem or a DBCTL tracking subsystem.

/DISPLAY TRACKING STATUS on a tracker shows the following information:

TRACKING SUBSYSTEM

The following tracking subsystem information is displayed:

IMSID

The IMSID of the tracking subsystem. The IMSID is 1 to 4 characters long.

READINESS-LEVEL

The readiness level of the tracking subsystem, which is either RECOVERY or DATABASE.

GSG-NAME

The global service group (GSG) name. The GSG is the collection of all IMS subsystems in an RSR complex, such as online IMS, utilities, and so on, which access a particular set of databases. A tracking subsystem tracks only one global service group. The global service group name is 1 to 8 characters long.

SG-NAME

The 1- to 8-character service group (SG) name.

SG-STATUS

The service group status, which can be IDENTIFIED, NOT IDENTIFIED, or STOPPED.

IDENTIFIED

The tracking subsystem has identified to the TMS, and can establish conversations with active loggers and isolated log sender (ILS) instances. IDENTIFIED appears as long as the tracking subsystem is connected or identified to the TMS.

NOT IDENTIFIED

The tracking subsystem has not attempted to identify to the TMS. NOT IDENTIFIED is the initial state.

STOPPED

The tracking subsystem is not identified to the TMS. This status can be the result of any of the following: a /STOP SERVGRP command entered from the tracking subsystem, an unsuccessful attempt to identify, or termination of the TMS.

TRACKING STATUS

The status of the tracking subsystem, which can be one of the following:

INACTIVE

The tracking subsystem is idle. The tracking subsystem has

completed all tracking work and has received no more log records from the active subsystems it tracks.

For example, a status of INACTIVE appears if the active subsystems have shut down and the tracking subsystem has completed its tracking work.

TRACKING

The tracking subsystem is tracking one or more active subsystems and has tracking work to do.

PLANNED TAKEOVER REQUESTED

One of the active subsystems being tracked issued an /RTAKEOVER command, notified the tracker, and shut down. As soon as all of the active systems in the GSG have shut down, all log gaps have been filled, and log routing has completed, the tracking subsystem will shut down for the planned remote takeover.

PLANNED TAKEOVER IN PROGRESS

An /RTAKEOVER command was entered on the active subsystem and all of the active subsystems being tracked have successfully shut down. The tracking subsystem is in the process of shutting down for the planned remote takeover. The tracking subsystem must shut down before active subsystems can be started at the new active site.

UNPLANNED TAKEOVER IN PROGRESS

An /RTAKEOVER command was entered on the tracking subsystem. The tracking subsystem will shut down for the unplanned remote takeover after it has completed routing received log data.

NUMBER OF ACTIVE SUBSYSTEMS

The number of active subsystems currently being tracked. It is followed by an integer.

TRACKING ACTIVITY

Status of the conversations between the tracker and the loggers of the active subsystems being tracked. The following information is displayed for each active subsystem being tracked:

NAME

The IMSID of the subsystem being tracked or the jobname for batch or batch backout being tracked. Subsystem names are 1 to 4 characters long. Job names are 1 to 8 characters long.

If the active subsystems are XRF-capable, the subsystem name displayed includes a hyphen and the one-character HSBID.

Example: The XRF alternate for IMSA would be displayed as IMSA-2.

TYPE Type of subsystem, which can be ONLINE, ACTIVE, BATCH, or BBO (batch backout):

ONLINE

An online (not batch) subsystem that has not sent data to the tracking subsystem. The subsystem might be an active subsystem that has not completed restart or it might be an XRF alternate subsystem.

ACTIVE

An online (not batch) subsystem that has sent data to the tracking subsystem.

BATCH

A batch subsystem that has sent data to the tracking subsystem.

BBO

A batch backout job that has sent data to the tracking subsystem.

RECEIVED-LOG

The universal coordinated time of the last log record received from the subsystem, BATCH job, or BBO job. The time stamp is of the format *hhmmss*, where *hh* represents hours, *mm* represents minutes, and *ss* represents seconds. RECEIVED-LOG does not apply to conversations with XRF-alternate subsystems, in which case N/A is displayed.

ROUTED-LOG

The universal coordinated time of the last log routed by the log router. The time stamp is of the format *hhmmss*, where *hh* represents hours, *mm* represents minutes, and *ss* represents seconds. ROUTED-LOG does not apply to conversations with XRF-alternate subsystems, in which case N/A is displayed.

NOT-ROUTED

The number of log records that have been received by the tracker but not yet routed by the log router. The number is in the format *nnnK*, where *K* represents 1024 log records. The number is rounded off to the nearest *K*. If this number exceeds 999K, then >999K is displayed. NOT-ROUTED does not apply to conversations with XRF-alternate subsystems, in which case N/A is displayed.

STATUS

The tracking status. If a conversation exists between the tracking subsystem and the active IMS, the status field contains CONV-ACT. If there is no conversation, the status field is left blank.

GAPS The status of gaps between the tracker and the active subsystems, BATCH jobs, or BBO jobs. One line is displayed for each gap associated with an active subsystem.

If the gap information is not known to the tracking subsystem, the PRILOG token associated with the gap is displayed as "MISSING LOG, PRILOG TOKEN=". The following gap information is displayed:

NAME

The IMSID of the active system for which there is a gap, or the jobname of the BATCH or BBO job for which there is a gap.

In an XRF environment, the NAME is the RSENAME rather than the IMSID.

LOG-SEQ-FIRST

The log sequence number, in hexadecimal, of the first log record in the gap

IN-GAP

The number of records, in decimal, that are in the gap. The number

is of the form *nnnK*, where K represents 1024 records. The number is rounded off to the nearest K. If this number exceeds 999K, then >999K is displayed.

RECEIVED

The number of records, in decimal, that have been received. The number is of the form *nnnK*, where K represents 1024 records. The number is rounded off to the nearest K. If this number exceeds 999K, then >999K is displayed.

NOT-ROUTED

The number of log records, in decimal, that have not been routed for the oldest gap. The number is of the form *nnnK*, where K represents 1024 records. If this number exceeds 999K, then >999K is displayed. This number does not apply to gaps other than the oldest one.

STATUS

The status of the gap, which is one of the following:

FILLING

The gap is currently being filled.

WAITING

The gap is not being filled yet. For example, the gap might be waiting to be filled if there are not enough conversations to send the log records, or a batch job is still running.

PERMNT ERR

There is a permanent error, such as a read error, that prevents this gap from being filled.

UNAVAIL

The log data needed to fill the gap is not available at the active site. The log or log data sets might have been deleted.

ISOLATED LOG SENDER STATUS

Status of isolated log sender conversations.

SYSTEM NAME OF TRANSPORT MANAGER SUBSYSTEM

If the tracking subsystem has a conversation with an isolated log sender, the system name of the TMS to which the isolated log sender is identified is displayed.

NUMBER OF CONVERSATIONS

Number of conversations with this instance of isolated log sender.

ONLINE FORWARD RECOVERY STATUS

The following online forward recovery (OFR) status is displayed:

NUMBER OF STREAMS BEING PROCESSED

Number of OFR processes initiated. The online forward recoveries are processed one at a time.

OFR ROUTING TIME

The latest close time of any log data set that has been or is currently being read for OFR.

MILESTONE INDEX STATUS

The following milestone information is displayed:

CURRENT MILESTONE INDEX

The current milestone index.

RESTART MILESTONE INDEX

The restart milestone index.

DLI TRACKING STATUS

Status of DL/I database tracking.

TRACKING PSTs

Number of DL/I database tracking PSTs currently in use. The number can be from 0 to 255.

USAGE OF TRACKING PSTs

Average percent usage of DLI database tracking PSTs currently in use

BACKLOG OF REDO RECORDS IN DATASPACE

The backlog number of redo records in the data space. The backlog is a measure of how well the tracker is keeping up with the workload. The backlog is a number in the form of *nnnK*, where K represents 1024 redo records. The number is rounded off to the nearest K. If the number of redo records exceeds 999K, then >999K is displayed.

FP TRACKING STATUS

Status of Fast Path database tracking.

TRACKING PSTs

Number of FP database tracking PSTs and the reason the PSTs are invoked. The number of tracking PSTs can be from 0 to 255. The reason the PSTs are invoked can be one of the following and only appears if there are one or more PSTs:

AREAWRITE

The PSTs are invoked by a write request for a specific area.

MILESTONE

The PSTs are invoked by milestone processing.

THRESHOLD

The PSTs are invoked by threshold write.

CURRENT LOG VOLUME IN DATASPACE

The current log volume in Fast Path tracking data space. This number can be from 0 to *nnnnnnnK*, where K represents 1024 log records. The maximum possible number is 2000000K (two gigabytes). The number is rounded off to the nearest K.

MAX LOG VOLUME IN DATASPACE

Maximum log volume in Fast Path tracking data space. This number can be from 0 to *nnnnnnnK*, where K represents 1024 log records. The maximum possible number is 2000000K (two gigabytes). The number is rounded off to the nearest K.

Examples

The following are examples of the `/DISPLAY TRACKING STATUS` command.

Example 1 for /DISPLAY TRACKING STATUS command

The following is an example of a /DISPLAY TRACKING STATUS entered from a tracking subsystem in Los Angeles. The two active systems in San Jose are named IMSA and IMSC. IMSA has an XRF alternate named IMSB. IMSC has an XRF alternate named IMD. The Coordinated Universal Time is 23:32:09. The local Los Angeles time is 15:32:09. OFR is also in progress and has started processing log data up through 14:11:34 local time.

Entry ET:

/DIS TRACKING STATUS

Response ET:

```

**** TRACKING SUBSYSTEM *****
IMSID READINESS-LEVEL GSG-NAME SG-NAME SG-STATUS
IMST RECOVERY          MSGSG1  STLSITE2 IDENTIFIED
**** TRACKING STATUS: TRACKING
NUMBER OF ACTIVE SUBSYSTEMS:                4
**** TRACKING ACTIVITY *****
NAME      TYPE      RECEIVED-LOG  ROUTED-LOG  NOT-ROUTED  STATUS
IMSD      ONLINE    N/A              N/A              N/A      CONV-ACT
IMSC      ACTIVE    15:31:00         15:29:54         2K      CONV-ACT
IMSB      ONLINE    N/A              N/A              N/A      CONV-ACT
IMSA      ACTIVE    15:31:10         15:29:47         3K      CONV-ACT
**** GAPS *****
NAME      LOG-SEQ-FIRST  IN-GAP  RECEIVED  NOT-ROUTED  STATUS
IMSC      0000000000007D31  2K      OK        N/A      WAITING
**** ISOLATED LOG SENDER STATUS *****
SYSTEM NAME OF TRANSPORT MANAGER SUBSYSTEM:  TPAR
NUMBER OF CONVERSATIONS:                      1
**** ONLINE FORWARD RECOVERY STATUS *****
NUMBER OF STREAMS BEING PROCESSED:              0
OFR ROUTING TIME:                2002.090 14:11:34
**** MILESTONE INDEX STATUS *****
CURRENT MILESTONE INDEX:                      38
RESTART MILESTONE INDEX:                      37
**** DLI TRACKING STATUS *****
TRACKING PSTS:                                0
USAGE OF TRACKING PSTS:                       0%
BACKLOG OF REDO RECORDS IN DATASPACE:          0K
**** FP TRACKING STATUS *****
TRACKING PSTS:                                0
CURRENT LOG VOLUME IN DATASPACE:                0K
MAX LOG VOLUME IN DATASPACE:                    0K
*02090/153209*

```

Example 2 for /DISPLAY TRACKING STATUS command

The following is an example of a /DISPLAY TRACKING STATUS command entered on an active system IMSC, located in San Jose.

Entry ET:

/DIS TRACKING STATUS

Response ET:

```

**** ACTIVE SUBSYSTEM *****
IMSID GSG-NAME SG-NAME SG-STATUS
IMSC  ACCTGRP1 SITESJ  IDENTIFIED
**** ACTIVE'S CONVERSATIONS WITH LOG ROUTERS *****
IMSID RECORDS-NOT-SENT
IMST              1K SENDING LOGS
*91317/150416*

```

/DISPLAY TRAN command

Use the /DISPLAY TRAN command to display the status of transactions.

Subsections:

- “Environment”
- “Syntax”
- “Keywords”
- “Usage notes” on page 572
- “Equivalent IMS type-2 commands” on page 572
- “Output fields” on page 573
- “Examples” on page 573

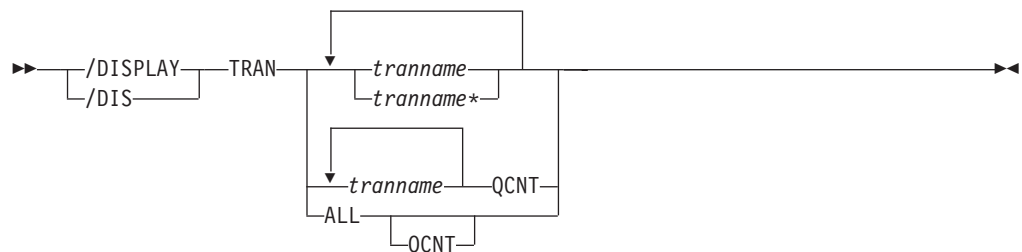
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 225. Valid environments for the /DISPLAY TRAN command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DISPLAY	X	X	X
QCNT	X		X
TRAN	X		X

Syntax



Keywords

The following keyword can be specified for the /DISPLAY TRAN command:

QCNT

Specifies that global queue count information is to be displayed. If the QCNT keyword is not specified, local queue counts are displayed. The QCNT keyword is valid only in a shared-queues environment.

IMS does not check that the specified name is a valid transaction in the IMS subsystem on which the command is entered.

The /DIS TRAN *tranname* QCNT command returns the count of messages on the shared-queue structure for transaction *tranname*. The message count includes the messages that can be processed by any IMS (messages with no affinity), plus messages that can be processed only by the IMS where the /DIS TRAN command was entered (messages with affinity to the IMS that issued

the command). Thus, a /DIS TRAN *trannname* QCNT command that is routed to several IMS subsystems in an IMSplex environment might show different queue counts on different IMS subsystems if there are messages on the shared-queue structure that are queued with affinity to an IMS.

The /DISPLAY TRAN ALL QCNT command displays all the transactions on the shared queues with a global queue count. This command returns one line for each transaction that has messages queued to the global (non-affinity) queue on the shared queue structure. This line shows the number of messages that are queued to the global queue of that transaction and indicates the messages that can be processed by any IMS. Additionally, the /DIS TRAN ALL QCNT command returns one line for each transaction that has messages queued with affinity to an IMS in the IMSplex. This line shows the number of messages queued with affinity, as well as the IMSID of the IMS to which they have affinity.

On the IMS where this message will be processed, you might need to register this transaction for affinity message processing by entering a type-1 /START TRAN *trannname* AFFINITY command or a type-2 UPDATE TRAN NAME(*trannname*) START(SCHD) OPTION(AFFIN) command.

For the AFFINITY status, the type-1 command can display messages on the shared queues that have affinity, but not the local AFFINITY status of the transaction (*trancode*) name in IMS. To query the affinity status of a transaction, use a type-2 QUERY TRAN STATUS(AFFIN) command or a QUERY TRAN NAME(*trannname*) SHOW(STATUS) command.

Usage notes

The TRAN keyword parameter can be generic.

IMS Open Transaction Manager Access (OTMA) supports an architected format for the output from the /DISPLAY TRAN command. The architected output is returned to the OTMA client, not to an IMS operator.

In a shared-queues environment, use the QCNT keyword to obtain the current message queue counts on the shared queues structure. The local queue counts (ENQCT, DEQCT, and QCT) value that is returned on this command when the QCNT keyword is not specified represents the messages being processed by the IMS system where this command is issued. Do not use local queue counts for queue evaluation purposes.

Equivalent IMS type-2 commands

The following table shows variations of the /DISPLAY TRAN command and the IMS type-2 commands that perform similar functions.

Table 226. Type-2 equivalents for the /DISPLAY TRAN command

Task	/DISPLAY TRAN command	Similar IMS type-2 command
Displays information about a transaction.	/DISPLAY TRAN <i>trannname</i>	QUERY TRAN NAME(<i>trannname</i>) SHOW(ALL)
Displays all of the transactions.	/DISPLAY TRAN ALL	QUERY TRAN SHOW(ALL)
Displays all of the transactions on the shared queues with a global queue count.	/DISPLAY TRAN <i>trannname</i> QCNT	QUERY TRAN NAME(<i>trannname</i>) SHOW(QCNT)

Output fields

The /DISPLAY TRAN command displays the transaction name, class (CLS), current priority(CP), normal priority (NP), local priority (LP), local enqueue queue count (ENQCT), local queue count (QCT), limit count (LCT), processing limit count (PLCT), parallel limit count (PARLM), the number and size of output segments for a specified transaction code (SESZ, SEGN0), and the number of regions the transaction is currently scheduled in (RC), all on the first line.

The next two indented lines show the PSB name associated with the transaction and the status. DFSCPIC is displayed as the PSB name for CPI Communications driven transactions that have not issued a DL/I APSB call to allocate a PSB.

Fast Path exclusive transaction codes have only the transaction code and class returned, where the class is displayed as FPE. The queue counts are not shown because Fast Path processing bypasses the IMS message queues.

Fast Path potential transactions have two lines returned, the first line with the transaction code and class, where the class is displayed as FPP, and the second line with the transaction information.

For remote transactions, the class column is displayed as RMT.

The status displayed can be one of the following:

BAL
DYNAMIC
I/O PREV
LOCK
NOTINIT
PSTOP
PUR
QERR
QSTP
SPND
STOP
TRA
USTOP

A status of NOINIT appears in the output of a /DISPLAY TRAN command when IMS is unable to initialize a transaction resource during restart processing.

The /DISPLAY TRAN command also displays I/O prevention when a BMP program containing GSAM cannot complete scheduling.

The /DISPLAY TRAN QCNT *count* command returns the global queue counts from shared queues and any affinity of messages on the IMS shared queues.

Examples

The following are examples of the /DISPLAY TRAN command.

Example 1 for /DISPLAY TRAN command

Entry ET:

/DISPLAY TRAN ALL

Response ET:

TRAN	CLS	ENQCT	QCT	LCT	PLCT	CP	NP	LP	SEGSZ	SEGNO	PARLM	RC
TPN1	22	14	7	5	0	8	5	8	0	0	0	5
PSBNAME: DFSCPIC												
TPN2	23	16	0	0	0	0	0	0	0	0	0	0
PSBNAME: DFSCPIC												
STATUS: PUR												
TPN2	24	0	0	0	0	0	0	0	0	0	0	0
PSBNAME: DFSCPIC												
STATUS: STOP												
TRAN1	4	0	0	10	5	8	8	10	0	0	2	2
PSBNAME: LU2PGM1												
TRAN2	7	0	0	65535	65535	8	8	8	0	0	0	0
PSBNAME: LU2PGM2												
STATUS: PSTOP												
90332/114253												

Example 2 for /DISPLAY TRAN command

Entry ET:

/DISPLAY TRAN SKS1 SKS2 SKS3 SKS4 SKS5 SKS6 SKS7

Response ET:

TRAN	CLS	ENQCT	QCT	LCT	PLCT	CP	NP	LP	SEGSZ	SEGNO	PARLM	RC
SKS1	1	0	0	65535	65535	8	8	8	0	0	0	0
PSBNAME: DFSDDL1												
STATUS: TRA												
SKS2	2	0	0	65535	65535	8	8	8	0	0	0	0
PSBNAME: DFSDDL2												
SKS3	3	0	0	65535	65535	8	8	8	0	0	0	0
PSBNAME: DFSDDL3												
STATUS: STOP,TRA												
SKS4	4	0	0	65535	65535	8	8	8	0	0	0	0
PSBNAME: DFSDDL4												
STATUS: STOP												
SKS5	5	0	0	65535	65535	8	8	8	0	0	0	0
PSBNAME: DFSDDL5												
SKS6	6	0	0	65535	65535	8	8	8	0	0	2	0
PSBNAME: DFSDDL6												
STATUS: BAL(2)												
SKS7	7	0	0	65535	65535	8	8	8	0	0	1	0
PSBNAME: DFSDDL7												
STATUS: BAL(2)												
89184/142345												

Example 3 for /DISPLAY TRAN command

Entry ET:

/DISPLAY TRAN TRANA TRANB TRANC QCNT

Response ET:

TRAN	GBLQCT
TRANA	0
TRANB	1000
TRANC	45
95200/170817	

Example 4 for /DISPLAY TRAN command

Entry ET:

/DISPLAY TRAN ALL QCNT

Response ET:

```

TRAN          GBLQCT  AFFINITY
TRAN1234      1524    IMS1
TRAN1234      3       IMSA
TRAN1234      14
*00305/103034*

```

Explanation: This example command receives multiple lines of output for a transaction, TRAN1234. The output shows there are 1524 messages for the transaction that have an affinity to execute on IMS1. A transaction might have an affinity if it were an APPC, OTMA, or serial transaction. If an output line shows no affinity, like the example output line with a GBLQCNT of 14, then there could be a single IMS system indicated, or multiple IMS systems that have messages that contribute to the GBLQCNT.

Example 5 for /DISPLAY TRAN command

Entry ET:

```
/DISPLAY TRAN ALL QCNT
```

Response ET:

```

DFS000I      TRAN          GBLQCT  AFFINITY
DFS000I      APOL12          1
DFS000I      APOL12          1  IMS1

```

Explanation: This example shows two messages queued to transaction APOL12. One message has affinity to IMS1. The other message does not.

Related reference:

“Status and attributes for the /DISPLAY command” on page 357

 [QUERY TRAN command \(Commands\)](#)

/DISPLAY UOR command

Use the /DISPLAY UOR command to display status information about IMS units of recovery (UORs) for protected resources on the z/OS Resource Recovery Services (RRS) platform.

Subsections:

- “Environment”
- “Syntax” on page 576
- “Keywords” on page 576
- “Output fields” on page 576
- “Examples” on page 577

Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

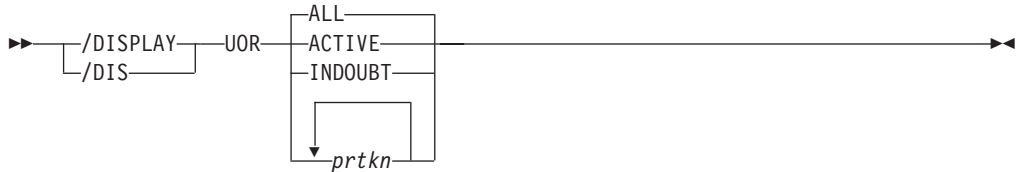
Table 227. Valid environments for the /DISPLAY UOR command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DISPLAY	X	X	X
ACTIVE	X	X	X
INDOUBT	X	X	

Table 227. Valid environments for the /DISPLAY UOR command and keywords (continued)

Command / Keywords	DB/DC	DBCTL	DCCTL
UOR	X	X	

Syntax



Keywords

The following keywords are valid for the /DISPLAY UOR command:

ALL

Displays active and indoubt UORs. ALL is the default.

ACTIVE

Displays only active UORs.

INDOUBT

Displays only UORs that were indoubt when they were terminated. Indoubt UORs identify residual work that needs resolution.

prtkn

If you specify the 6-byte pseudorecovery token of the protected UOR, this command displays information about the requested UOR.

Output fields

The following output fields are displayed by the /DISPLAY UOR command:

EID The identifier of a work request across multiple connected distributed systems coordinated by the Encina toolkit. This data appears on a separate line of output if it is available.

IMS-RECTOKN

The IMS recovery token that uniquely identifies the IMS portion of the UOR.

LUWID

The identifier of a work request across multiple distributed systems connected by LU 6.2 conversations. This data appears on a separate line of output if it is available.

PSBNAME

The IMS PSB scheduled for this UOR.

P-TOKEN

The IMS pseudorecovery token, which can be used in subsequent commands to refer to this particular UOR. This token only displays for indoubt UORs (status RI). Use this token for subsequent /DISPLAY UOR and /CHANGE UOR commands.

RRS-URID

The unique identifier for a protected unit of recovery (of which IMS work is part). z/OS Resource Recovery Services (RRS) generates and maintains this data.

ST Status of the UOR, which can be one of the following:

A Active; work is inflight.

B Active; work is being backed out.

C Active; work is being committed.

E Active; work is in cleanup phase.

I Active; work is indoubt, awaiting phase 2 action.

RI Residual indoubt; indoubt UOR from a prior IMS execution or a dependent-region abend.

WID The identifier of a work request across multiple distributed systems that are not associated with a LUWID, EID, or XID task. This data is provided only for the /DIS UOR ACTIVE command, and appears on a separate line of output.

XID X/Open identifier (XID). One possible work identifier for a distributed transaction used by a communications resource manager that uses X/Open distributed transaction processing model.

Examples

Example 1 for /DISPLAY UOR command

Entry ET:

/DISPLAY UOR

Response ET:

ST	P-TOKEN	PSBNAME	RRS-URID	IMS-TOKEN
A		DBOVLFPB	AF3499A27EC3E2980000000401010000	SYS1 0000000400000002
			EID=0001812223768AC1009B5870268346	
C		DBOVLFPB	AF1124A27EE1C2380000000501020000	SYS1 0000000700000002
			EID=0002A35549021DA108538121766899670	
RI	00010120	PLAPJK02	12345678901234567890123456789012	SYS1 0000001300000001
			EID=0001C35549021DB176523121445797320	
			96337/145345	

Example 2 for /DISPLAY UOR command

Entry ET:

/DISPLAY UOR ACTIVE

Response ET:

ST	P-TOKEN	PSBNAME	RRS-URID	IMS-TOKEN
A		PLAPJK01	AF3278A27EC3E2980000000402010000	SYS1 0000000400000002
			LUWID=0EIMSNET.L62IMS1999E359820810001	
			96338/091642	

Example 3 for /DISPLAY UOR command

Entry ET:

/DISPLAY UOR INDOUBT

ST	P-TOKEN	PSBNAME	RRS-URID	IMS-TOKEN
RI	00010040	DBOVLFP	98768883421097867890123456789012	SYS1 0000008300000001
		LUID=0EIMSNET.L62IMS1763E358330410001		
RI	00010120	PLAPJK02	AF34A6307EC4E2980000000201010000	SYS1 0000002700000001
		LUID=0EIMSNET.L62IMS1438E339103810001		
		96336/113502		

```
/DISPLAY UOR 010140
```

```
ST  P-TOKEN  PSBNAME  RRS-URID                                IMS-TOKEN
RI   00010140  PLAPJK02  AF34A6307EC4E2980000000201010000  SYS1      0000002700000001
      LUWID=0EIMSNET.L62IMS1999E359820810001
*96340/011544*
```

/DIS UOR

[illegible]

/DIS UOR ACTIVE

```
ST P-TOKEN PSBNAME RRS-URID
IMS-RECTOKN
A          APOL1      C59FF3967DE430000000000201030000 IMS2
00000000300000000
DFS000I      WID=0A43D048NATIVE CASCADED TRAN      IMS2
DFS000I      *10062/173908*      IMS2
```

/DISPLAY USER command

Use the /DISPLAY USER command to display all of the user structures and the user IDs that match the parameter or attribute specified.

Subsections:

- “Environment” on page 579
- “Syntax” on page 579
- “Keywords and reserved parameters” on page 579
- “Usage notes” on page 581
- “Equivalent IMS type-2 commands” on page 582

- “Examples” on page 582

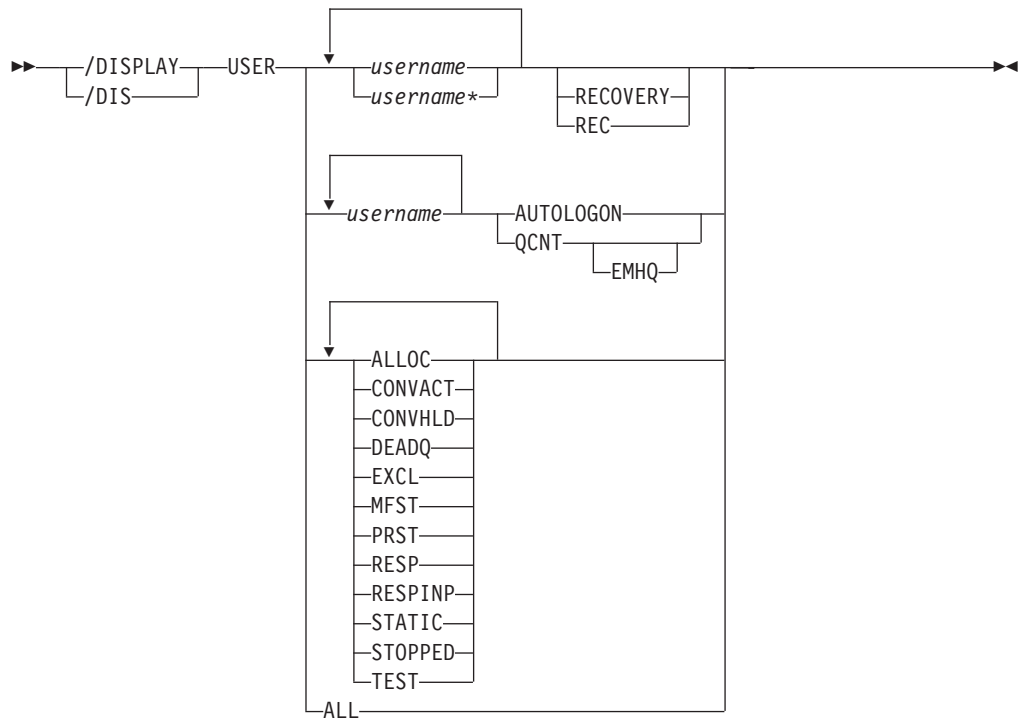
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 228. Valid environments for the /DISPLAY USER command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/DISPLAY	X	X	X
AUTOLOGON	X		X
EMHQ	X		X
QCNT	X		X
RECOVERY	X	X	
USER	X		X

Syntax



Keywords and reserved parameters

The following keywords can be specified for the /DISPLAY USER command:

AUTOLOGON

Displays the current autologon information for the specified user. The autologon information can be changed dynamically with the /CHANGE command.

EMHQ

Specifies that global queue count information on the Expedited Message

Handler Queues (EMHQ) displays when both EMHQ and QCNT are specified. If EMHQ is specified, QCNT must also be specified. This keyword is valid only in a shared-queues environment.

QCNT

Specifies that global queue count information is to be displayed. If QCNT is not specified, local queue counts are displayed; when it is specified, no local queue counts are displayed. If QCNT is specified and EMHQ is not, global queue count information on the shared message queues (MSGQ) is displayed.

This count represents the message counts of messages that can be processed by the IMS system where the command is issued. This count includes messages that can be processed by any IMS system (messages with no affinity), plus messages that can be processed by the IMS system where the command is issued (messages with an affinity to the IMS system that issued the command).

IMS does not check if the specified name is a valid LTERM in the IMS subsystem on which the command is entered.

This command does not display queue counts for Fast Path output messages for the NODE unless EMHQ and QCNT are specified.

This keyword is valid only in a shared-queues environment.

RECOVERY

The /DISPLAY NODE|USER RECOVERY command can be used to display the recovery values that pertain to the node or user. The recovery values may be displayed from the local control blocks, if available, or from values saved for the node or user in the Resource Manager, if resource information is being kept in Resource Manager, and the node or user is defined to have its status kept in Resource Manager. The recovery information displayed with this command are:

- IMS owner
- The IMS ID (RSEname if an XRF system) of the IMS system that currently owns this resource. If the resource is not currently owned, this field will be displayed as NONE.
- The scope of recovery for a resource, and from where the end-user significant status is maintained and recovered.
- End-user significant status
- The following status are end-user significant status for nodes and users.
 - Conversation
 - STSN
 - Fast Path

These are status that frequently change for a resource, and thus there are performance considerations related to maintaining end-user significant status. The installation can tell IMS how to recover end-user significant status by specifying the level of recovery for each status. Shown for each resource is the level of recovery for each end-user significant status.

username

Specifies either a user structure name or a RACF user ID.

“Attributes” are reserved parameters for the /DISPLAY USER command and cannot be used to name users. Any one attribute can be used with the USER keyword. Users are selected for display based on the attribute or attributes specified. The attribute display format is the same as the standard USER display. Attributes usually correspond to the conditions displayed for users.

Following is a list of the attributes that can be specified with the USER keyword:

- ALLOC
- CONVACT
- CONVHLD
- DEADQ
- EXCL
- MFST
- PRST
- RESP
- RESPINP
- STATIC
- STOPPED
- TEST

RESPINP shows users with RESP-INP and RESP-INP-FP status.

Usage notes

The USER parameter can be generic when the generic parameter specifies users that already exist.

The following information is displayed:

- The USER field shows the user structure name. N/A appears for all user IDs signed on to static nodes.
- The USERID field shows the RACF user ID that was used to sign on to the node. N/A appears if a user structure is not associated with a node. In that case, the user structure exists to hold status or has messages inserted to it. If no messages or status exist, the user structure is deleted at the next checkpoint.
- The node name appears if the user is allocated to a node or signed on to a node.
- The cumulative queue counts for enqueues, dequeues, and number of items still on the queue for the specified users is displayed. The cumulative counts include all LTERMs associated with the specified users, whether the LTERMs are allocated to a node or not.

For non-ISC static users, queue counts are displayed as N/A, since non-ISC static users are not associated with queues.

- STOPPED or ALLOC is displayed to show whether the user LTERMs are assigned to a node (ALLOC) or the user is stopped (STO).

User IDs can only be used as parameters with the /DISPLAY USER command and the /SIGN ON command. In other commands that support the USER keyword, the user structure name, not the user ID, must be used.

The ALLOC status is followed by the node name (in parentheses) to which the user is allocated or signed on to.

The use of DEADQ with the /DISPLAY USER command shows all users that have queues marked as dead letter queues. When all the messages are purged by the /DEQUEUE command, the DEADQ status is removed. After all the messages have been purged and the status removed, then the user structure is deleted at the next simple checkpoint.

In a shared-queues environment, use the QCNT keyword to obtain the current message queue counts on the shared queues structure. The local queue counts (ENQCT, DEQCT, and QCT) value that is returned on this command when the QCNT keyword is not specified represents the messages being processed by the IMS system where this command is issued. Do not use local queue counts for queue evaluation purposes.

Equivalent IMS type-2 commands

The following table shows variations of the /DISPLAY USER command and the IMS type-2 commands that perform similar functions.

Table 229. Type-2 equivalents for the /DISPLAY USER command.

Task	/DISPLAY USER command	Similar IMS type-2 command
Displays preset destination.	/DISPLAY USER <i>user</i>	QUERY USER SHOW(PRESET)
Displays node.	/DISPLAY USER <i>user</i>	QUERY USER SHOW(NODE) QUERY USERID SHOW(NODE)
Displays status for a particular user.	/DISPLAY USER <i>user</i>	QUERY USER SHOW(STATUS)
Displays user ID.	/DISPLAY USER <i>user</i>	QUERY USER SHOW(USERID)
Displays status of a particular user ID.	/DISPLAY USER <i>user</i>	QUERY USERID SHOW(STATUS)
Displays user.	/DISPLAY USER <i>user</i>	QUERY USERID SHOW(USER)
Displays autologon parameters.	/DISPLAY USER <i>user</i> AUTOLOGON	QUERY USER SHOW(AUTOLOGON)
Displays queue count.	/DISPLAY USER <i>user</i> /DISPLAY USER <i>user</i> QCNT	QUERY USER SHOW(QCNT)
Displays message queue count in the Expedited Message Handler (EMH) queues.	/DISPLAY USER <i>user</i> QCNT EMHQ	QUERY USER SHOW(EMHQ)
Displays status recovery information.	/DISPLAY USER <i>user</i> RECOVERY	QUERY USER SHOW(RECOVERY)
Displays owner IMSID in RM resource structure.	/DISPLAY USER <i>user</i> RECOVERY	QUERY USER SHOW(OWNER)

Examples

The following are examples of the /DISPLAY USER command.

Example 1 for /DISPLAY USER command

Entry ET:

```
/DISPLAY USER IMSUS01 IMSUS02
```

Response ET:

```
USER    USERID  ENQCT DEQCT  QCT
IMSUS01  IMSUS01      1      1      0 ALLOC(DTSLU201) CONV-HLD
N/A      IMSUS01     N/A     N/A     N/A ALLOC(L3270A ) STATIC
N/A      IMSUS02     N/A     N/A     N/A ALLOC(L3270B ) STATIC
DT327002 IMSUS02      0      0      0 ALLOC(DT327002)
*92350/112229*
```

Entry ET:

```
/DISPLAY USER USER1 USER2 USER3 QCNT
```

Response ET:

USERID	USER	GBLQCT
N/A	USER1	25
USER2	USER2A	0
USER2	USER2B	10
USER3	IMSUSR3A	40

95200/170817

Entry ET:

/DISPLAY USER IMSUS01*

Response ET:

USER	USERID	ENQCT	DEQCT	QCT
IMSUS01C	N/A	0	0	0 STOPPED
IMSUS01D	N/A	0	0	0 STOPPED
IMSUS01	IMSUS01	1	1	0 ALLOC(DTSLU201) CONV-HLD
N/A	IMSUS01	N/A	N/A	N/A ALLOC(L3270A) STATIC

92350/113904

Entry ET:

/DISPLAY USER ALL

Response ET:

USER	USERID	ENQCT	DEQCT	QCT
CA13	N/A	0	0	0 STATIC
IMSUS01C	N/A	0	0	0 STOPPED
IMSUS01D	N/A	0	0	0 STOPPED
LU6SPA	N/A	0	0	0 ALLOC(LU6NDPF) STATIC
LU6SPB	N/A	0	0	0 STATIC
DT327002	IMSUS02	0	0	0 ALLOC(DT327002)
IMSUS03	IMSUS03	0	0	0 ALLOC(DTSLU601)
IMSUS01	IMSUS01	1	1	0 ALLOC(DTSLU201) CONV-HLD
IMSUS05	N/A	0	0	0 STOPPED
N/A	IMSUS02	N/A	N/A	N/A ALLOC(L3270B) STATIC
N/A	IMSUS01	N/A	N/A	N/A ALLOC(L3270A) STATIC
N/A	IMSUS04	N/A	N/A	N/A ALLOC(L3270C) STATIC

92350/114845

Example 2 for /DISPLAY USER command

Entry ET:

/DISPLAY USER ABC100 EMHQ QCNT

One user is on the queue.

Response ET:

```
14.42.46          57/DIS USER ABC100 QCNT EMHQ.
14.42.46          IEE600I REPLY TO 57 IS;/DIS USER ABC100 QCNT EMHQ.
14.42.46 JOB00110 DFS000I      USER          GBLQCT      IMS1
14.42.46 JOB00110 DFS000I      ABC100          0          IMS1
14.42.46 JOB00110 DFS000I      *98203/144246*    IMS1
```

Example 3 for /DISPLAY USER command

Entry ET:

/DISPLAY USER IMSUS01 IMSUS02 IMSUS03 AUTOLOGON.

Response ET:

USER	NODE	MODE	DESC	ID
IMSUS01	N/A	N/A	N/A	N/A
IMSUS02	N/A	N/A	N/A	N/A
IMSUS03	N/A	N/A	N/A	N/A

99243/082505

Entry ET:

/CHANGE USER IMSUS01 AUTOLOGON DT327001 MODE LU032NT4.

Response ET:

DFS058I CHANGE COMMAND COMPLETED

Entry ET:

/CHANGE USER IMSUS02 AUTOLOGON DTSLU601 MODE LU6NEGPS ID IMSID2.

Response ET:

DFS058I CHANGE COMMAND COMPLETED

Entry ET:

/CHANGE USER IMSUS03 AUTOLOGON DT327001 LOGOND DFS3270 MODE LU032NT4.

Response ET:

DFS058I CHANGE COMMAND COMPLETED

Entry ET:

/DISPLAY USER IMSUS01 IMSUS02 IMSUS03 AUTOLOGON.

Response ET:

USER	NODE	MODE	DESC	ID
IMSUS01	DT327001	LU032NT4	N/A	N/A
IMSUS02	DTSLU601	LU6NEGPS	N/A	IMSID2
IMSUS03	DT327001	LU032NT4	DFS3270	N/A

99243/083309

Example 4 for /DISPLAY USER RECOVERY command

Entry ET:

/DISPLAY USER IMSUS* IMSUS03 LU6SPG RECOVERY

Response ET:

USER OWNER SRM CONV STSN FPATH
IMSUS05 IMSA GLOBAL Y Y Y
IMSUS01 IMSA LOCAL Y Y Y
IMSUS03 IMSB GLOBAL Y N N
LU6SPG IMSA LOCAL Y Y Y
99240/134730

Related reference:

“Status and attributes for the /DISPLAY command” on page 357

 QUERY USER command (Commands)

 QUERY USERID command (Commands)

Chapter 27. /END command

The /END command terminates all special operating modes established through the prior entry of an /EXCLUSIVE, /TEST, or /LOOPTEST command.

/END NODE | USER does not reset TEST mode. Only the same terminal that is in TEST mode can reset the TEST mode (using /END without the NODE or USER keywords).

Subsections:

- “Environment”
- “Syntax”
- “Keywords”
- “Usage notes” on page 586
- “Example” on page 586

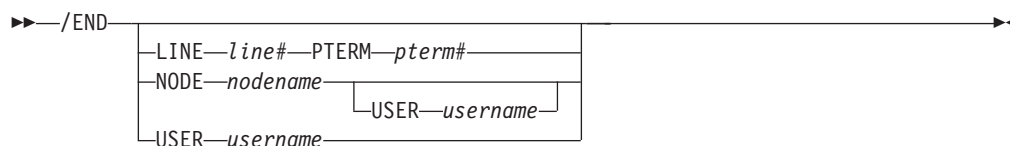
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 230. Valid environments for the /END command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/END	X		X
LINE	X		X
NODE	X		X
PTERM	X		X
USER	X		X

Syntax



Keywords

The following keywords are valid for the /END command:

LINE

Specifies the communication line for which special operating modes are terminated.

NODE

Specifies the VTAM node for which special operating modes are terminated.

/END NODE is not valid for ISC nodes with users or nodes that were dynamically created. /END NODE USER only applies to ISC sessions and affects the half-session allocated to username.

Restrictions for using NODE and USER parameters together:

- Commands with the NODE USER keyword pair are valid only if:
 - The USER is signed on to the NODE
 - In an ISC environment, the USER is allocated to the NODE
 - The nodes and users already exist
- /END NODE USER commands are valid for ISC and non-ISC nodes and users.

USER

Without the NODE keyword, USER specifies the dynamic user for which special operating modes are terminated. The named user must exist in IMS, must be dynamic, and must not be signed on to a node. When /END USER is issued against a temporary user, which was created solely to retain status that is now reset, the temporary user is deleted at the next simple checkpoint.

Usage notes

The /END NODE command applies to dynamic nodes in addition to static nodes because MFSTEST mode is associated with dynamic nodes as well as dynamic users. The /END NODE command and the /END NODE USER command reset MFSTEST mode at the node level. The /END USER command resets MFSTEST at the user level. The /END command with no keywords resets MFSTEST at the node level for static terminals (they have no user level) and at the user level for dynamic terminals. The /END NODE USER command supports static and dynamic ISC sessions. When the /END NODE command or the /END NODE USER command is used for a dynamic node, only MFSTEST is reset. Exclusive mode can only be reset for a dynamic resource with the /END USER command. If global resource information is kept in Resource Manager, MFSTEST mode is reset globally and locally. If global resource information is not kept in Resource Manager, MFSTEST mode is reset locally.

The /END command with no keywords operates on the entering terminal with a signed on user. The /END command with no keywords is not supported through the OM API in an IMSplex.

This command can be issued to an IMSplex using the Batch SPOC utility.

Example

Entry ET:

```
/END
```

Response ET:

```
DFS058I  END COMMAND COMPLETED
```

Explanation: All modes that previously existed are ended.

Chapter 28. /ERESTART command

Use the /ERESTART command, which is a multisegment command, to perform a manual restart of an IMS XRF alternate system and to restart IMS any time the system was not terminated with an orderly /CHECKPOINT shutdown.

Three conditions that result in the need for an emergency restart are:

- Abnormal termination of IMS
- Abnormal termination of z/OS
- Forced termination of IMS by using the z/OS MODIFY command

Subsections:

- “Environment”
- “Syntax” on page 588
- “Keywords” on page 589
- “Usage notes” on page 594
- “Examples” on page 594

Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 231. Valid environments for the /ERESTART command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/ERESTART	X	X	X
BACKUP	X		X
BUILDQ	X		X
CHECKPOINT	X	X	X
CMDAUTH	X		X
CMDAUTHE	X		X
COLDBASE	X	X	
COLDCOMM	X		X
COLDSYS	X	X	X
FORMAT	X	X	X
MULTSIGN	X		X
NOBMP	X	X	X
NOCMDAUTH	X		X
NOCMDAUTHE	X		X
NOTRANAUTH	X		X
NOUSER	X		X
OPTION	X	X	X
OVERRIDE	X	X	X
SNGLSIGN	X		X

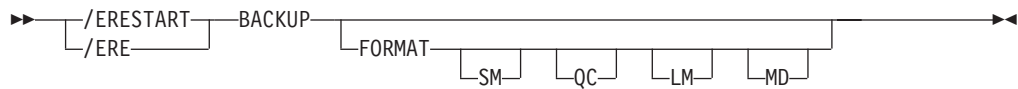
Table 231. Valid environments for the /ERESTART command and keywords (continued)

Command / Keywords	DB/DC	DBCTL	DCCTL
TRANAUTH	X		X
USER	X		X

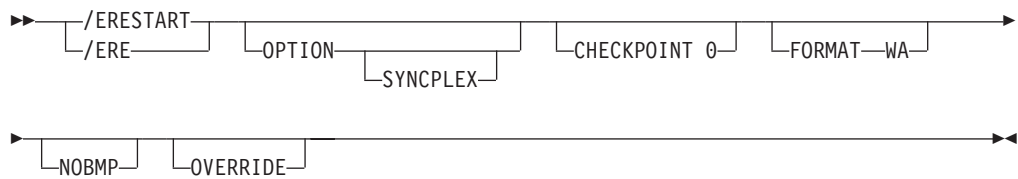
Syntax

Manual restart of an XRF alternate system

Use this command only after the active system issues message DFS3804I.

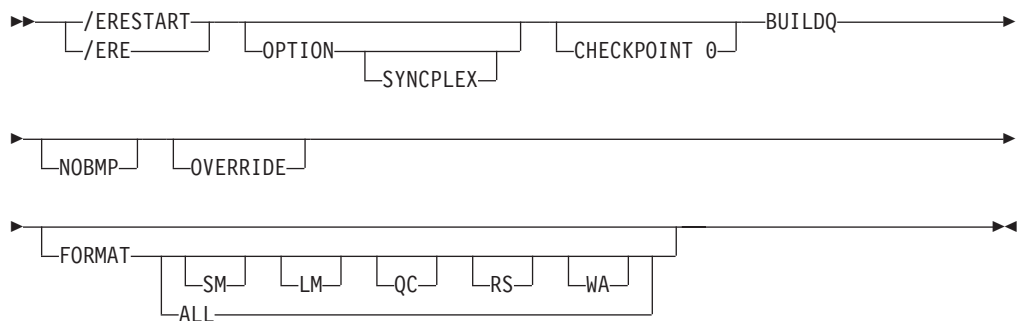


Restart of IMS following loss of virtual storage only

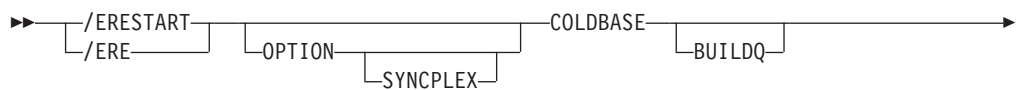


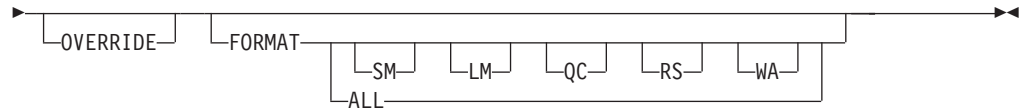
Restart of IMS following loss of virtual storage and message queue data set integrity

The message queues have not been dumped to the system log since the most recent cold start.

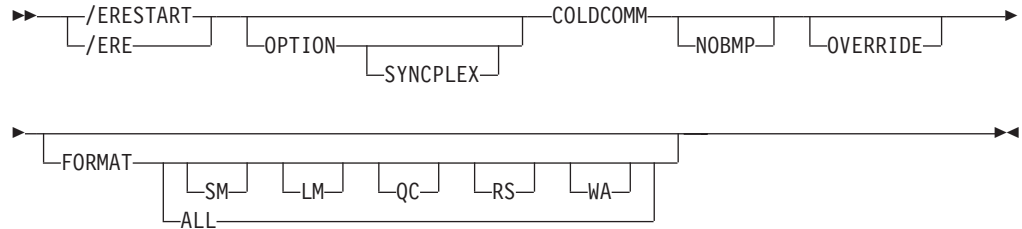


Restart of IMS following /ERESTART failure of the database component

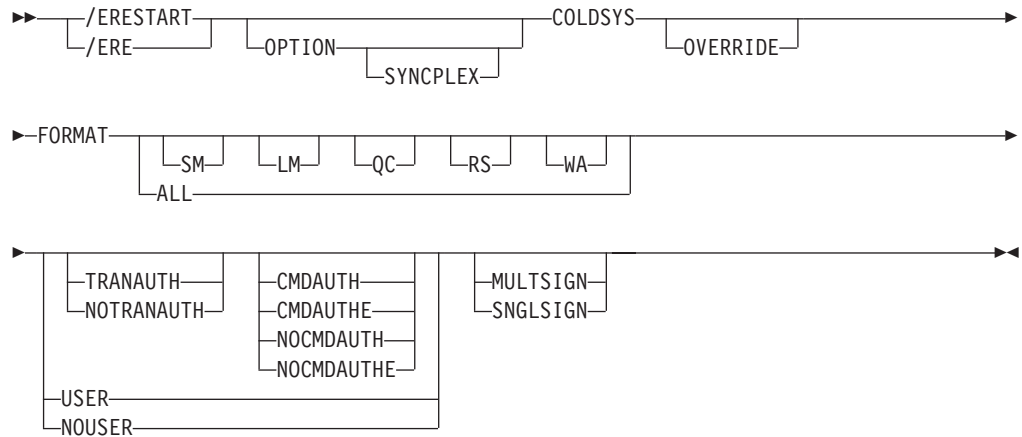




Restart of IMS following /ERESTART failure of communication component



Restart of IMS following /ERESTART failure of both the database and communication components



Keywords

The following keywords are valid for the /ERESTART command:

BACKUP

Indicates that the control region is an alternate system in an XRF environment. This command is required when performing manual restart.

BUILDQ

Is required for any restart from a failure in which message queue data set integrity was lost. When a checkpoint other than checkpoint 0 is specified, the checkpoint must be one at which the message queues were dumped to the system log. Message queue data set integrity has been lost if one or more of the data sets have been reallocated or reformatted. If a checkpoint is not specified, IMS selects the appropriate checkpoint from which to start.

If an /ERESTART BUILDQ command fails, and then you issue the /ERESTART CHECKPOINT 0, /ERESTART COLD COMM, or /ERESTART COLD SYS command, messages in local queues are lost. However, IMS Message Requirer (MRQ) can be used to recover local message queues.

In a shared-queues environment, the BUILDQ keyword is ignored because the message queue data sets are not used.

CHECKPOINT

CHECKPOINT is an optional keyword that identifies whether the restart should use the latest cold start system checkpoint that was taken by the IMS subsystem. If you do not specify this keyword, IMS determines the correct system checkpoint to use. If you do specify this keyword, you can specify only CHECKPOINT 0 to use the latest cold start system checkpoint.

CMDAUTH

Specifies that both signon (user identification verification) and command authorization for static and ETO terminals are in effect at the end of the emergency restart. (Command authorization is same as specifying RCF=S on the startup parameter.)

To specify CMDAUTH, you must specify one of the following:

- TYPE=RACFTerm|RACFCOM|SIGNEXIT|TRANEXIT on the SECURITY macro
- RCF=A|Y|T|C|S as an initialization EXEC parameter

CMDAUTC

Specifies that command authorization for ETO terminals (same as RCF=S on the startup parameter) is in effect at the end of the emergency restart. CMDAUTC also resets command authorization for static terminals, if it was set.

To specify CMDAUTC, you must specify one of the following:

- TYPE=RACFTerm|RACFCOM|SIGNEXIT|TRANEXIT on the SECURITY macro
- RCF=A|Y|T|C|S as an initialization EXEC parameter

COLDBASE

Indicates a cold start of the database component, while performing an emergency restart of the communications component.

- If this keyword is used, you are responsible for the recovery of the databases. The Fast Path areas will not be redone and no backouts of inflight DL/I databases will be performed. If in-doubts exist, a batch backout run with the cold start option will backout inflight DL/I data. This will place both DL/I and Fast Path data in the aborted state.
- If this keyword is not used, the database component will be warm started.

COLDCOMM

Indicates a cold start of the data communication component, while an emergency restart of the database component is being performed. This includes recovering Fast Path DEDBs, reloading MSDBs, backing out inflight changes to DL/I databases, and maintaining all existing indoubt data. COLDCOMM is used to get the DC network reinstated as soon as possible while databases are being recovered. As a result of COLDCOMM, all of the messages on the local message queue will be lost; inflight messages in shared queues are moved to the cold queue for later recovery. If this keyword is not used, the data communication component will be restarted.

COLDSYS

Indicates a cold start of both the database and the data communication components. An /ERE COLDSYS command differs from a /NRE CHECKPOINT 0 command in function, but the COLDSYS keyword is equivalent to, and replaces, the /NRE CHECKPOINT 0 DETACH command. The COLDSYS keyword is the newer syntax.

The use of the COLDSYS keyword causes the release of database authorizations for DBCTL SHARECTL (full DBRC data sharing) and releases any locks held by the subsystem in IRLM. This is the required form of cold start following a failure when using DBRC SHARECTL.

The SGN=, TRN=, and RCF= startup parameters can be overridden by the /ERESTART COLDSYS command using the keywords shown in the following table. This table lists the keywords and the startup parameters that those keywords can override and a brief description.

Table 232. Security keywords and their startup parameter equivalents

Keyword ¹	Description	Startup parameter
CMDAUTH	RACF command authorization on static and ETO terminals only	RCF=S
CMDAUTHE	RACF command authorization on ETO terminals only	RCF=C
MULTSIGN	Permits multiple signons for each user ID	SGN=M
NOCMDAUTH	Resets the command authorization on static and ETO terminals	Not RCF=S
NOCMDAUTHE	Resets the command authorization on ETO terminals only	Not RCF=C
NOTRANAUTH	Resets the transaction authorization.	Not TRN=F or Y
NOUSER	Resets user identification verification, transaction authorization, and command authorization	Not SGN=F or Y (G or Z becomes M) Not TRN=F or Y Not RCF=C or S
SNGLSIGN	Permits a single signon for each user ID	SGN=F and Y Not SGN=M (G or Z becomes F or Y)
TRANAUTH	Transaction authorization	TRN=F or Y
USER	Sets user identification verification	SGN=Y

Note:

1. Valid only with the /ERESTART COLDSYS command.

FORMAT

Specifies which queues or data sets should be formatted as part of the restart process when:

- A message queue or data set I/O error occurs.
- The size of a message queue or data set is to be changed.
- A message queue or data set is to be reallocated.
- Allocation of the WADS changes.

When queues or data sets must be formatted as part of the restart process, specify one or more of the following:

- SM** Short-message queue
- LM** Long-message queue
- QC** Control record data set (QBLKs)
- RS** Restart data set

- WA** Write ahead data set
- MD** MSDB dump data set (valid only for backup)
- ALL** All message queues (SM and LM) and data sets (QC, WA, and RS). For DBCTL, this supports RS and WA only.

Any combination of SM, LM, QC, WA, MD, and RS can be specified; for example, FORMAT LM RS. When you specify ALL, do not specify SM, LM, QC, WA, MD, or RS.

In a shared-queues environment, the LM, SM, and QC parameters are ignored because the message queue data sets are not used. If you specify ALL, IMS does not attempt to format the message queue data sets.

The following table shows the environments in which the parameters are valid.

Table 233. /ERESTART FORMAT command parameter environments

Parameter	DB/DC	DBCTL	DCCTL
SM	X		X
LM	X		X
QC	X		X
RS	X	X	X
WA	X	X	X
MD	X		X
ALL	X	X	X

If the WADS must be reformatted during emergency restart, the ALL parameter can be used. IMS first closes the OLDS from the WADS and then reformats the WADS. If you generally use the ALL parameter during restart, do not be concerned that the WADS will not be available to close the OLDS.

MULTSIGN

Permits multiple signons for each user ID.

In an IMSplex with Resource Manager and a resource structure, if MULTSIGN conflicts with the single user signon definition for the IMSplex, a warning message is issued.

NOBMP

Specifies no backout of BMP updates occurs and all affected databases and programs are stopped.

If NOBMP is not specified, all updates made subsequent to the last commit point invoked by the active BMP programs are backed out of the database as part of the restart process.

NOBMP is ignored if no BMP programs were active at the time of the system failure.

NOCMDAUTH

Resets command authorization on static and ETO terminals.

NOCMDAUTE

Resets command authorization for static and ETO terminals. The command authorization is reset for static terminals because the command authorization for static terminals cannot exist without the command authorization for ETO terminals.

NOTRANAUTH

Turns off transaction authorization. NOTRANAUTH is not the opposite of TRANAUTH. TRANAUTH sets transaction authorization and also turns on signon (user identification verification).

If you specify NOTRANAUTH, it will be rejected with an error message if either:

- SECLEVEL=FORCTAN was specified on the system definition SECURITY macro.
- TRN=F was specified as a JCL EXEC parameter.

NOUSER

Specifies that none of the following is in effect at the end of the emergency restart:

- Transaction authorization
- User identification verification
- Command authorization

OPTION

Specifies parameters that are in effect for the execution of the restart process.

The valid parameters for this keyword are as follows:

SYNCPLEX

Synchronize the startup of IMS systems after a multi-IMS failure. The option SYNCPLEX is entered on all the IMS systems that are to be synchronized. At the end of the restart process, the write to operator with replay (WTOR) message, DFS3067A, is issued. Once all of the IMS Systems are at this WTOR, they are now synchronized and can resume normal processing. The operator replies to the WTOR on each IMS and normal processing resumes

OVERRIDE

Is required only to restart the system after failure of power, machine, z/OS, or DBRC where IMS abnormal termination was unable to mark the DBRC subsystem record in RECON as abnormally terminated. IMS emergency restart will abort with message DFS0618A when DBRC indicates that the subsystem is currently active and that neither the OVERRIDE keyword nor the BACKUP keyword is present on the /ERESTART command. If there is any doubt about the status of an IMS system at restart time, the OVERRIDE keyword should not be used.

Attention: Use of the OVERRIDE keyword on a currently running IMS system can lead to database and system integrity problems.

SNGLSIGN

Permits a single signon for each user ID.

In an IMSplex with Resource Manager and a resource structure, if SNGLSIGN conflicts with the single user signon definition for the IMSplex, a warning message is issued.

TRANAUTH

Specifies both transaction authorization and user identification verification, with or without RACF.

To specify TRANAUTH, you must specify one of the following:

- TYPE=RACFTERM|RACFCOM|SIGNEXIT|TRANEXIT on the SECURITY macro
- RCF=A|Y|T|C|S as an initialization EXEC parameter

USER

Specifies user identification verification. User identification verification means that signon is required by static terminals. This keyword has no effect on ETO terminals because they are always required to sign on. User identification verification can be forced on by TRANAUTH or CMDAUTH.

To specify USER, you must specify one of the following:

- TYPE=RACFTerm|RACFCom|SIGNEXIT|TRANEXIT on the SECURITY macro
- RCF=A|Y|T|C|S as an initialization EXEC parameter

Usage notes

This command can be issued to an IMSplex by using the Batch SPOC utility.

For an /ERESTART command restart, the base security definition is created:

- From the IMS system definition and the EXECUTE parameter specifications, when the COLDSYS keyword is specified.
- From the IMS checkpoint data, when the COLDSYS keyword is not specified.

To override the security definitions, specify the COLDSYS keyword and the security keywords on the COLDSYS keyword.

The format for /ERESTART depends on whether the IMS system is an XRF alternate system. If the system is not an alternate system, the format also depends on the type of system failure that is associated with the termination and whether the message queues have been dumped to the system log since the most recent cold start.

All /ERESTART formats require an EOM indication to denote end-of-message; an EOS indication must be included for all segments that precede the last segment.

With Fast Path, the /ERESTART command loads the latest MSDB checkpoint data set and applies all MSDB changes up to the latest complete commit point. /ERESTART also ensures that DEDB updates created between the restart checkpoint and the latest complete commit point are applied. If the DEDB updates are not applied, they are queued for output. Output messages not acknowledged or not transmitted are also queued for output.

When IMS is initialized, the system parameters that are used for this initialization can come from the IMS system generation, from a PROCLIB member, or from EXEC statements that can override both the defaults and the PROCLIB members. Therefore, message DFS1929I is displayed showing the system parameters used for this particular initialization. The system parameters are also written to the job log.

Examples

The following are examples of the /ERESTART command:

Example 1 for /ERESTART command

All system data sets are intact.

Entry ET:

/ERESTART.

Response ET:

```
DFS058I (time stamp) ERESTART COMMAND IN PROGRESS
DFS680I USING CHKPT 85200/123456
DFS994I *CHKPT 85201/110117**SIMPLE*
```

Explanation: The restart is being performed from checkpoint 85200/123456, which was selected by IMS. If IMS contained active BMPs when the system failed, checkpoint 85200/123456 is the checkpoint that allows backout of all updates made by each active BMP since its latest system checkpoint. A simple checkpoint is written on the system log. The checkpoint number is 85201/110117.

Example 2 for /ERESTART command

Message queues are in error.

Entry ET:

```
/ERESTART BUILDQ.
```

Response ET:

```
DFS058I (time stamp) ERESTART COMMAND IN PROGRESS
DFS680I USING CHKPT 85119/074811
DFS994I *CHKPT *85120/192021**SIMPLE*
```

Explanation: IMS is restarted at 192021 (time) on 85120 (* * date) from the most recent DUMPQ or SNAPQ checkpoint, 85119/074811. A simple checkpoint is written on the system log. The checkpoint number is 85120/192021.

The message queues from checkpoint 85119/074811 are loaded.

If BMP programs were active when the system failed, all updates invoked by the BMP programs are backed out.

Example 3 for /ERESTART command

Small and large message queues were reallocated. The message queues have been dumped at least once since the most recent cold start.

Entry ET:

```
/ERESTART BUILDQ FORMAT SM LM.
```

Response ET:

```
DFS058I (time stamp) ERESTART COMMAND IN PROGRESS
DFS680I USING CHKPT 85201/070348
DFS994I *CHKPT *85204/010203**SIMPLE*
```

Explanation: IMS is restarted at 010203 (time) on 85204 (Julian date). A simple checkpoint was written on the system log. The checkpoint number is 85204/010203.

The large and small message queue data sets are reformatted.

The message queues are loaded from checkpoint 85201/070348.

If BMP programs were active when the system failed, all updates invoked by the BMP programs are backed out.

Example 4 for /ERESTART command

Message queues in error or data sets reallocated and the message queues have not been dumped since the most recent cold start.

Entry ET:

```
/ERESTART BUILDQ FORMAT ALL NOBMP.
```

Response ET:

```
DFS058I (time stamp) ERESTART COMMAND IN PROGRESS
DFS680I USING CHKPT 85045/112140
DFS994I *CHKPT 85121/235959**SIMPLE*
```

Explanation: IMS is restarted at 235959 (time) on 85121 (Julian date) from the checkpoint taken during cold start 85045/112140. A simple checkpoint is written on the system log. The checkpoint number is 85121/235959.

All message queues and data sets are reformatted.

The message queues from the system log were loaded.

BMP programs that were active when the system failed are stopped, as are the databases updated by them.

Example 5 for /ERESTART command

The following two figures show formatted master screens for active and backup IMS master terminals in an XRF environment.

The /ERESTART BACKUP command was entered on the master terminal of the XRF IMS system IMSB. During the synchronization phase, the alternate system requested a SNAPQ checkpoint from the active system. The /ERESTART BACKUP is currently complete and alternate system IMSB is now tracking active system IMSA.

```
02/05/15 14:28:44 RSENAME: DFSRSENM BACKUP TRACKING IN PROGRESS IMSB
DFS810A IMS READY 085135/1422535 IMS432 .IEFPROC
DFS058 14:26:10 ERESTART COMMAND IN PROGRESS
DFS3871I JOINAVM WAS SUCCESSFUL
DFS3873I JOINRSE MODE=BACKUP WAS SUCCESSFUL
DFS3857I OKTOSYNC ARRIVED FROM THE ACTIVE SYSTEM.
DFS680I USING CHKPT85135/142629
DFS2591I NO MSDB HEADERS FOUND, IMAGE COPY LOAD IGNORED
DFS3839I 14:26:46 XRF INITIAL DC PRE-OPEN COMPLETE.
DFS3838I 14:28:41 XRF INITIAL DB PRE-OPEN COMPLETE.
```

/ere backup.

PASSWORD:

Figure 4. IMS formatted master for the alternate system

```

02/05/15 14:26:40 RSENAME: DFSRSENM ACTIVE IMSA
DFS3499I ACTIVE DDNAMES: MODBLKSA IMSACBA FORMATA MODSTAT ID: 11
DFS3804I LAST CHKPT ID VALID FOR RESTART: 85135/141619-BUILDQ: 85135/141619

DFS994I COLD START COMPLETED.
DFS3830 14:16:23 NO DEFERRED PAGE FIXING WAS DONE
DFS3856I REQSYNC WAS PROCESSED TO TAKE SNAPQ CHKPT.
DFS994I *CHKPT 85135/14269***SNAPQ**
DFS3499I ACTIVE DDNAMES: MODBLKSA IMSACBA FORMATA MODSTAT ID: 11
-----

MASTER MESSAGE WAITING PASSWORD:

```

Figure 5. IMS formatted master for the active system

Related concepts:

 Synchronizing IMS restart after a multiple IMS system failure (System Administration)

 Shutting down an IMS system that uses dynamic resource definition (Operations and Automation)

Related reference:

“Commands recovered during emergency restart” on page 28

“How to enter IMS commands” on page 2

 /CHECKPOINT command (Commands)

Chapter 29. /EXCLUSIVE command

Use the /EXCLUSIVE command to put a terminal into exclusive mode. This command, without keywords, is valid from a terminal with a signed on user.

The LINE PTERM and NODE keywords are only valid for output-only terminals. For a dynamically created user, the exclusive mode status is remembered across signons.

Subsections:

- “Environment”
- “Syntax”
- “Keywords”
- “Usage notes” on page 600
- “Examples” on page 600

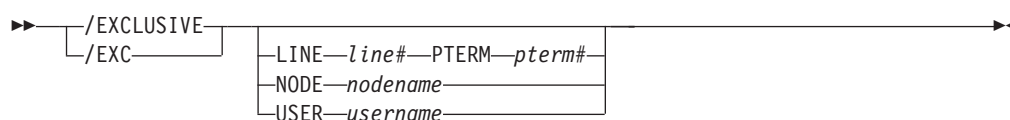
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 234. Valid environments for the /EXCLUSIVE command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/EXCLUSIVE	X		X
LINE	X		X
NODE	X		X
PTERM	X		X
USER	X		X

Syntax



Keywords

The following keywords are valid for the /EXCLUSIVE command:

LINE PTERM

Specifies the communication line to be put into exclusive mode. The /DISPLAY LINE line# PTERM pterm# command identifies a terminal in exclusive mode.

NODE

Specifies that the static VTAM node be put into exclusive mode. This command is not valid for nodes that were dynamically created.

USER

Specifies that the dynamic user be put into exclusive mode. If the user does

not exist in IMS, it and its associated LTERMs will be created to remember the exclusive status. If /EXCLUSIVE USER is issued against an existing user, the user must be dynamic.

Usage notes

Exclusive mode restricts the output received by the terminal affected:

- A regular input/output terminal in exclusive mode only receives messages transmitted in response to transactions entered from that physical terminal.
- An output-only terminal in exclusive mode receives messages transmitted in response to transactions entered into its associated input logical terminals.

Except for an IMS system message responding to an error condition, all other output for a terminal in exclusive mode remains queued for later transmission. The queued output is transmitted after exclusive mode is reset with the /END command or a /START command.

In an IMSplex, if global resource information is kept in Resource Manager, the /EXCLUSIVE command sets a global exclusive status for the resource. If global resource information is not kept in Resource Manager, the /EXCLUSIVE command sets the status.

This command can be issued to an IMSplex using the Batch SPOC utility.

The /END command is used to get a terminal out of exclusive mode.

Examples

The following are examples of the /EXCLUSIVE command:

Example 1 for /EXCLUSIVE command

Entry ET:

```
/EXCLUSIVE
```

Response ET:

```
DFS058I EXCLUSIVE COMMAND COMPLETED
```

Explanation: No messages are sent to this terminal other than application program output resulting directly from transaction input.

Example 2 for /EXCLUSIVE command

Entry ET:

```
/EXCLUSIVE USER alpha
```

Response ET:

```
DFS058I EXCLUSIVE COMMAND COMPLETED
```

Chapter 30. /EXIT command

Use the /EXIT command to end conversations between users and application programs.

The conversation can be either active or in hold status at the time /EXIT is entered. Depending upon the conversational processing options selected for the IMS system, the application program might or might not be notified of the conversation termination.

Subsections:

- “Environment”
- “Syntax”
- “Keywords”
- “Usage notes” on page 602
- “Examples” on page 603

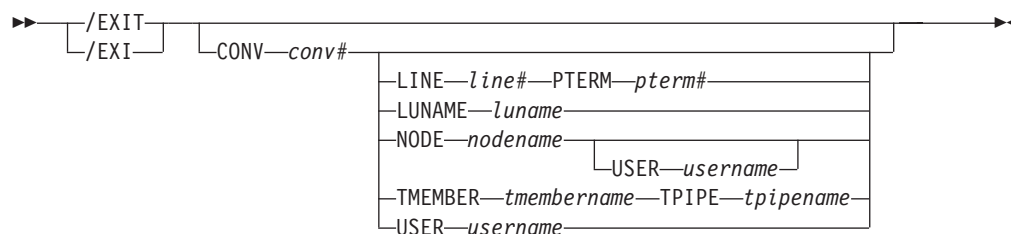
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 235. Valid environments for the /EXIT command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/EXIT	X		X
CONVERSATION	X		X
LINE	X		X
LUNAME	X		X
NODE	X		X
PTERM	X		X
TMEMBER TPIPE	X		X
USER	X		X

Syntax



Keywords

The following keywords are valid for the /EXIT command:

CONVERSATION

Terminates the specified conversation. The conversation is terminated whether it was active or held. The conversation identifier (conv#) must be specified as a 4-digit number, including leading zeros.

LINE PTERM

Terminates the conversation on the physical terminal specified, regardless of whether the conversation was active or held. The line specified must be in stopped and idle status.

LUNAME

Terminates the IMS conversation and the APPC conversation on the specified luname. In an IMSplex environment, /EXIT LUNAME needs to be issued on the IMS that owns the conversation. Within an IMS system, the conversation ID is unique.

NODE

Terminates the conversation on the node specified, regardless of whether the conversation was active or held. The node specified must be stopped or idle. This form of the command does not support dynamic nodes or LU 6.2 nodes defined with users.

The NODE USER combination applies only to the specified half-session of the ISC parallel session node allocated to USER. The half-session must have been stopped and idled. The command must be issued from a terminal or node other than the one in the conversation.

Restrictions for using NODE and USER parameters together:

- Commands with the NODE USER keyword pair are valid only if:
 - The USER is signed on to the NODE
 - In an ISC environment, the USER is allocated to the NODE
 - The nodes and users already exist
- /EXIT (CONV) NODE USER commands are valid for ISC, LUP, and 3600 nodes only.

TMEMBER TPIPE

Terminates the IMS conversation on the specified *tmembername* *tpipename*. In an IMSplex environment, /EXIT TMEMBER TPIPE must be issued on the IMS that owns the conversation. Within an IMS system, the conversation ID is unique.

USER

Terminates the conversation associated with the specified user. The user must not be signed on to a node. The user must be dynamic.

Usage notes

Transactions that are queued for processing when the /EXIT command is issued are discarded. If a transaction is being processed or was sent to a remote system for processing when /EXIT is issued, the command is still processed; however, the conversation will be terminated, but the conversational transaction will still be issued. When the conversational response is received, the Conversational Abnormal Termination exit (DFSCONE0) is called, and the response message is queued to the response terminal.

The /EXIT command with no keywords can only be used if the conversation is active.

If global resource information is kept in Resource Manager (RM), /EXIT NODE or /EXIT USER terminates the conversation in RM. If global resource information is not kept in RM, /EXIT NODE or /EXIT USER terminates a conversation on the IMS where the /EXIT command is entered or routed to by the OM SPOC.

This command can be issued to an IMSplex using the Batch SPOC utility.

/EXIT is not valid from an LU 6.2 device or OTMA device. DEALLOCATE the APPC conversation after receiving all output from an iteration. When the /EXIT command specifies only the CONVERSATION keyword, the command can be entered only from the terminal that owns the conversation.

Examples

The following are examples of the /EXIT command:

Example 1 for /EXIT command

Entry ET:

```
/EXIT
```

Response ET:

```
DFS058I  EXIT COMMAND COMPLETED
```

Explanation: The active and not held conversation associated with the entering terminal is terminated.

Example 2 for /EXIT command

Entry ET:

```
/EXIT
```

Response ET:

```
DFS576I  EXIT COMPLETED, TRANSACTION DISCARDED
```

Explanation: /EXIT processing found the conversational transaction enqueued for an application or transmission across an MSC link, but it has not yet been scheduled for processing. The transaction has been discarded.

Example 3 for /EXIT command

Entry ET:

```
/EXIT
```

Response ET:

```
DFS577I  EXIT COMPLETED, TRANSACTION STILL ACTIVE
```

Explanation: /EXIT processing found the conversational transaction had been or is in the process of being transmitted across an MSC link.

Example 4 for /EXIT command

Entry ET:

```
/EXIT CONVERSATION 0001
```

Response ET:

```
DFS058I  EXIT COMMAND COMPLETED
```

Explanation: The active or held conversation (0001) is terminated if the terminal is in conversation.

Example 5 for /EXIT command

Entry ET:

```
/EXIT CONVERSATION 0001 LINE 10 PTERM 2
```

Response ET:

```
DFS058I  EXIT COMMAND COMPLETED
```

Explanation: Used from another PTERM or master terminal when a PTERM in conversation is "locked," waiting for a response. /EXIT CONVERSATION should be used before a /START LINE command that resets all conversations active on the line.

Chapter 31. EXPORT command

Use the EXPORT command to export runtime resource and descriptor definitions from the online IMS system to a resource definition data set (RDDS). The resource and descriptor definitions can then be added to IMS dynamically through the IMPORT command.

Subsections:

- “Environment”
- “Syntax”
- “Keywords” on page 606
- “Usage notes” on page 609
- “Output fields” on page 611
- “Return, reason, and completion codes ” on page 611
- “Examples” on page 614

Environment

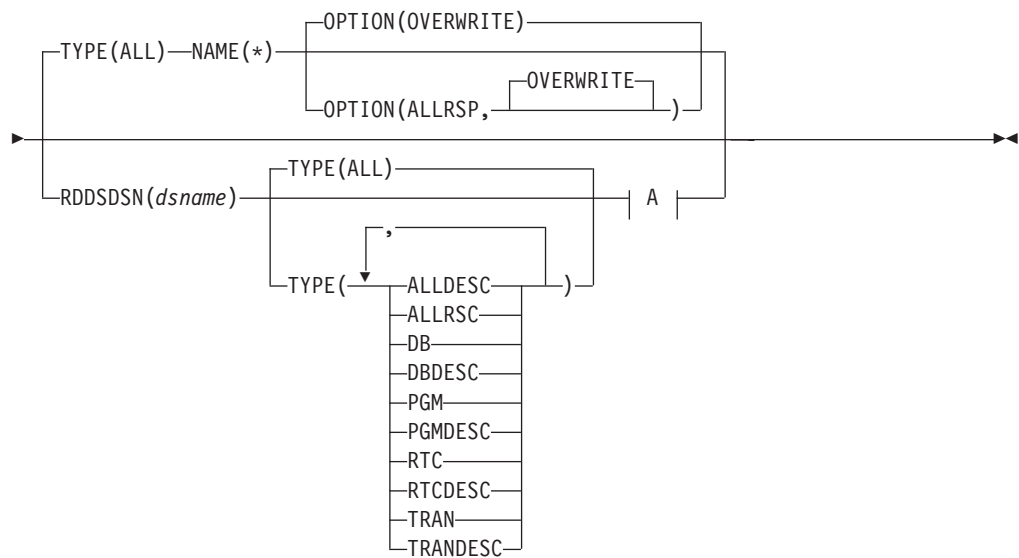
The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 236. Valid environments for the EXPORT command and keywords

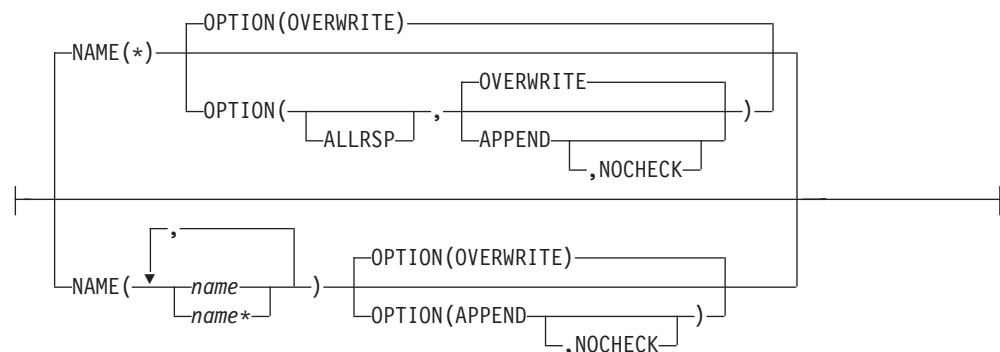
Command / Keywords	DB/DC	DBCTL	DCCTL
EXPORT	X	X	X
DEFN	X	X	X
NAME	X	X	X
OPTION	X	X	X
RDDSDSN	X	X	X
TARGET	X	X	X
TYPE	X	X	X

Syntax





A:



Keywords

The following keywords are valid for the EXPORT command:

DEFN

Specifies that resource and descriptor definitions are to be exported.

NAME()

Specifies the 1-8 character name of a resource or descriptor. Wildcards can be specified in the name. The name is a repeatable parameter. If the NAME parameter specified is a specific name or a wildcard, command responses are returned for all the resource names that are processed. NAME is an optional parameter, and if not specified, it defaults to NAME(*). For NAME(*), command responses are returned only for the resource and descriptor names that resulted in an error. OPTION(ALLRSP) can be specified with NAME(*) to obtain the command responses for all of the resource and descriptor names that are processed.

OPTION()

Specifies additional functions to be performed along with the command.

ALLRSP

Indicates that response lines are to be returned for all resources and descriptors that are processed by the command. If NAME(*) is specified,

the default action is to return response lines only for the resources and descriptors that resulted in an error. `OPTION(ALLRSP)` can be used with `NAME(*)` to request response lines for all resources and descriptors processed by the command. If a name value other than `NAME(*)` is specified, the default action is to return a response line for all resources and descriptors processed by the command. If `OPTION(ALLRSP)` is specified with a name value other than `NAME(*)`, the `ALLRSP` parameter is ignored.

For HALDB databases, only the definition of the HALDB master database is exported. HALDB partition definitions are not exported, because the partition definitions are maintained in the RECON data set. `OPTION(ALLRSP)` does not include the partitions definitions in the output and therefore does not flag them with a nonzero completion code.

When coding the Destination Creation exit routine (`DFSINSX0`), the user can indicate whether the definitions for transaction and program resources created by the exit should be exported. Transaction and program resource definitions that are not exported are not included in the `OPTION(ALLRSP)` output.

IMS resources such as the Fast Path utility (`DBF#FPU0`) and the IMS defined descriptors (`DBFDSRT1`, `DFSDSDB1`, `DFSDSPG1`, and `DFSDSTR1`) are not exported. `OPTION(ALLRSP)` does not include these resources and descriptors in the output and therefore does not flag them with a nonzero completion code.

APPEND

Indicates that the resource and descriptor definitions are to be appended to the end of the specified RDDS data set. If `OPTION(NOCHECK)` is not specified, validity checking is done to ensure that the IMS performing the export is the same IMS that previously exported definitions to the RDDS. The `APPEND` option is valid only when exporting to a non-system RDDS.

`APPEND` is mutually exclusive with `OVERWRITE`. If `APPEND` results in multiple definitions for the same resource in the RDDS, IMS uses the definition that was exported most recently when the definitions are imported.

NOCHECK

Indicates that no ID checking is to be done when definitions are appended to an RDDS. If `OPTION(NOCHECK)` is specified, the IMS performing the export can be a different IMS than the one that performed the previous export. The `NOCHECK` option is valid only when exporting to a non-system RDDS. `NOCHECK` is mutually exclusive with `OVERWRITE` and can be specified only if `APPEND` is specified.

OVERWRITE

Indicates that the resource and descriptor definitions are to overwrite any existing definitions in the RDDS. `APPEND` is mutually exclusive with `OVERWRITE`. `OVERWRITE` is the default and the only valid option when exporting to a system RDDS.

RDDSDSN(*dsname*)

An optional keyword that is used to specify the name of a non-system RDDS to which resource and descriptor definitions are to be exported. When the `RDDSDSN()` keyword is omitted from the `EXPORT` command, the definitions are written to the system RDDS that contains the oldest data. The data set name specified in the `RDDSDSN()` keyword cannot be the name of any of the system RDDSs defined in the `DYNAMIC_RESOURCES` section of the

DFSDFxxx PROCLIB member. If a set of system data sets is not defined in the DYNAMIC_RESOURCES section of the DFSDFxxx PROCLIB member, the RDDSDSN() keyword is required on the EXPORT command.

If using the RDDSDSN() keyword to specify a specific data set, care should be taken when routing the EXPORT command by using Operations Manager (OM) routing. If the command is routed to multiple IMS systems in the IMSplex, only the IMS selected as the command master will process the command.

The data set specified for the RDDSDSN() keyword must be a physical sequential (DSORG=PS) BSAM data set. The data set must exist and be cataloged. When creating and allocating the RDDS data set, ensure that an end-of-file (EOF) mark is placed at the beginning of the data set. Failure to do so can produce unpredictable results. To place an EOF mark at the beginning of the data set, use program IEBGENER. The sample job skeleton DFSRDDAL, which is in the IMS.SDFSSLIB data set, can be used for this step. An alternative method of allocating the RDDS data sets is to use the ALLOCATE function of ISPF utilities. The ALLOCATE function places an EOF mark correctly at the beginning of the data set. Do not use program IEFBR14 to allocate the RDDS data sets, because IEFBR14 does not place an EOF mark at the beginning of the data set.

IMS allocates the RDDS with DISP=OLD during the export process. If you attempt to allocate a new data set by using JCL in one step of a job and then try to issue the EXPORT command by using the batch SPOC in another step of the same job, the batch export will fail with return code 10 (environment error) and reason code 4118 (data set allocate error), followed by message DFS2503W with error reason code 210 (data set is allocated to another job). This is because IMS cannot obtain an exclusive enqueue on the newly allocated RDDS.

Generation data group (GDG) data sets are not fully supported for RDDSs. Relative generation numbers cannot be used when specifying an RDDS name. For example, if you specify RDDSDSN(IMS.EXP.GDG(0)) or RDDSDSN(IMS.EXP.GDG(+1)), the EXPORT command will fail with message DFS2503W and error reason code 35C (invalid parm specified in text unit). Specifying the absolute generation number for a GDG data set does work. For example, RDDSDSN(IMS.EXP.GDG.G0001V00) can be specified.

TARGET()

Specifies where resource and descriptor definitions are to be exported.

RDDS

Specifies that resource and descriptor definitions are to be exported to an RDDS. If the RDDSDSN() keyword is not used to specify the name of a non-system RDDS, the system RDDS with the oldest data is used.

TYPE()

Specifies the type of resource or descriptor definitions to export.

ALL

Specifies that all definitions for all resource and descriptor types (DB, DBDESC, PGM, PGMDESC, RTC, RTCDESC, TRAN, and TRANDESC) are to be exported.

ALLDESC

Specifies that all definitions for all descriptor types (DBDESC, PGMDESC, RTCDESC, and TRANDESC) are to be exported. TYPE(ALLDESC) is not valid when exporting to a system RDDS or when exporting from an IMS that does not have DRD enabled.

ALLRSC

Specifies that all definitions for all resource types (DB, PGM, RTC, and TRAN) are to be exported. TYPE(ALLRSC) is not valid when exporting to a system RDDS.

DB Specifies that one or more database definitions are to be exported. TYPE(DB) is not valid when exporting to a system RDDS. If TYPE(DB) is specified on a DCCTL system, completion code 10 ("NO RESOURCES FOUND") is returned.

DBDESC

Specifies that one or more database descriptor definitions are to be exported. TYPE(DBDESC) is not valid when exporting to a system RDDS or when exporting from an IMS that does not have DRD enabled. If TYPE(DBDESC) is specified on a DCCTL system, completion code 10 ("NO RESOURCES FOUND") is returned.

PGM

Specifies that one or more program definitions are to be exported. TYPE(PGM) is not valid when exporting to a system RDDS.

PGMDESC

Specifies that one or more program descriptor definitions are to be exported. TYPE(PGMDESC) is not valid when exporting to a system RDDS or when exporting from an IMS that does not have DRD enabled.

RTC

Specifies that one or more routing code definitions are to be exported. TYPE(RTC) is not valid when exporting to a system RDDS. If TYPE(RTC) is specified on a DBCTL system, completion code 10 ("NO RESOURCES FOUND") is returned.

RTCDESC

Specifies that one or more routing code descriptor definitions are to be exported. TYPE(RTCDESC) is not valid when exporting to a system RDDS or when exporting from an IMS that does not have DRD enabled. If TYPE(RTCDESC) is specified on a DBCTL system, completion code 10 ("NO RESOURCES FOUND") is returned.

TRAN

Specifies that one or more transaction definitions are to be exported. TYPE(TRAN) is not valid when exporting to a system RDDS. If TYPE(TRAN) is specified on a DBCTL system, completion code 10 ("NO RESOURCES FOUND") is returned.

TRANDESC

Specifies that one or more transaction descriptor definitions are to be exported. TYPE(TRANDESC) is not valid when exporting to a system RDDS or when exporting from an IMS that does not have DRD enabled. If TYPE(TRANDESC) is specified on a DBCTL system, completion code 10 ("NO RESOURCES FOUND") is returned.

Usage notes

The EXPORT command can be issued only through the Operations Manager (OM) API. This command can be issued through TSO SPOC or the Manage Resources options in the IMS Applications menu. It can also be issued to an IMSplex by using the Batch SPOC utility.

Important: Commands such as CREATE, DELETE, EXPORT, IMPORT, and UPDATE, which affect the definitional attributes of resources and descriptors, are not allowed while the EXPORT command is in progress.

The EXPORT command writes the definitions either to the data set specified by the RDDSDSN() keyword or, if the RDDSDSN() keyword is omitted, to the system RDDS containing the oldest data. A system RDDS is one of the RDDS data sets defined with the RDDSDSN= parameter in the DYNAMIC_RESOURCES section of the DFSDFxxx PROCLIB member. A system RDDS contains all of the resource and descriptor definitions for a single IMS. If using automatic import or automatic export, each IMS must have its own set of system RDDS data sets. When exporting to a system RDDS, all of the IMS resource and descriptor definitions must be exported. When exporting to a non-system RDDS, all or some of the IMS resource and descriptor definitions can be exported.

When exporting to a system RDDS, all definitions in the system RDDS are overwritten with the definitions being exported. When exporting to a non-system RDDS, the user has the option of overwriting the existing definitions with the new definitions, or appending the new definitions to the end of the data set. When the APPEND option is used, all of the definitions that meet the criteria specified on the EXPORT command are exported and appended to the existing definitions in the RDDS. If the export results in multiple definitions for the same resource in the RDDS, the last definition written to the RDDS is the definition used by the IMPORT command when creating the runtime resource definition for the resource or descriptor.

Definitions for IMS resources such as the Fast Path utility (DBF#FPU0) and the descriptors defined by IMS (DBFDSRT1, DFSDSDB1, DFSDSPG1, and DFSDSTR1) cannot be exported.

The EXPORT command is not allowed on the XRF alternate, RSR tracker, or FDBR region. Export to a system RDDS is allowed only in a DRD environment (DFSDFxxx or DFSCGxxx defined with MODBLKS=DYN). Export to a non-system RDDS is allowed in a non-DRD environment (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC, or MODBLKS not defined); however, descriptors do not exist and cannot be exported.

The EXPORT command is defined as ROUTE=ALL to OM. When the EXPORT command is issued, OM routes the EXPORT command to all active IMS systems (or to all IMS systems specified in the ROUTE list if the ROUTE parameter is specified on the CSLOMCMD or CSLOMI request) that have registered interest in the command. The EXPORT command is processed as follows by the IMS systems that receive the command:

- When exporting to a system RDDS, the EXPORT command is processed by all IMS systems that receive the command. Each IMS that receives the command exports its resource and descriptor definitions to its own system RDDS. The system RDDSs are not shared among IMS systems, so all IMS systems that receive the command can process the command simultaneously without data set contention.
- When exporting to a non-system RDDS, the EXPORT command is treated as if the command was defined to OM as ROUTE=ANY. OM selects one IMS to be the command master. The command master IMS exports its resource and descriptor definitions to the specified non-system RDDS. All non-master IMS systems that receive the command return without exporting any definitions with an “IMS not master” return and reason code to OM. The export to the

non-system RDDS is processed by only one IMS to avoid data set contention and to prevent the resource and descriptor definitions from being overwritten if the RDDS is shared between IMS systems.

If the EXPORT command is to be processed by a specific IMS, the EXPORT command must be routed to that IMS.

Recommendation: When exporting to a non-system RDDS, each IMS should export its definitions to a unique data set. If one RDDS is shared between systems, the resource and descriptor definitions written by one IMS might be overwritten by another IMS.

Output fields

When TARGET(RDDS) is specified, message DFS3404I is returned by each IMS that processes the EXPORT command. It indicates whether all, some, or none of the specified resource or descriptors were successfully exported. It also contains the name of the data set to which the resource or descriptor definitions were exported. Each DFS3404I message is encapsulated in a single set of <msg> </msg> XML tags.

In addition to the message, command response output is also returned in XML tag structure. The following table shows the EXPORT response output fields. The columns in the table are as follows:

Short label

Contains the short label generated in the XML output.

Long label

Contains the long label generated in the XML output.

Keyword

Identifies keyword on the command that caused the field to be generated. The value *error* appears for output fields that are returned only in the case of an error. N/A (not applicable) appears for output fields that are always returned.

Meaning

Provides a brief description of the output field.

Table 237. Output fields for the EXPORT command

Short label	Long label	Keyword	Meaning
CC	CC	N/A	Completion code.
CCTXT	CCText	<i>error</i>	Completion code text that briefly explains the meaning of the nonzero completion code.
MBR	MbrName	N/A	IMSplex member that built the output line.
NAME	Name	NAME	Descriptor or resource name.
TYPE	Type	TYPE	Type of resource or descriptor, which can be DB, DBDESC, PGM, PGMDESC, RTC, RTCDESC, TRAN, or TRANDESC.

Return, reason, and completion codes

The following table includes the return and reason codes and a brief explanation of the codes. The return or reason code returned for the command might also indicate an error from a CSL request.

Table 238. Return and reason codes for the EXPORT command

Return code	Reason code	Meaning
X'00000000'	X'00000000'	Command completed successfully. The command output contains a line for each resource, accompanied by its completion code. If NAME(*) is specified without OPTION(ALLRSP), no output lines are returned. See the completion code table for details.
X'00000004'	X'00001000'	The EXPORT command was not processed on the IMS system, because the IMS system is not the command master. No resource information is returned.
X'00000008'	X'0000211F'	Unable to determine the export data set name. The RDDSDSN() keyword was not specified on the command, and there are no system RDDSs defined.
X'00000008'	X'0000213A'	The data set specified for the RDDSDSN() keyword is a system RDDS.
X'00000008'	X'0000213B'	OPTION(OVERWRITE) is mutually exclusive with OPTION(APPEND).
X'00000008'	X'0000213C'	A value other than NAME(*) was specified. NAME(*) is required when exporting to a system RDDS.
X'00000008'	X'0000213D'	A value other than TYPE(ALL) was specified. TYPE(ALL) is required when exporting to a system RDDS.
X'00000008'	X'0000213E'	OPTION(APPEND) is not allowed when exporting to a system RDDS.
X'00000008'	X'0000213F'	OPTION(NOCHECK) can be specified only if OPTION(APPEND) is specified.
X'0000000C'	X'00003000'	Command was successful for some resources but failed for others. The command output contains a line for each resource, accompanied by its completion code. If NAME(*) is specified without OPTION(ALLRSP), output lines are only returned for resources with nonzero completion codes.
X'0000000C'	X'00003004'	Command was not successful for any of the resources. The command output contains a line for each resource, accompanied by its completion code. See the completion code table for details.
X'00000010'	X'0000400C'	Command is not valid on the XRF alternate.
X'00000010'	X'00004014'	Command is not valid on the RSR tracker.
X'00000010'	X'00004114'	Unable to access the RDDS. The RDDS is either a system RDDS or the data set specified with the RDDSDSN() keyword.
X'00000010'	X'00004118'	Unable to allocate the RDDS. The RDDS is either a system RDDS or the data set specified with the RDDSDSN() keyword.
X'00000010'	X'0000411C'	An EXPORT command was issued to append definitions to an RDDS, but the RDDS contains invalid data.
X'00000010'	X'00004120'	Online change phase is in progress.

Table 238. Return and reason codes for the EXPORT command (continued)

Return code	Reason code	Meaning
X'00000010'	X'00004300'	Command is not allowed, because online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC, or MODBLKS not defined) and an RDDS was not specified with the RDDSDSN() keyword.
X'00000010'	X'00004302'	The RDDS is full. No more definitions can be written to the RDDS.
X'00000010'	X'0000432C'	Invalid value is specified for the TYPE() keyword. ALLDESC, DBDESC, PGMDESC, RTCDESC and TRANDESC are not allowed if online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC, or MODBLKS not defined).
X'00000010'	X'00004330'	None of the system RDDSs defined in the DFSDFxxx PROCLIB member are available for export.
X'00000010'	X'00004334'	The RECFM of the RDDS is not VB.
X'00000010'	X'00004338'	Invalid RDDS block size. The RDDS must be defined with a block size between 4096 and 32760.
X'00000010'	X'0000433C'	The RDDS specified with the RDDSDSN() keyword contains definitions written by another IMS. If new definitions are to be appended to the RDDS by a different IMS, OPTION(NOCHECK) must be specified.
X'00000014'	X'00005004'	DFSOCMD response buffer could not be obtained.
X'00000014'	X'00005008'	DFSPOOL storage could not be obtained.
X'00000014'	X'00005010'	Unable to obtain latch.
X'00000014'	X'00005018'	Unable to obtain a 64-bit buffer.
X'00000014'	X'00005FFF'	The EXPORT command could not be processed because of an internal error.

Errors unique to the processing of this command are returned as completion codes. The following table includes an explanation of the completion codes.

Table 239. Completion codes for the EXPORT command

Completion code	Completion code text	Meaning
0		Command completed successfully for this resource or resource descriptor.
10	NO RESOURCES FOUND	Resource or descriptor was not found, or the wildcard parameter specified does not match any resource or descriptor names.
2E	NOT ALLOWED FOR RESOURCE	Export of resource or descriptor definition is not allowed. The definitions for IMS defined resources and HALDB partitions cannot be exported.
48	NOT ALLOWED FOR IMS RESOURCE	Command not allowed for IMS descriptors or IMS resources. DFSDSDB1, DFSDSPG1, DBFDSRT1, and DFSWSTR1 are examples of IMS descriptors. DBF#FPU0 is an example of an IMS resource.

Table 239. Completion codes for the EXPORT command (continued)

Completion code	Completion code text	Meaning
5F	INVALID CHARACTERS IN NAME	Resource or descriptor name contains an invalid character.
90	INTERNAL ERROR	Resource or descriptor definition was not exported because of an internal error.

Examples

The following are examples of the EXPORT command:

Example 1 for EXPORT command

TSO SPOC input:

```
EXPORT DEFN TARGET(RDDS)
```

TSO SPOC output:

Log for: EXPORT DEFN TARGET(RDDS)

```
IMSpLex . . . . . : PLEX1
Routing . . . . . :
Start time. . . . : 2007.074 12:40:02.30
Stop time . . . . : 2007.074 12:40:03.32
Return code . . . : 00000000
Reason code . . . : 00000000
Reason text . . . :
Command master. . : IMS2
```

MbrName Messages

```
-----
IMS1    DFS3404I EXPORT COMMAND COMPLETE FOR ALL , DSN=IMSPLEX1.IMS1.RDDS1.DEFN
IMS2    DFS3404I EXPORT COMMAND COMPLETE FOR ALL , DSN=IMSPLEX1.IMS2.RDDS3.DEFN
```

Explanation: The EXPORT command is routed to two IMS systems: IMS1 and IMS2. Each IMS exports all of its database, program, routing code, and transaction resource and descriptor definitions to its own system RDDS. Because OPTION(ALLRSP) is not specified, the list of exported resources is not returned.

Note: Each DFS3404I message is encapsulated in a single set of <msg> </msg> tags and is shown on the same TSO SPOC screen as the return and reason codes. If the message does not fit on one screen, you might have to scroll to the right to view the entire message.

Example 2 for EXPORT command

TSO SPOC input:

```
EXPORT DEFN TARGET(RDDS) RDDSdsn(IMSplex1.IMS2.RDDS.DEFN) OPTION(ALLRSP)
```

TSO SPOC output:

Name	Type	MbrName	CC
DBDFLT	DBDESC	IMS2	0
DEDBJN01	DB	IMS2	0
PGMDFLT	PGMDESC	IMS2	0
CDEBS	PGM	IMS2	0

```

RTCDFLT  RTCDESC  IMS2      0
SMQFP5A  RTC      IMS2      0
TRANDFLT  TRANDESC  IMS2      0
CDEBTRN1  TRAN      IMS2      0

```

When the PF4 key is pressed, the following is displayed:

Log for: EXPORT DEFN TARGET(RDDS) RDDSDSN(IMSPLEX1.IMS2.RDDS.DEFN) OPTION(ALLRSP)

```

IMSplex . . . . . : PLEX1
Routing . . . . . :
Start time. . . . : 2007.074 12:40:02.30
Stop time . . . . : 2007.074 12:40:03.32
Return code . . . : 00000000
Reason code . . . : 00000000
Reason text . . . :
Command master. . : IMS2

```

MbrName Messages

```

-----
IMS2      DFS3404I EXPORT COMMAND COMPLETE FOR ALL , DSN=IMSPLEX1.IMS2.RDDS.DEFN

```

Explanation: The EXPORT command is routed to IMS2. IMS2 exports all of its database, program, routing code, and transaction resource and descriptor definitions to RDDS IMSPLEX1.IMS2.RDDS.DEFN. Because OPTION(ALLRSP) is specified, the list of exported resources is returned.

Example 3 for EXPORT command

TSO SPOC input:

EXPORT DEFN TARGET(RDDS) TYPE(ALL) NAME(*) OPTION(ALLRSP)

TSO SPOC output:

Name	Type	MbrName	CC	CCText
PART	DB	IMS2	0	
PARTMAST	DB	IMS2	0	
PGMD01	PGM	IMS2	0	
RTC001	RTC	IMS2	0	
TRND01	TRAN	IMS2	0	
TRND11	TRAN	IMS2	0	
TRND123	TRAN	IMS2	0	
TRND01	TRANDESC	IMS2	0	

When the PF4 key is pressed, the following is displayed:

Log for: EXPORT DEFN TARGET(RDDS) TYPE(ALL) NAME(*) OPTION(ALLRSP)

```

IMSplex . . . . . : PLEX1
Routing . . . . . :
Start time. . . . : 2007.074 12:40:02.30
Stop time . . . . : 2007.074 12:40:03.32
Return code . . . : 0200000C
Reason code . . . : 00003000
Reason text . . . : At least one request successful
Command master. . : IMS2

```

MbrName	Return Code	Reason Code	Description
IMS1	00000010	00004330	No system RDDSs are available

MbrName Messages

```

-----
IMS2      DFS3404I EXPORT COMMAND COMPLETE FOR ALL , DSN=IMSPLEX1.IMS2.RDDS1.DEFN

```

Explanation: The EXPORT command is routed to two IMS systems: IMS1 and IMS2. IMS1 attempts to export its resource and descriptor definitions to a system RDDS, but none of the system RDDSs are available for export. IMS2 successfully exports its resource and descriptor definitions to RDDS IMSPLEX1.IMS2.RDDS1.DEFN.

Example 4 for EXPORT command

TSO SPOC input:

```
EXPORT DEFN TARGET(RDDS) TYPE(DB, DBDESC, TRAN, TRANDESC, PGM, PGMDISC)
NAME(PART*, TRND*, PGMD*) RDDSDSN(IMSPLEX1.IMS2.RDDS.DEFN)
```

TSO SPOC output:

Name	Type	MbrName	CC	CCText
PGMD*		IMS2	10	NO RESOURCES FOUND
PART	DB	IMS2	0	
PARTMAST	DB	IMS2	0	
TRND11	TRAN	IMS2	0	
TRND120	TRAN	IMS2	0	
TRND123	TRAN	IMS2	0	
TRND123	TRANDESC	IMS2	0	

When the PF4 key is pressed, the following is displayed:

Log for . . : EXPORT DEFN TARGET(RDDS) TYPE(DB, DBDESC, TRAN, ... More:

```
IMSpIex . . . . . : PLEX1
Routing . . . . . :
Start time. . . . : 2011.124 09:36:06.09
Stop time . . . . : 2011.124 09:36:06.17
Return code . . . : 0200000C
Reason code . . . : 0000300C
Reason text . . . : The command completed with warning(s).
Command master. . : IMS2
```

MbrName	Return Code	Reason Code	Reason text
IMS2	0000000C	00003000	At least one request successful
IMS1	00000004	00001000	IMS not master, cmd ignored

MbrName	Messages
IMS2	DFS3404I EXPORT COMMAND COMPLETE FOR SOME, DSN=IMSPLEX1.IMS2.RDDS.DEFN
IMS1	DFS3404I EXPORT COMMAND COMPLETE FOR NONE, DSN=IMSPLEX1.IMS2.RDDS.DEFN

OM API input:

```
CMD(EXPORT DEFN TARGET(RDDS) TYPE(DB, DBDESC, TRAN, TRANDESC, PGM, PGMDISC)
NAME(PART*, TRND*, PGMD*) RDDSDSN(IMSPLEX1.IMS2.RDDS.DEFN))
```

OM API output:

```
<imsout>
<ctl>
<omname>OM10M </omname>
<omvsn>1.5.0</omvsn>
<xmlvsn>20 </xmlvsn>
<statime>2011.124 16:36:06.112826</statime>
<stotime>2011.124 16:36:06.171441</stotime>
<staseq>C7B85E23C774F3FA</staseq>
<stoseq>C7B85E23D94B927E</stoseq>
<rqsttkn1>USRT011 10091756</rqsttkn1>
<rc>0200000C</rc>
<rsn>0000300C</rsn>
```

```

<rsnmsg>CSLN055I</rsnmsg>
<rsntxt>The command completed with warning(s).</rsntxt>
</ctl>
<cmderr>
<mbr name="IMS2  ">
<typ>IMS      </typ>
<styp>DBDC    </styp>
<rc>0000000C</rc>
<rsn>00003000</rsn>
<rsntxt>At least one request successful</rsntxt>
</mbr>
<mbr name="IMS1  ">
<typ>IMS      </typ>
<styp>DBDC    </styp>
<rc>00000004</rc>
<rsn>00001000</rsn>
<rsntxt>IMS not master, cmd ignored</rsntxt>
</mbr>
</cmderr>
<cmd>
<master>IMS2    </master>
<userid>USRT011 </userid>
<verb>EXP </verb>
<kwd>DEFN      </kwd>
<input>EXPORT DEFN TARGET(RDDS) TYPE(DB, DBDESC, TRAN, TRANDESC, PGM,
PGMDESC) NAME(PART*, TRND*, PGMD*) RDDS(SN(IMSplex1.IMS2.RDDS.DEFN)
</input>
</cmd>
<cmdrsphdr>
<hdr slbl="NAME" llbl="Name" scope="LCL" sort="a" key="2" scroll="no"
len="8" dtype="CHAR" align="left" />
<hdr slbl="TYPE" llbl="Type" scope="LCL" sort="a" key="1" scroll="no"
len="8" dtype="CHAR" skipb="yes" align="left" />
<hdr slbl="MBR" llbl="MbrName" scope="LCL" sort="a" key="3" scroll="no"
len="8" dtype="CHAR" align="left" />
<hdr slbl="CC" llbl="CC" scope="LCL" sort="n" key="0" scroll="yes"
len="4" dtype="INT" align="right" skipb="no" />
<hdr slbl="CCTXT" llbl="CCText" scope="LCL" sort="n" key="0"
scroll="yes" len="*" dtype="CHAR" skipb="yes" align="left" />
<hdr slbl="ERRT" llbl="ErrorText" scope="LCL" sort="n" key="0"
scroll="yes" len="*" dtype="CHAR" skipb="yes" align="left" />
</cmdrsphdr>
<cmdrspdata>
<rsp>NAME(PART ) TYPE(DB) MBR(IMS2 ) CC( 0) </rsp>
<rsp>NAME(PARTMAST) TYPE(DB) MBR(IMS2 ) CC( 0) </rsp>
<rsp>NAME(TRND11 ) TYPE(TRAN) MBR(IMS2 ) CC( 0) </rsp>
<rsp>NAME(TRND120 ) TYPE(TRAN) MBR(IMS2 ) CC( 0) </rsp>
<rsp>NAME(TRND123 ) TYPE(TRAN) MBR(IMS2 ) CC( 0) </rsp>
<rsp>NAME(TRND123 ) TYPE(TRANDESC) MBR(IMS2 ) CC( 0) </rsp>
<rsp>NAME(PGMD* ) TYPE() MBR(IMS2 ) CC( 10) CCTXT(NO RESOURCES
FOUND) </rsp>
</cmdrspdata>
<msgdata>
<mbr name="IMS2  ">
<msg>DFS3404I EXPORT COMMAND COMPLETE FOR SOME,
DSN=IMSplex1.IMS2.RDDS.DEFN </msg>
</mbr>
<mbr name="IMS1  ">
<msg>DFS3404I EXPORT COMMAND COMPLETE FOR NONE,
DSN=IMSplex1.IMS2.RDDS.DEFN </msg>
</mbr>
</msgdata>
</imsout>

```

Explanation: The EXPORT command is routed to two IMS systems: IMS1 and IMS2. Because the data set is a non-system RDDS, only the IMS that is selected as

the command master can process the command. OM selects IMS2 as the command master. IMS2 exports a set of resource and descriptor definitions whose names match the PART* and TRND* wildcard values. No resources or descriptors were found matching the PGMD* wildcard value. IMS1 does not process the command because it is not the command master.

Example 5 for EXPORT command

TSO SPOC input:

```
EXPORT DEFN TARGET(RDDS) TYPE(ALL) NAME(*)
```

TSO SPOC output:

```
Log for . . : EXPORT DEFN TARGET(RDDS) TYPE(ALL) NAME(*)
```

```
IMSpIex . . . . . : PLEX1
Routing . . . . . : IMS1
Start time. . . . : 2011.124 14:22:57.39
Stop time . . . . : 2011.124 14:22:57.41
Return code . . . : 0200000C
Reason code . . . : 00003004
Reason text . . . : No requests were successful.
Command master. . : IMS1
```

MrName	Return Code	Reason Code	Reason text
-----	-----	-----	-----
IMS1	00000008	0000211F	No system RDDSs defined, rddsdn() required

OM API input:

```
CMD(EXPORT DEFN TARGET(RDDS) TYPE(ALL) NAME(*) )
```

OM API output:

```
<imsout>
<ctl>
<omname>OM10M </omname>
<omvsn>1.5.0</omvsn>
<xmIvsn>20 </xmIvsn>
<statime>2011.124 21:22:57.408936</statime>
<stotime>2011.124 21:22:57.409591</stotime>
<staseq>C7B8A25066BA8BF2</staseq>
<stoseq>C7B8A25066E37072</stoseq>
<rqsttkn1>USRT011 10142257</rqsttkn1>
<rc>0200000C</rc>
<rsn>00003004</rsn>
<rsnmsg>CSLN024I</rsnmsg>
<rsntxt>No requests were successful.</rsntxt>
</ctl>
<cmderr>
<mbr name="IMS1 ">
<typ>IMS </typ>
<styp>DBDC </styp>
<rc>00000008</rc>
<rsn>0000211F</rsn>
<rsntxt>No system RDDSs defined, rddsdn() required</rsntxt>
</mbr>
</cmderr>
<cmd>
<master>IMS1 </master>
<userid>USRT011 </userid>
<verb>EXP </verb>
```



```
| <kwd>DEFN                </kwd>  
| <input>EXPORT DEFN TARGET(RDDS) TYPE(ALL) NAME(*) </input>  
| </cmd>  
| </imsout>
```

Explanation: The EXPORT command is sent to IMS1. There are no system RDDSs defined in DFSDFxxx PROCLIB member of IMS1, and the RDDSDSN() keyword was not specified on the EXPORT command. The EXPORT command cannot be processed.

Related concepts:

 How to interpret CSL request return and reason codes (System Programming APIs)

 Resource definition data sets (System Definition)

Related reference:

Chapter 2, “Command keywords and their synonyms,” on page 57

Chapter 32. /FORMAT command

Use the /FORMAT command to cause a specific format to be displayed on a physical terminal using the IMS Message Format Service (MFS).

The displayed format is used by IMS in processing the next input from the formatted terminal.

Subsections:

- “Environment”
- “Syntax”
- “Keywords”
- “Usage notes” on page 622
- “Example” on page 622

Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) from which the command and keyword can be issued.

Table 240. Valid environments for the /FORMAT command and keyword

Command / Keyword	DB/DC	DBCTL	DCCTL
/FORMAT	X		X
LTERM	X		X

Syntax



Keywords

The following keywords are valid for the /FORMAT command:

modname

Specifies the name of the message output descriptor (MOD) to be used to format the terminal.

LTERM

Specifies the name of the logical terminal to be formatted. LTERM is required when a terminal other than the input terminal is to be formatted. If LTERM is not specified, the input physical terminal must have at least one LTERM assigned.

If the *ltermname* does not exist, an attempt is made to create the lterm and associated user structure. The command creates this structure by queuing the format and data, if any exists, to the terminal as if it were a message. This process is similar to a message switch, a message insert, or a /BROADCAST LTERM, all of which queue a message to an LTERM.

The format request is rejected if the specified LTERM is:

- Assigned to a physical terminal that is not supported by MFS
- In line-response mode or exclusive mode
- Involved in an active conversation
- An input-only terminal
- Not the alternate master in an XRF system
- A remote LTERM

In an IMSplex, /FORMAT LTERM can be used to queue a format to an LTERM that is not active or that is active on any IMS in the IMSplex.

data

Is a string consisting of 1 to 8 characters to be inserted into the output message created for the terminal being formatted. Since MFS treats the data as application program output data, the data string can be used to select a logical page (LPAGE) within the requested MOD. The way the selection is performed is determined by the requested MOD's LPAGE definitions.

Usage notes

Using a password with the /FORMAT command is not valid.

The /FORMAT command, where an IMS-supplied default *modname* is used, is not effective for a 3270 master terminal that uses the MFS master terminal formatting option.

Recommendation: If a format is lost during a conversation, do not use the /FORMAT command to restore the format. Instead, enter a /HOLD command followed by a /RELEASE command to display the first physical page of the current message and restore the format.

Example

Remote Terminal entry:

```
/FORMAT DFSMO4
/BROADCAST LTERM WTOR (eos)
this is segment 1 (eos)
this is segment 2 (eos)
this is segment 3 (eom)
```

Response ET:

```
DFS058I  BROADCAST COMMAND COMPLETED
```

Response RT:

```
THIS IS SEGMENT 1
THIS IS SEGMENT 2
THIS IS SEGMENT 3
```

Explanation: The remote terminal is first formatted by the /FORMAT command, where default format DFSMO4 supports the input of 4 segments. This is followed by /BROADCAST with four segments.

Chapter 33. /HOLD command

Use the /HOLD command to suspend and save a currently active conversation.

Subsections:

- “Environment”
- “Syntax”
- “Usage notes”
- “Example”

Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) from which the command can be issued.

Table 241. Valid environments for the /HOLD command

Command	DB/DC	DBCTL	DCCTL
/HOLD	X		X

Syntax

➤ `/HOLD` ➤
└─ `/HOL` ─┘

Usage notes

The IMS response to /HOLD provides a conversation identification that must be used later when the held conversation is resumed (/RELEASE command) or terminated (/EXIT).

In an IMSplex, if global resource information is kept in Resource Manager, /HOLD suspends and saves the active conversation globally in Resource Manager. If global resource information is not kept in Resource Manager, /HOLD suspends and saves the active conversation locally.

Example

Entry ET:

/HOLD

Response ET:

DFS999I HELD CONVERSATION ID IS 0001

Explanation: The active conversation is saved and is assigned an identification of 0001.

Chapter 34. /IAM command

The /IAM command is used to sign on to IMS from a terminal that is on a non-VTAM attached switched communication line.

This command (without the DONE keyword) must be entered before any input transaction codes or terminal commands are accepted.

Subsections:

- “Environment”
- “Syntax”
- “Keywords”
- “Usage notes” on page 626
- “Examples” on page 626

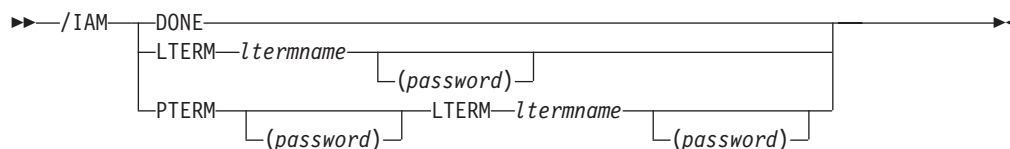
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 242. Valid environments for the /IAM command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/IAM	X		X
DONE	X		X
LTERM	X		X
PTERM	X		X

Syntax



Keywords

The following keywords are valid for the /IAM command:

DONE

Requests that IMS disconnect your terminal.

LTERM

Indicates this command automatically accomplishes the attachment of a user logical terminal named *ltermname* to the switched (dialup) communication line over which the call was received from the remote terminal.

If the first four characters of the *ltermname* parameter are INQU, the connection is completed with the inquiry logical terminal associated with the line/pterm that received the call.

PTERM [password] LTERM ltermname [password]

All logical terminals associated with the user in which logical terminal ltermname exists are signed on to the terminal entering the command. This form of /IAM is required if conversational transactions are to be entered.

Usage notes

The terminal operator has five chances to sign on. If signon is not accomplished after five tries, IMS sends the operator a message indicating that the line is being disconnected. IMS disconnects the line and restores the line to answering status.

The /IAM command is not supported for Network Terminal Option devices.

Examples

The following are examples of the /IAM command:

Example 1 for /IAM command

Entry ET:

```
/IAM LTERM SMITH
```

Response ET:

```
DFS058I  IAM COMMAND COMPLETED
```

Explanation: Logical terminal SMITH is signed on to IMS.

Example 2 for /IAM command

Entry ET:

```
/IAM LTERM INQU
```

Response ET:

```
DFS058I  IAM COMMAND COMPLETED
```

Explanation: The inquiry logical terminal associated with the line/pterm that received the call is signed on to IMS.

Example 3 for /IAM command

Entry ET:

```
/IAM PTERM (DOLLY) LTERM SUE (GIRL)
```

Response ET:

```
DFS058I  IAM COMMAND COMPLETED
```

Explanation: All logical terminals associated with the user to which LTERM SUE belongs are signed on to IMS.

Chapter 35. /IDLE command

The /IDLE command is used to immediately terminate input from, or output to, physical terminals assigned to the lines, logical links, or nodes specified in the command.

Partially processed input messages on the lines specified in the command are discarded. Output messages being sent are returned to the message queues for later transmission

This command can be issued to an IMSplex using the Batch SPOC utility.

Subsections:

- “Environment”
- “Syntax”
- “Keywords” on page 628
- “Examples” on page 629

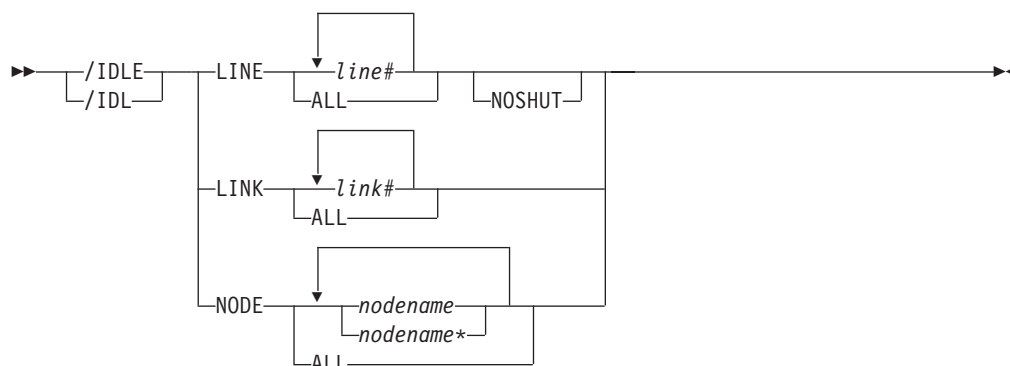
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 243. Valid environments for the /IDLE command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/IDLE	X		X
LINE	X		X
LINK	X		X
NODE	X		X
NOSHUT	X		X

Syntax



Keywords

The following keywords are valid for the /IDLE command:

LINE

Specifies the communication line to be immediately terminated.

/IDLE does not apply to the system console line, the master terminal line, or the secondary master terminal line. If these lines are specified, a DFS058 COMMAND COMPLETED EXCEPT LINE X message is returned. If the master terminal is assigned to a line that must be idle, the master terminal must be reassigned to a different line before /IDLE is specified.

NOSHUT

Immediately terminates input to and output from 3270 remote non-VTAM lines without a checkpoint shutdown. /IDLE cannot be entered before a checkpoint unless the NOSHUT keyword is included in the command. NOSHUT is only valid if IMS is not in the process of shutting down and is mutually exclusive with the NODE parameter. When /IDLE LINE line# NOSHUT is entered, the 3270 remote non-VTAM lines must be stopped or process stopped. A DFS058 COMMAND COMPLETED EXCEPT LINE X message is returned if the command is entered and one of the following conditions exists:

- The line is the master terminal line or system console line, including the secondary master terminal line.
- The line is not stopped or process stopped.
- The line is not a 3270 remote non-VTAM line.
- The line is not open.
- The line is deactivated by IMS.

If the line specified with the NOSHUT keyword belongs to a line group, the input and output for all lines within the group are immediately terminated. If the line belonging to the line group has the master terminal assigned to it, the /IDLE LINE line# NOSHUT command is rejected.

To restart the lines idled by the /IDLE LINE line# NOSHUT command, either the /START LINE or /RSTART LINE command must be entered.

LINK

Specifies the logical link from which input, or to which output, is to be terminated. (No input messages are lost with /IDLE LINK.)

If a checkpoint shutdown is not in progress, only MSC VTAM links are valid. All non-MSC VTAM links require a shutdown checkpoint in progress. IMS returns a DFS058 IDLE COMMAND COMPLETED EXCEPT LINK X message if one of the following conditions exists:

- The link is idled already.
- The link is not connected.
- The link cannot be opened.
- A shutdown checkpoint is not in progress (for non-MSC VTAM links).

An /IDLE LINK link# command internally causes issuing of the VTAM command:

```
VARY NET,TERM,TYPE=FORCE,NOTIFY=NO,SCOPE=ALL,LU1=xxxxxxx,LU2=yyyyyyy
```

All logical links, assigned to the same physical link, associated with the named logical link (link#) will be stopped. That is, all parallel sessions on the same physical link will be stopped. The /RSTART LINK command is used to reactivate links or sessions.

The /IDLE LINK link# command should not be used as the first attempt to stop the link. If the MSC link appears to be hung, the IMS operator should:

1. First attempt to stop the link with the IMS /PSTOP command.
2. If this fails, display the link session status through VTAM, using the VTAM command:

```
D NET,ID=xxxxxxx
```

or the VTAM command:

```
D NET,SESSIONS,LIST=ALL
```

3. If the link session is still active (STATUS=ACTIV), terminate it with the /IDLE LINK command or the VTAM command:

```
VARY NET,TERM,TYPE=FORCE,LU1=xxxxxxx
```

Note: All parallel sessions associated with the link will be terminated.

NODE

Specifies the VTAM node to which output is to be terminated, or from which input is to be terminated. The master terminal only can be idled when specifically named.

If the /IDLE NODE *nodename* command is entered for an ISC node defined with users, all half-sessions of the specified node are affected.

An /IDLE NODE ALL command causes the VTAM command VARY NET,INACT, to be issued to all nodes still connected to IMS, except the master terminal.

If the /IDLE NODE command is entered prior to IMS entering shutdown, the /ACT command can be entered to reactivate the node in VTAM. If the /IDLE NODE command is entered while in IMS shutdown, a VARY NET,ACT command might have to be entered directly to VTAM. However, before using the /IDLE command, a /CLSDST and then a /CLSDST FORCE command should be tried.

The node parameter can be generic. The generic parameter specifies nodes that already exist.

Examples

The following are examples of the /IDLE command:

Example 1 for /IDLE command

Entry ET:

```
/IDLE LINE 14 24
```

Response ET:

```
DFS058I IDLE COMMAND COMPLETED
```

Explanation: The I/O on lines 14 and 24 is forced to terminate.

Example 2 for /IDLE command

Entry ET:

```
/IDLE LINE 4 NOSHUT
```

Response ET:

DFS058I IDLE COMMAND COMPLETED

Explanation: The I/O on line 4, which is a 3270 remote non-VTAM line, is forced to terminate.

Example 3 for /IDLE command

Entry ET:

/IDLE LINK 2

Response ET:

DFS058I IDLE COMMAND COMPLETED

Explanation: The input/output on logical link 2 is forced to terminate.

Example 4 for /IDLE command

Entry ET:

/IDLE NODE ABC

Response ET:

DFS058I IDLE COMMAND COMPLETED

Explanation: A VARY NET, INACT command is executed that will cause the IMS VTAM LOSTERM exit to be entered with an indication that the session has been terminated.

Chapter 36. IMPORT command

Use the IMPORT command to create resource and descriptor definitions or replace existing resource and descriptor definitions in an online IMS system by using the definitions in a resource definition data set (RDDS).

The IMPORT command can be issued through TSO SPOC or the Manage Resources options in the IMS Applications menu. This command can also be issued to an IMSplex by using the Batch SPOC utility.

Subsections:

- “Environment”
- “Syntax”
- “Keywords” on page 632
- “Usage notes” on page 634
- “Output fields” on page 636
- “Return, reason, and completion codes” on page 637
- “Examples” on page 646

Environment

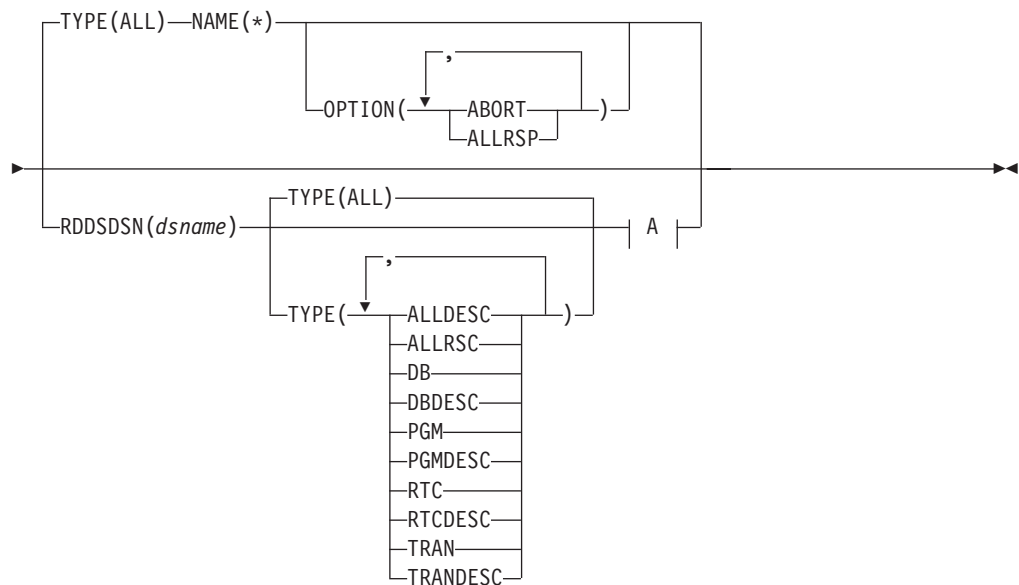
The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 244. Valid environments for the IMPORT command and keywords

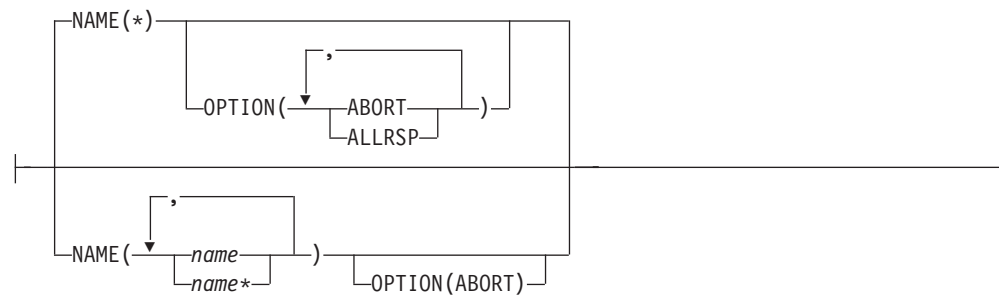
Command / Keywords	DB/DC	DBCTL	DCCTL
IMPORT	X	X	X
DEFN	X	X	X
NAME	X	X	X
OPTION	X	X	X
RDDSDSN	X	X	X
SOURCE	X	X	X
TYPE	X	X	X

Syntax

►► 



A:



Keywords

The following keywords are valid for the IMPORT command:

DEFN

A required keyword.

NAME()

Specifies the 1-8 character name of a resource or descriptor for which you are importing a definition. Wildcards can be specified in the name. The name is a repeatable parameter. If the NAME parameter specified is a specific name or a wildcard, command responses are returned for all the resource names that are processed. NAME is an optional parameter, and if not specified, it defaults to NAME(*). For NAME(*), command responses are returned only for the resource and descriptor names that resulted in an error. OPTION(ALLRSP) can be specified with NAME(*) to obtain the command responses for all of the resource and descriptor names that are processed.

OPTION()

Specifies additional functions to be performed along with the command.

ABORT

Processes the definitions specified as a group. If an error occurs while

processing any of the resource or descriptor definitions, the IMPORT command fails and none of the resource or descriptor definitions are imported.

If option ABORT is not specified and an error occurs while processing a particular resource or resource descriptor, that resource or descriptor is not imported. Import processing continues with the next resource or descriptor definition.

Important: Commands such as CREATE, DELETE, EXPORT, IMPORT, and UPDATE, which affect the definitional attributes of resources and descriptors, are not allowed while the IMPORT OPTION(ABORT) command is in progress.

ALLRSP

Indicates that a response is to be returned for all resources and descriptors that are processed by this command. If NAME(*) is specified, the default action is to return a response only for the resources and descriptors that result in an error.

OPTION(ALLRSP) can be used with NAME(*) to request a response for all resources and descriptors processed by this command. If a name value other than NAME(*) is specified, the default action is to return a response for all resources and descriptors processed by the command. If OPTION(ALLRSP) is specified with a name value other than NAME(*) the ALLRSP parameter is ignored.

RDDSDSN(dsname)

Specifies an optional RDDS from which resource and descriptor definitions are to be imported. The data set specified can be either a system RDDS or a non-system RDDS. If the RDDSDSN keyword is not specified, resource and descriptor definitions are imported from the most current system RDDS. If RDDS system data sets are not defined in the DFSDFxxx PROCLIB member, the RDDSDSN keyword is required on the IMPORT command.

SOURCE()

Specifies the source of the resource and descriptor definitions to be imported.

RDDS

Specifies that resource and descriptor definitions are to be imported from an RDDS. If a data set name is not specified on the command with the RDDSDSN() keyword, the most current system RDDS is used.

TYPE()

Specifies the type of resource or descriptor definition to import.

ALL

ALL specifies that all types of resource and descriptor definitions (DB, DBDESC, PGM, PGMDDESC, RTC, RTCDESC, TRAN, and TRANDESC) are to be imported. ALL is the only valid value when importing from a system RDDS.

ALLDESC

ALLDESC specifies that all definitions for all descriptor types (DBDESC, PGMDDESC, RTCDESC, and TRANDESC) are to be imported. TYPE(ALLDESC) is not valid when importing from a system RDDS.

ALLRSC

ALLRSC specifies that all definitions for all resource types (DB, PGM, RTC, and TRAN) are to be imported. TYPE(ALLRSC) is not valid when importing from a system RDDS.

DB DB specifies that one or more database definitions are to be imported. TYPE(DB) is not valid when importing from a system RDDS.

DBDESC

DBDESC specifies that one or more database descriptor definitions are to be imported. TYPE(DBDESC) is not valid when importing from a system RDDS.

PGM

PGM specifies that one or more program definitions are to be imported. TYPE(PGM) is not valid when importing from a system RDDS.

PGMDESC

PGMDESC specifies that one or more program descriptor definitions are to be imported. TYPE(PGMDESC) is not valid when importing from a system RDDS.

RTC

RTC specifies that one or more route code definitions are to be imported. TYPE(RTC) is not valid when importing from a system RDDS.

RTCDESC

RTCDESC specifies that one or more route code descriptor definitions are to be imported. TYPE(RTCDESC) is not valid when importing from a system RDDS.

TRAN

TRAN specifies that one or more transaction definitions are to be imported. TYPE(TRAN) is not valid when importing from a system RDDS.

TRANDESC

TRANDESC specifies that one or transaction descriptor definitions are to be imported. TYPE(TRANDESC) is not valid when importing from a system RDDS.

Usage notes

The IMPORT command can be issued only through the Operations Manager (OM) API. This command applies to DB/DC, DBCTL and DCCTL systems. The IMPORT command is not valid on the XRF alternate, RSR tracker, or FDBR region. The command is valid only in a DRD environment (MODBLKS=DYN specified in either the DFSDFxxx or DFSCGxxx PROCLIB member).

The IMPORT command is defined as ROUTE=ALL to OM. When the IMPORT command is issued, OM routes the IMPORT command to all active IMS systems (or to all IMS systems specified in the route list if the ROUTE parameter is specified on the CSLOMCMD or CSLOMI request) that have registered interest in the command. All IMS systems that receive the command process the IMPORT command and import the specified resource definitions from the system or non-system RDDS. If you want the IMPORT command to be processed by a specific IMS, the ROUTE parameter must be used to direct the IMPORT command to the specific IMS.

The IMPORT command imports resource and descriptor definitions from a resource definition data set (RDDS) into an online IMS system. If the definition is for a resource or descriptor that is unknown to IMS, the IMS creates the internal control blocks that are needed to manage the resource. If the definition is for a resource or descriptor that exists in IMS, the definition is not imported.

Resource and descriptor definitions are imported from either the system RDDS with the most current resource and descriptor definitions, or they are imported from an RDDS specified with the RDDSDSN() keyword on the IMPORT command. The RDDS specified with the RDDSDSN() keyword can be a system RDDS or a non-system RDDS. A system RDDS is one of the RDDSs defined with the RDDSDSN= parameter in the DYNAMIC_RESOURCES section of the DFSDFxxx PROCLIB member. A system RDDS contains all of the resource and descriptor definitions for a single IMS. If using automatic import or automatic export, each IMS must have its own set of system RDDSs.

If an RDDS contains multiple definition instances for the same resource or descriptor, the last definition instance imported is the definition used to create the resource or descriptor.

The definitions for IMS-defined resources, such as the Fast Path utility (DBF#FPU0) and the IMS-defined descriptors (DBFDSRT1, DFSDSDB1, DFSDSPG1 and DFSDSTR1), cannot be exported or imported. IMS-defined resources and descriptors are created at IMS restart. If the name of an IMS-defined resource or descriptor is specified in the NAME() parameter, the import of the resource or descriptor definition fails with a completion code of 48 and a completion code text of "NOT ALLOWED FOR IMS RESOURCE".

Rules and restrictions that apply to the IMPORT command: The IMPORT command imports resource and descriptor definitions from an RDDS and uses the definitions to create the runtime resource and descriptor definitions in the online IMS system. Therefore, the same rules and restrictions that apply to the CREATE commands for databases, programs, routing codes, and transactions also apply to the IMPORT command. For example, when importing a transaction definition, the definition for the program referenced by the transaction must either be imported at the same time, or the program must already be defined in the online IMS. The definitional attributes of the transaction must correspond to the definitional attributes of the program. The only exception is the CREATE DB command for a HALDB master database. The CREATE DB command for a HALDB master database creates the runtime resource definitions for both the HALDB master database and its associated HALDB partition databases. On the other hand, The IMPORT command for a HALDB master database creates the runtime resource definition for the HALDB master database only. The runtime resource definitions for the HALDB partition databases must be created with either a /START DB or UPDATE DB START(ACCESS) command for the HALDB master database.

The runtime resource and descriptor definitions that are created by the IMPORT command exist in the online system until IMS terminates, unless they are deleted using a DELETE command. They are recoverable across an IMS warm start or emergency restart. To preserve the resource and descriptor definitions across a cold start, export the definitions to an RDDS before IMS terminates, and then import the stored definitions from the RDDS back into IMS either during cold start processing by using the automatic import function or, once IMS is up and running, by using the IMPORT command.

Runtime resource and descriptor definitions are lost if IMS is cold started (/NRE CHKPT 0 or /ERE COLDSYS), unless an automatic import from the current system RDDS is done during cold start.

When OPTION(ABORT) is not specified, IMPORT, EXPORT, and automatic export are processed serially. CREATE, DELETE, and UPDATE commands, which do not affect the imported resources, can run in parallel with the IMPORT command.

HALDB considerations

The IMPORT command creates runtime resource and descriptor definitions in an online IMS system from definitions that have been exported to an RDDS. Whereas HALDB master database definitions can be exported to an RDDS, HALDB partition definitions cannot be exported to an RDDS. If the definition for a HALDB master database is imported, the IMPORT command creates only runtime resource definitions for the HALDB master database; it does not create runtime resource definitions for the associated HALDB partitions. A completion code of “D” is returned for the HALDB master database and the completion code text of “RSC NEEDS STA DB ON HALDB MASTER” is returned.

After a HALDB master database is imported, you must issue a /START DB or UPDATE DB command on the HALDB master database to build its associated partition structures.

- /START DB *HALDB_master*
- UPDATE DB NAME(*HALDB_master*) START(ACCESS)

MSDB considerations

Like a CREATE DB command for an MSDB database, an IMPORT command for an MSDB database creates runtime resource definitions for the MSDB. If a CREATE DB or IMPORT command creates one or more MSDB databases, the MSDB resource control blocks are logged in the checkpoint log records. However, the MSDB databases cannot be used and they are not written to the MSDB checkpoint data sets (MSDBCPx) until they are loaded into online storage either at the next IMS cold start, or IMS warm start with MSDBLOAD (/NRESTART MSDBLOAD) from the MSDBINIT data set.

If IMS is warm-started without MSDBLOAD (/NRESTART) or is emergency restarted (/ERESTART) without loading MSDB databases from the MSDBINIT data set, a new message, DFS2608W MSDBS NOT AVAILABLE - NO MSDBCPX DATA SET NAMES FOUND IN CHECKPOINT, is issued at IMS warm or emergency restart. IMS continues to run with no MSDB databases available until MSDB databases are loaded from the MSDBINIT data set during a subsequent cold start or warm restart with MSDBLOAD (/NRESTART MSDBLOAD).

Output fields

Message DFS3405I is returned by each IMS that processes the IMPORT command. It indicates whether all, some, or none of the specified resource or descriptor definitions were imported. It also contains the name of the data set from which the resource or descriptor definitions were imported. Each DFS3405I message is encapsulated in a single set of <msg> </msg> XML tags.

In addition to the message, command response output is also returned in XML tag structure. The following table shows the IMPORT response output fields. The columns in the table are as follows:

Short label

Contains the short label generated in the XML output.

Keyword

Identifies keyword on the command that caused the field to be generated.

N/A (not applicable) appears for output fields that are always returned.
The value *error* appears for output fields that are returned only in the case of an error.

Meaning

Provides a brief description of the output field.

Table 245. Output fields for the *IMPORT* command

Short label	Keyword	Meaning
CC	N/A	Completion code.
CCTXT	<i>error</i>	Completion code text that briefly explains the meaning of the nonzero completion code.
IMPTYPE	N/A	Import type of the resource or descriptor. When a resource or descriptor definition is imported and a new resource or descriptor is created, the import type value of the resource or descriptor is set to CREATE. When a resource or descriptor is not imported, the import type value is blank.
MBR	N/A	IMSplex member that built the output line.
NAME	NAME	Descriptor or resource name.
TYPE	TYPE	Type of resource or descriptor, which can be DB, DBDESC, PGM, PGMDISC, RTC, RTCDESC, TRAN, or TRANDESC.

Return, reason, and completion codes

The following table includes the return and reason codes and a brief explanation of the codes. The return or reason code returned for the command might also indicate an error from a CSL request.

Table 246. Return and reason codes for the *IMPORT* command

Return code	Reason code	Meaning
X'00000000'	X'00000000'	Command completed successfully. If NAME(*) is not specified (or defaulted to), the command output contains a line for each resource, accompanied by its completion code. If NAME(*) is specified and OPTION(ALLRSP) is not specified, no output lines are returned. If NAME(*) is specified and OPTION(ALLRSP) is specified, output lines are returned for each resource or descriptor definition imported.
X'00000008'	X'0000211F'	Unable to determine the import data set name. The RDDSDSN() keyword was not specified on the command, and there are no system RDDSs defined.
X'00000008'	X'00002138'	Values other than NAME(*) and TYPE(ALL) were specified, and either the RDDSDSN() keyword was not specified or the data set specified with the RDDSDSN() keyword is a system RDDS.

Table 246. Return and reason codes for the IMPORT command (continued)

Return code	Reason code	Meaning
X'0000000C'	X'00003000'	Command was successful for some resource definitions but failed for others. If OPTION(ALLRSP) is specified, the command output contains a line for each resource, accompanied by its completion code. If OPTION(ALLRSP) is not specified, output lines are only returned for resources with nonzero completion codes.
X'0000000C'	X'00003004'	Command was not successful for any of the resource definitions. The command output contains a line for each resource, accompanied by its completion code.
X'00000010'	X'0000400C'	Command is not valid on the XRF alternate.
X'00000010'	X'00004014'	Command is not valid on the RSR tracker.
X'00000010'	X'0000401C'	Command is not valid on the FDBR region.
X'00000010'	X'00004038'	No requests were processed. OPTION(ABORT) was specified on the IMPORT command and the number of database definitions to be imported exceeds 32K.
X'00000010'	X'00004114'	Unable to access the RDDS. The RDDS is either the system RDDS with the most current data or the data set specified with the RDDSDSN() keyword.
X'00000010'	X'00004118'	Unable to allocate the RDDS. The RDDS is either the system RDDS with the most current data or the data set specified with the RDDSDSN() keyword.
X'00000010'	X'0000411C'	The RDDS from which the definitions are to be imported contains invalid data.
X'00000010'	X'00004120'	Online change phase is in progress.
X'00000010'	X'00004124'	The IMPORT command is rejected, because a process of a similar type is in progress. Possible commands in progress are /DISPLAY MODIFY, CREATE DB, or DELETE DB commands. Wait until the other process completes and issue the IMPORT command again.
X'00000010'	X'00004300'	Command is not allowed, because online change for MODBLKS is enabled (DFSDFxxx or DFSCGxxx defined with MODBLKS=OLC, or MODBLKS not defined).
X'00000014'	X'00005000'	The IMPORT command was terminated, because IMODULE GETSTOR storage could not be obtained.
X'00000014'	X'00005004'	DFSOCMD response buffer could not be obtained.
X'00000014'	X'00005008'	DFSPOOL storage could not be obtained.
X'00000014'	X'0000500C'	AWE could not be obtained.
X'00000014'	X'00005010'	Unable to obtain latch.
X'00000014'	X'00005018'	Unable to obtain a 64-bit buffer.
X'00000014'	X'00005FFF'	The IMPORT command could not be processed because of an internal error.

Errors unique to the processing of this command are returned as completion codes. The following table includes an explanation of the completion codes.

Table 247. Completion codes for the *IMPORT* command

Completion code	Completion code text	Meaning
0		Command completed successfully for resource or descriptor definition.
6	RESOURCE NEEDS ONLINE CHANGE	The database definition was imported, but an online change is needed if the database is to be used.
7	RSC PSB, NOT DMB, NEED OLC	The database definition was imported, but the ACB found in ACBLIB is a PSB, not a DMB. An online change is needed if the database is to be used.
9	NO IMPORT - OPTION ABORT	The resource or descriptor definition was not imported. An error occurred importing one or more resource or descriptor definitions and OPTION(ABORT) was specified.
A	NO IMPORT - SAME RSC FOUND LATER	There were multiple definitions for the same resource or descriptor on the RDDS. The last instance of the resource or descriptor definition on the RDDS was used to create the resource or descriptor.
D	RSC NEEDS STA DB ON HALDB MASTER	The HALDB master database definition was imported. In order to create the database partitions a /STA DB or UPD DB START(ACCESS) command on the master HALDB database is required.
E	IMPORT CANNOT SET DEFLT DESC	The descriptor definition was imported, but the descriptor could not be made the default descriptor as defined.
F	GLOBAL STATUS NOT APPLIED	The resource definition was imported, but global status could not be applied to the resource.
10	NO RESOURCES FOUND	Resource or descriptor name is invalid, or the wildcard parameter specified does not match any resource names.
11	RESOURCE ALREADY EXISTS	The resource or descriptor being imported already exists. No import was done.
16	INVALID CLASS VALUE	The transaction class value is invalid. The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
17	ANOTHER CMD IN PROGRESS	Another command (such as DELETE PGM or UPDATE PGM) is in progress for the program referenced by the transaction or routing code definition being imported.
19	CMTMODE(MULT)/WFI(Y) CONFLICT	Wait-for-input WFI(Y) option conflicts with commit mode CMTMODE(MULT). The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.

Table 247. Completion codes for the **IMPORT** command (continued)

Completion code	Completion code text	Meaning
1B	CONV(Y)/ CMTMODE(MULT) CONFLICT	Conversation option CONV(Y) conflicts with commit mode CMTMODE(MULT). The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
1E	CONV(N)/ SPASZ/SPATRUNC CONFLICT	Non-conversation CONV(N) option conflicts with conversation attributes SPASZ > 0 or SPATRUNC. The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
1F	CONV(Y)/RECOVER(N) CONFLICT	Conversation CONV(Y) option conflicts with recovery RECOVER(N) option. The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
21	CONV(Y) REQUIRES SPASZ/SPATRUNC	Conversation CONV(Y) option requires conversation attributes SPASZ and SPATRUNC. The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
22	CPIC TRAN ALREADY EXISTS	CPI-C transaction already exists by same name. The transaction definition was not imported.
29	DOPT(Y)/RESIDENT(Y) CONFLICT	Dynamic DOPT(Y) option conflicts with resident RESIDENT(Y) option. The program definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
2A	DOPT(Y)/ PARALLEL CONFLICT	Dynamic DOPT(Y) option conflicts with parallel schedule SCHDTYPE(PARALLEL) option. The program definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
2B	INVALID EDITRTN NAME	EDITRTN name is invalid. The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
2C	MAX 255 EDIT ROUTINES EXCEEDED	Transaction definition to be imported specifies a new edit routine name, which exceeds the limit of 255 edit routines. The transaction definition was not imported.
2D	INVALID EMHBSZ VALUE	EMH buffer size EMHBSZ value is invalid. The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.

Table 247. Completion codes for the IMPORT command (continued)

Completion code	Completion code text	Meaning
2F	FP(E)/BMPTYPE(Y) CONFLICT	Fast Path exclusive FP(E) option conflicts with BMP type BMPTYPE(Y). The program definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
35	FP(E)/EDITRTN CONFLICT	Fast Path exclusive FP(E) option conflicts with edit routine EDITRTN. The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
36	FP(E)/FP(N) PGM CONFLICT	Fast Path exclusive FP(E) option conflicts with program defined as non-Fast Path FP(N). The transaction definition was not imported.
37	FP(E)/LANG(JAVA) CONFLICT	Fast Path exclusive FP(E) option conflicts with Java language LANG(JAVA) option. The program definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
3A	FP(E OR P)/ MSC KEYWORD CONFLICT	Fast Path exclusive FP(E) or Fast Path potential FP(P) conflicts with MSC MSNAME or SIDR/SIDL value. The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
3B	FP/ MSGTYPE(MULTSEG) CONFLICT	Fast Path exclusive FP(E) or Fast Path potential FP(P) conflicts with multiple segment MSGTYPE(MULTSEG) option. The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
3C	MAXRGN>0/ PARLIM(65535) CONFLICT	The maximum region count MAXRGN value conflicts with the parallel limit count PARLIM value 65535, which disables parallel processing. MAXRGN>0 is not allowed with PARLIM(65535). The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
3D	FP(N)/EMHBSZ>0 CONFLICT	Non-Fast Path FP(N) conflicts with Fast Path attribute EMHBSZ>0. The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
3E	FP(N)/FP(E) PGM CONFLICT	Non-Fast Path FP(N) option conflicts with program defined as Fast Path exclusive FP(E). The transaction definition was not imported.

Table 247. Completion codes for the *IMPORT* command (continued)

Completion code	Completion code text	Meaning
3F	FP(P)/BMPTYPE(Y) CONFLICT	Fast Path potential FP(P) option conflicts with program defined as BMP type BMPTYPE(Y). The transaction definition was not imported.
40	PARLIM/ SCHDTYPE(SERIAL) CONFLICT	PARLIM value is something other than 65535 and the program is defined as SCHDTYPE(SERIAL). The transaction definition was not imported.
41	FP(E OR P)/RECOVER(N) CONFLICT	Fast Path exclusive FP(E) or Fast Path potential FP(P) option conflicts with recovery RECOVER(N) option. The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
42	FP(E OR P)/RESP(N) CONFLICT	Fast Path exclusive FP(E) or Fast Path potential FP(P) option conflicts with response mode RESP(N) option. The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
43	GPSB(Y)/DOPT(Y) CONFLICT	Generated PSB GPSB(Y) option conflicts with the dynamic DOPT(Y) option. The program definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
45	INVALID SIDR VALUE	Remote system ID SIDR value is invalid. The transaction definition was not imported.
46	GPSB(N)/LANG CONFLICT	Generated PSB option N GPSB(N) conflicts with the language option LANG(). The program definition is not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
47	GPSB(Y)/RESIDENT(Y) CONFLICT	Generated PSB GPSB(Y) option conflicts with the resident RESIDENT(Y) option. The program definition is not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
48	NOT ALLOWED FOR IMS RESOURCE	Command is not allowed for IMS descriptors or IMS resources. DFSDSDB1, DFSDSPG1, DBFDSRT1, and DFSDSTR1 are examples of IMS descriptors. DBF#FPU0 is an example of an IMS resource.
49	INQ(N)/RECOVER(N) CONFLICT	Inquiry INQ(N) option conflicts with recover RECOVER(N) option. The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.

Table 247. Completion codes for the IMPORT command (continued)

Completion code	Completion code text	Meaning
4B	INVALID LCT VALUE	Limit count LCT value is invalid. The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
4D	INVALID LPRI INVALID	Limit priority LPRI value is invalid. The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
4E	LTERM ALREADY EXISTS	An LTERM already exists by the same name. The transaction definition was not imported.
4F	INVALID MAXRGN VALUE	Maximum region count value is invalid. The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
51	NO RESOURCE STRUCTURE	The resource structure is not available. The resource could not be registered with RM. The resource definition was not imported.
52	RESOURCE STRUCTURE FULL	The resource structure is full. The resource could not be registered with RM. The resource definition was not imported.
55	NO FAST PATH INSTALLED	Fast Path is not installed. The resource or descriptor definition was not imported.
58	IMS NOT REGISTERED TO RM	IMS is not registered to RM.
59	MSC KEYWORD/ FP(E) PGM CONFLICT	MSC MSNAME or SIDR/SIDL value conflicts with program defined as Fast Path exclusive FP(E). The transaction definition was not imported.
5A	INVALID MSNAME	MSNAME is invalid. The transaction definition was not imported.
5B	MSNAME ALREADY EXISTS	An MSNAME with the same name already exists. The transaction definition was not imported.
5E	MAXRGN>0/ SERIAL(Y) CONFLICT	Serial SERIAL(Y) option conflicts with maximum region count MAXRGN > 0 value. The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
5F	INVALID CHARACTERS IN NAME	Resource or descriptor name is invalid because it contains an invalid character. The resource or descriptor definition was not imported.
61	DFSBCB STORAGE ERROR	DFSBCB storage error. Could not get storage for DDIR, PDIR, RCTE, or SMB control block. The resource or descriptor definition was not imported.

Table 247. Completion codes for the **IMPORT** command (continued)

Completion code	Completion code text	Meaning
67	NO PGM() DEFINED	No program PGM() defined. PGM() is required for transactions that are not remote REMOTE(N) and for routing codes. The definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
68	INVALID NPRI VALUE	Normal priority NPRI value is invalid. The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
69	INVALID PARLIM VALUE	Parallel limit count PARLIM value is invalid. The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
6A	FP(P)/FP(E) PGM CONFLICT	Fast Path potential FP(P) transaction definition conflicts with program already defined as Fast Path exclusive FP(E). The transaction definition was not imported.
6B	PARLIM/SERIAL(Y) CONFLICT	Serial SERIAL(Y) option conflicts with parallel limit PARLIM value. The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
6D	INVALID PROGRAM NAME	Program specified does not exist. The transaction or route code definition was not imported.
75	INVALID PLCTIME VALUE	Parallel limit count time is invalid. The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
79	REMOTE(Y) REQUIRES MSC KEYWORD	Remote REMOTE(Y) option requires MSC MSNAME or SIDR/SIDL value. The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
7A	RTC/FP(N) PGM CONFLICT	The program specified is defined as non-Fast Path FP(N). The route code definition was not imported.
7E	INVALID SPASZ VALUE	SPA size is invalid. The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
83	INVALID SIDL VALUE	Local system ID SIDL value is invalid. The transaction definition was not imported.

Table 247. Completion codes for the IMPORT command (continued)

Completion code	Completion code text	Meaning
8A	WILDCARD PARAMETER NOT SUPPORTED	Resource or descriptor name is invalid because it contains a wildcard parameter. The definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
90	INTERNAL ERROR	An IMS internal error occurred. The definition was not imported.
93	RESERVED NAME	Resource or descriptor name is reserved. For example, name starts with DFS (except for DFSSAMxx or DFSIVPxx), or is an IMS reserved name such as BASICEDT or WTOR. The definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
94	RM REQUEST ERROR	An RM request error occurred. The resource could not be registered with RM. The resource definition was not imported.
97	DOPT(Y)/LANG CONFLICT	The program was defined as DOPT(Y) and a language other than JAVA was defined. The program definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
98	CQS REQUEST ERROR	A CQS request error occurred. The resource could not be registered with RM. The resource definition was not imported.
B0	RESOURCE DEFINITION ERROR	The resource exists as another resource type in the RM structure. The resource definition was not imported.
B6	LATCH ERROR	Unable to obtain latch. The resource or descriptor definition was not imported.
B9	LANG REQUIRED	Program is defined as GPSB(Y) but a language LANG() value was not defined. The program definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
BA	NOT ALLOWED FOR MRQ PSB	An attribute was defined that is not supported for the MRQ PSB. The program definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
BC	MAX 32767 DB EXCEEDED	32767 databases already exist. A maximum of 32767 databases are allowed. The database definition was not imported.
BD	INVALID DB ACCESS TYPE	The database access type is invalid. The database definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.

Table 247. Completion codes for the **IMPORT** command (continued)

Completion code	Completion code text	Meaning
BE	INVALID CPRI VALUE	The current priority CPRI value is invalid. The transaction definition was not imported. This should not occur if the definition was created by a valid export or by an IBM-supplied utility.
DE	ACBLIB READ FAILURE	An error occurred trying to read ACBLIB. The definition was not imported.
140	NO TRAN INPUT EDIT RTN TBL	An edit routine was defined for the transaction, but an edit routine table was never built. The transaction definition was not imported.
141	LOAD FOR EDIT ROUTINE FAILED	An edit routine was defined for the transaction, but the edit routine could not be loaded. The transaction definition was not imported.
142	ROUT CODE FOR FPE TRAN NOT EXIST	The routing code associated with a Fast Path exclusive transaction does not exist. The transaction definition was not imported.
143	NO IMPORT - FPE TRAN ERROR	The routing code is associated with a Fast Path exclusive transaction. An error occurred importing the transaction, so the routing code definition was not imported.
144	NO STORAGE FOR RM REG TRAN LIST	No storage was available to build the list of transactions to register with RM. The transaction definition was not imported.

Examples

The following are examples of the **IMPORT** command:

Example 1 for **IMPORT** command

TSO SPOC input:

```
IMPORT DEFN SOURCE(RDDS) RDDS(SN(IMS PLEX1.RDDS.DEFN))
```

TSO SPOC output:

```
Log for: IMPORT DEFN SOURCE(RDDS) RDDS(SN(IMS PLEX1.RDDS.DEFN))
```

```
IMSpLex . . . . . : PLEX1
Routing . . . . . :
Start time. . . . : 2007.074 12:40:02.30
Stop time . . . . : 2007.074 12:40:03.32
Return code . . . : 00000000
Reason code . . . : 00000000
Reason text . . . :
Command master. . : IMS2
```

```
MbrName Messages
```

```
-----
IMS1     DFS3405I IMPORT COMMAND COMPLETE FOR ALL , DSN=IMSPLEX1.RDDS.DEFN
IMS2     DFS3405I IMPORT COMMAND COMPLETE FOR ALL , DSN=IMSPLEX1.RDDS.DEFN
```

Explanation: The **IMPORT** command is routed to two IMS systems: IMS1 and IMS2. Each IMS successfully imports all of the resource and descriptor definitions

from RDDS IMSPLEX1.RDDS.DEFN. Because OPTION(ALLRSP) is not specified, the list of imported resources is not returned.

Note: Each DFS3405I message is encapsulated in a single set of <msg> </msg> tags and is shown on the same TSO SPOC screen as the return and reason codes. If the message does not fit on one screen, you might need to scroll right to view the entire message.

Example 2 for IMPORT command

TSO SPOC input:

```
IMPORT DEFN SOURCE(RDDS) RDDSDSN(IMSPLEX1.RDDS.DEFN) OPTION(ALLRSP)
```

TSO SPOC output:

Name	Type	MbrName	CC	ImpType
DEDBJN01	DB	IMS2	0	CREATE
DBDFLT	DBDESC	IMS2	0	CREATE
CDEBS	PGM	IMS2	0	CREATE
PGMDFLT	PGMDESC	IMS2	0	CREATE
SMQFP5A	RTC	IMS2	0	CREATE
RTCDFLT	RTCDESC	IMS2	0	CREATE
CDEBTRN1	TRAN	IMS2	0	CREATE
TRANDFLT	TRANDESC	IMS2	0	CREATE

When the PF4 key is pressed, the following is displayed:

```
Log for: IMPORT DEFN SOURCE(RDDS) RDDSDSN(IMSPLEX1.RDDS.DEFN) OPTION(ALLRSP)
```

```
IMSPlex . . . . . : PLEX1
Routing . . . . . : IMS2
Start time. . . . : 2007.074 12:40:02.30
Stop time . . . . : 2007.074 12:40:03.32
Return code . . . : 00000000
Reason code . . . : 00000000
Reason text . . . :
Command master. . : IMS2
```

```
MbrName  Messages
-----  -
IMS2     DFS3405I IMPORT COMMAND COMPLETE FOR ALL , DSN=IMSPLEX1.RDDS.DEFN
```

Explanation: The IMPORT command is sent to IMS2. All resources from RDDS IMSPLEX1.RDDS.DEFN are imported successfully by IMS2. Because OPTION(ALLRSP) is specified, a list of imported resources is returned.

Example 3 for IMPORT command

TSO SPOC input:

```
IMPORT DEFN SOURCE(RDDS) RDDSDSN(IMSPLEX1.RDDS.DEFN) OPTION(ALLRSP)
```

TSO SPOC output:

Name	Type	MbrName	CC	CCText	ImpType
PART	DB	IMS1	0		CREATE
PART	DB	IMS2	0		CREATE
PARTMAST	DB	IMS1	0		CREATE
PARTMAST	DB	IMS2	0		CREATE
TESTDB	DB	IMS1	0		CREATE
TESTDB	DB	IMS2	0		CREATE
TRND01	TRAN	IMS1	6D	INVALID PROGRAM NAME	
TRND01	TRAN	IMS2	0		CREATE

TRND11	TRAN	IMS1	0	CREATE
TRND11	TRAN	IMS2	0	CREATE
TRND123	TRAN	IMS1	0	CREATE
TRND123	TRAN	IMS2	0	CREATE
TRND01	TRANDESC	IMS1	0	CREATE
TRND01	TRANDESC	IMS2	0	CREATE

When the **PF4** key is pressed, the following is displayed:

Log for: IMPORT DEFN SOURCE(RDDS) RDDSDSN(IMSPLEX1.RDDS.DEFN)

```

IMSpLex . . . . . : PLEX1
Routing . . . . . :
Start time. . . . : 2007.074 12:40:02.30
Stop time . . . . : 2007.074 12:40:03.32
Return code . . . : 0200000C
Reason code . . . : 00003000
Reason text . . . : At least one request successful
Command master. . : IMS2

```

MbrName	Return Code	Reason Code	Description
IMS1	0000000C	00003000	At least one request successful

MbrName	Messages
IMS1	DFS3405I IMPORT COMMAND COMPLETE FOR SOME, DSN=IMSPLEX1.RDDS.DEFN
IMS2	DFS3405I IMPORT COMMAND COMPLETE FOR ALL , DSN=IMSPLEX1.RDDS.DEFN

Explanation: The IMPORT command is routed to two IMS systems: IMS1 and IMS2. Each IMS imports the resource and descriptor definitions from RDDS IMSPLEX1.RDDS.DEFN. IMS1 failed to import one or more resource or descriptor definitions. IMS2 imported all of the resource and descriptor definitions successfully. Transaction resource TRND01 is not imported at IMS1, because its program name does not exist at IMS1. Because OPTION(ALLRSP) is specified, a list of imported resources at IMS1 and IMS2 is returned.

Example 4 for IMPORT command

TSO SPOC input:

```
IMPORT DEFN SOURCE(RDDS) RDDSDSN(MYDSN.DEFN) OPTION(ABORT,ALLRSP)
```

TSO SPOC output:

Name	Type	MbrName	CC CText
PART	DB	IMS1	9 NO IMPORT - OPTION ABORT
PARTMAST	DB	IMS1	9 NO IMPORT - OPTION ABORT
TESTDB	DB	IMS1	9 NO IMPORT - OPTION ABORT
TRND01	TRAN	IMS1	6D INVALID PROGRAM NAME
TRND11	TRAN	IMS1	9 NO IMPORT - OPTION ABORT
TRND123	TRAN	IMS1	9 NO IMPORT - OPTION ABORT
TRND01	TRANDESC	IMS1	9 NO IMPORT - OPTION ABORT

When the **PF4** key is pressed, the following is displayed:

Log for . . : IMPORT DEFN SOURCE(RDDS) RDDSDSN(MYDSN.DEFN) OPTION(...

```

IMSpLex . . . . . : PLEX1
Routing . . . . . :
Start time. . . . : 2009.027 19:34:42.27
Stop time . . . . : 2009.027 19:34:42.34
Return code . . . : 0200000C
Reason code . . . : 00003008
Reason text . . . : None of the clients were successful.

```

Command master. . : IMS1

MbrName	Return Code	Reason Code	Reason text
IMS1	0000000C	00003004	No requests were successful

MbrName	Messages

IMS1	DFS3405I IMPORT COMMAND COMPLETE FOR NONE, DSN=MYDSN.DEFN

Explanation: The IMPORT command is sent to IMS1. IMS1 encountered an error when importing resource and descriptor definitions from RDDS MYDSN.DEFN. Transaction resource TRND01 is not imported, because its associated program name does not exist at IMS1. Because OPTION(ABORT,ALLRSP) is specified, no resources are imported at IMS1 because of the ABORT option, and a response line is returned for each resource processed by the command because of the ALLRSP option. The resources that are not imported because of the ABORT option have a completion code of 9 and completion code text of "NO IMPORT - OPTION ABORT". If OPTION(ALLRSP) is not specified, response lines are only returned for those resources that encountered an import error, such as TRND01 in this example, and response lines are not returned for those resources that have a completion code of 9.

Related concepts:

 How to interpret CSL request return and reason codes (System Programming APIs)

Related reference:

Chapter 2, "Command keywords and their synonyms," on page 57

Chapter 37. INITIATE commands

Use the INITIATE commands to initiate the online change process or online reorganization of the specified HALDB partitions.

INITIATE commands are:

- “INITIATE OLC command”
- “INITIATE OLREORG command” on page 692

INITIATE OLC command

Use the INITIATE OLC command to initiate the global online change process. The resources that can be changed online are areas, databases, DMBs, Fast Path DEDB databases, MFS formats, programs, routing codes, and transactions. The correct online change command sequence is INITIATE OLC PHASE(PREPARE) followed by INITIATE OLC PHASE(COMMIT).

Restrictions:

- The INITIATE OLC command is not supported if local online change is enabled.
- This command is invalid on XRF alternate, RSR tracker, and FDBR systems.

Subsections:

- “Environment”
- “Syntax”
- “Keywords” on page 652
- “Usage notes” on page 659
- “Output fields” on page 662
- “Return, reason, and completion codes” on page 663
- “Examples” on page 681

Environment

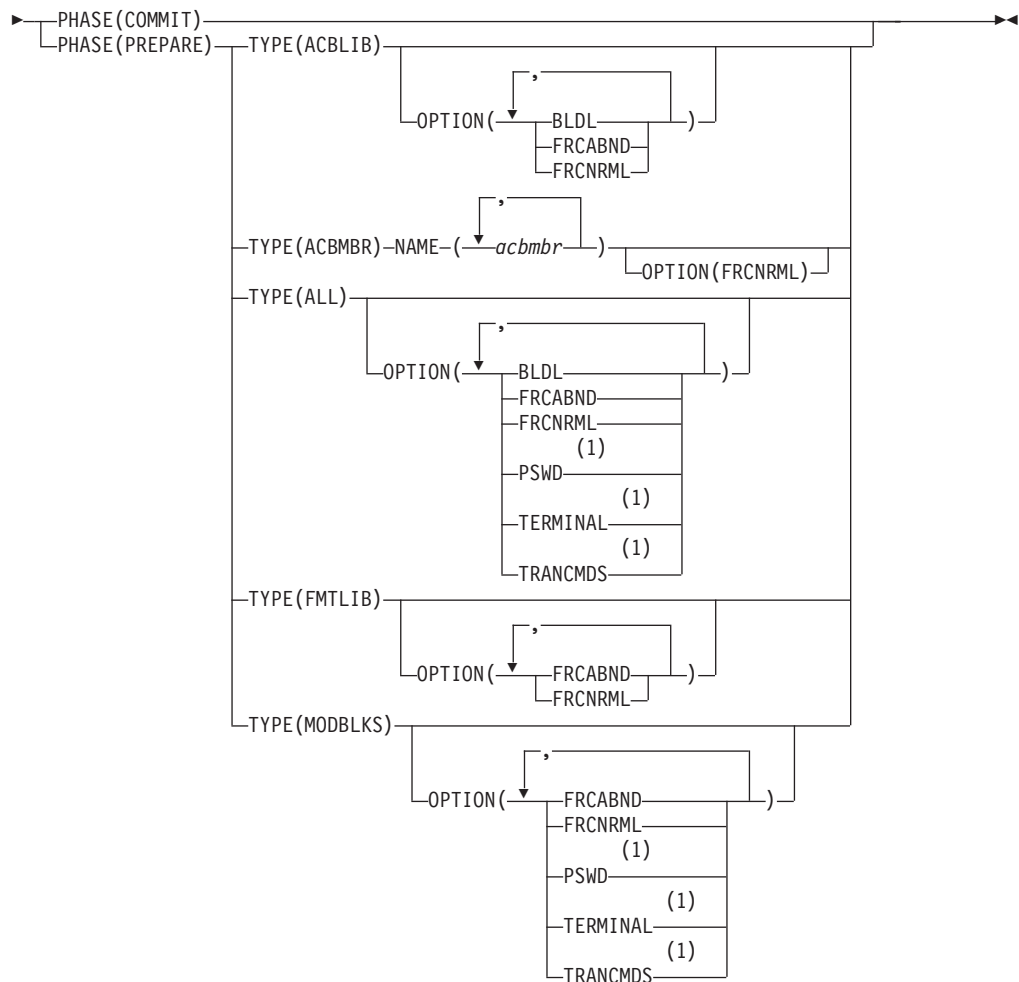
The following table lists the environments (DB/DC, DBCTL, and DCCTL) from which the INITIATE command and keywords can be issued.

Table 248. Valid environments for the INITIATE OLC command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
INITIATE OLC	X	X	X
OPTION	X	X	X
PHASE	X	X	X
TYPE	X	X	X

Syntax

➡ INITIATE OLC
 └── INIT ─┘



Notes:

- 1 PSWD, TERMINAL, and TRANCMDs are ignored by IMS Version 10 and later. For more details, see "Keywords."

Keywords

The following keywords are valid for the INITIATE OLC command:

OPTION()

Specifies an additional function to be performed during an online change. Following is a list of additional functions:

BLDL Sends asynchronous information message DFS3498I to the system console for each PSB or DMB not found in ACBLIB. This message does not affect the success of the command.

FRCABND

Forces the online change prepare phase even if one or more required IMS systems in the IMSplex have ended abnormally. An IMS is required to participate in the global online change if it is listed in the OLCSTAT data set as being current with the online change libraries. An IMS is listed in the OLCSTAT data set because it either participated in the last global online change or cold started since the last global online change. A successful global online

change specified with the FRCABND removes an abnormally ended IMS from the list of required IMS systems in the OLCSTAT data set.

If the INITIATE OLC PHASE(PREPARE) command is specified with the FRCABND keyword and the command fails for any IMS, you can proceed with an INITIATE OLC PHASE(COMMIT) command, if you want, after canceling those IMS systems where prepare failed. Otherwise, you must cancel (abort) the online change and start over.

FRCNRML

Forces the online change prepare phase even if one or more required IMS systems in the IMSplex have terminated normally. An IMS is required to participate in the global online change if it is listed in the OLCSTAT data set as being current with the online change libraries. An IMS is listed in the OLCSTAT data set because it either participated in the last global online change or cold started since the last global online change. A successful global online change specified with the FRCNRML keyword removes an IMS that shut down normally from the list of required IMS systems in the OLCSTAT data set.

If the INITIATE OLC PHASE(PREPARE) command is specified with the FRCNRML keyword and the command fails for any IMS, you can proceed with an INITIATE OLC PHASE(COMMIT) command, if you want, after shutting down those IMS systems where prepare failed. Otherwise, you must terminate the online change and start over.

PSWD

Specifies specific types of SMU password security definitions to add, if they had not existed before. The application of new security definitions is always attempted based upon the prevailing security options in effect from the last IMS initialization.

This keyword is ignored by IMS Version 10 and later, because the keyword is related to SMU security, which is not valid in IMS Version 10 and later. This keyword is left in IMS Version 10 and later for compatibility with a Version 9 IMS in the OLCSTAT.

TERMINAL

Specifies specific types of SMU terminal security definitions to add, if they had not existed before. The application of new security definitions is always attempted based upon the prevailing security options in effect from the last IMS initialization.

This keyword is ignored by IMS Version 10 and later, because the keyword is related to SMU security, which is not valid in IMS Version 10 and later. This keyword is left in IMS Version 10 and later for compatibility with a Version 9 IMS in the OLCSTAT.

TRANCMD

Specifies specific types of SMU transaction command security definitions to add, if they had not existed before. The application of new security definitions is always attempted based upon the prevailing security options in effect from the last IMS initialization.

This keyword is ignored by IMS Version 10 and later, because the keyword is related to SMU security, which is not valid in IMS

Version 10 and later. This keyword is left in IMS Version 10 and later for compatibility with a Version 9 IMS in the OLCSTAT.

NAME(*acbmbr*)

Specifies that one or more ACB library members are to be copied from the staging ACB library to the active ACB library. *acbmbr* can be a DBD or a PSB that is being changed or added.

Wildcard characters are not supported in the member names.

If a DBD is being changed, you do not have to specify the associated PSBs on the command because all of the PSBs that are associated with the changed DBD are copied automatically from the staging ACB library to the active ACB library.

If a DBD that is being changed or added has external references, the secondary index DBD does not have to be specified on the *acbmbr* parameter. The INIT OLC TYPE(ACBMBR) command processing copies all externally referenced members of the DBD from the staging ACB library to the active ACB library.

PHASE()

Specifies the online change phase to start. The PREPARE phase must be performed first, followed by the COMMIT phase.

PREPARE

Performs the online change prepare phase on each IMS system listed in the OLCSTAT data set by specifying which resources are to be added, changed, and deleted. PREPARE is not recovered across an emergency restart and must be reentered after restart if the COMMIT phase did not complete before IMS failure.

The prepare phase is rejected if any IMS systems in the IMSplex current with the online change libraries are down, unless the FRCABND or the FRCNRML option is used. The OLCSTAT data set lists the IMS systems that are current with the online change libraries. These IMS systems either participated in the last global online change or cold started after the last global online change. To force a global online change in spite of abended IMS systems, use the FRCABND option. To force a global online change in spite of IMS systems that are shut down normally, use the FRCNRML option. The prepare phase fails if any IMS participating in the global online change prepare phase fails, detects an error, or fails to respond in time. Zero, one, or more of the IMS systems remain in an online change prepare complete state. Issue the QUERY MEMBER TYPE(IMS) SHOW(STATUS) command to display the online change state of all the IMS systems in the IMSplex. Evaluate the QUERY MEMBER TYPE(IMS) output to help you decide whether to issue the INITIATE OLC PHASE(PREPARE) command to try the PREPARE phase again, or to issue the TERMINATE OLC command to terminate the online change. The IMS systems that are in an online change state remain in an online change state until you terminate or commit the online change. IMS does not automatically terminate online change because of a failure. IMS leaves the IMS systems in their online change states. You must issue the QUERY MEMBER TYPE(IMS) SHOW(STATUS) command and evaluate the output to decide whether to terminate the online change or attempt the online change phase again.

Restriction: The INITIATE OLC PHASE(PREPARE) command is rejected if the IMS to which the command is routed does not support global online change. If this situation occurs and there is an IMS that supports global online change, you must route the command to a specific IMS that supports global online change.

COMMIT

Performs the online change commit phase on each IMS listed in the OLCSTAT data set, which commits the online changes by bringing all the newly defined resources online, updating changed resources, and removing deleted resources. The commit phase consists of commit phase 1, the OLCSTAT data set update, commit phase 2, and commit phase 3. The OLCSTAT data set is updated with the new current online change libraries and the list of IMS systems that are current with the current online change libraries. The commit phase 2 switches the online environment from the active ACBLIB, FORMAT, MATRIX, or MODBLKS libraries to the inactive libraries containing the new or changed resource descriptions.

Note: The MATRIX library is not supported by IMS Version 10 and later, because the MATRIX library is related to SMU security, which is not supported in IMS Version 10 and later. The only case where this library is supported by Version 10 and later is when the IMS Version 10 system or later coexists in an IMSplex with either an IMS Version 8 (using SMU security), an IMS Version 9 (using SMU security), or both, and the IMS Version 10 or later is the command master for an INIT OLC command. IMS Version 10 or later passes the command with this keyword to the other IMS systems in the IMSplex that support SMU security.

Recommendation: Use the /DISPLAY MODIFY command to display the work in progress for resources to be changed or deleted, before attempting the COMMIT phase.

When COMMIT is successful, the modifications persist across all IMS restarts, unless global online change occurs while this IMS is down.

The commit phase fails if any IMS participating in the global online change commit phase fails, detects an error, or fails to respond in time. Zero, one, or more of the IMS systems might be in an online change prepare complete state, a commit phase 1 complete state, or no longer in an online change state because commit phase 2 succeeded. Issue the QUERY MEMBER TYPE(IMS) SHOW(STATUS) command to display the online change state of all the IMS systems in the IMSplex. Evaluate the QUERY MEMBER TYPE(IMS) output to help you decide whether to issue the INITIATE OLC PHASE(COMMIT) command to try the commit again, or issue the TERMINATE OLC command to terminate the online change. The IMS systems that are in an online change state remain in an online change state until you terminate or commit the online change.

IMS does not automatically terminate online change because of a failure. IMS leaves the IMS systems in their online change states. You must issue the QUERY MEMBER TYPE(IMS) SHOW(STATUS)

command and evaluate the output to decide whether to terminate the online change or attempt the online change phase again.

If a database is deleted, IMS closes the database and makes it unavailable to programs. Also, if the database is authorized for DBRC, COMMIT deauthorizes it.

If FMTLIB is being changed, most new and in-progress requests are queued for processing after the INITIATE OLC PHASE(COMMIT) command is completed.

Most new and in-progress requests are queued for processing.

An INITIATE OLC PHASE(COMMIT) command is rejected if:

- An INITIATE OLC PHASE(PREPARE) command was not previously entered.
- Commit phase 1 fails on one or more IMS systems in the IMSplex.
- Transactions to be deleted have messages queued.
- Transactions to be changed by the following system definition keywords have messages queued:
 - MSGTYPE
 - INQUIRY
 - FPATH
 - EDIT
 - SPA
 - SERIAL
- Transactions to be changed by keywords not shown in the previous bullet have messages queued and the transactions have not been the object of a /STOP or /PSTOP command.
- Transactions with access to programs or databases to be changed or deleted are prevented from updating and the transactions have not been the object of a /STOP or /PSTOP command. When a transaction shows a status of USTOP during a /DISPLAY TRAN command, the /STO command might have to be entered because the /PSTOP command might not enable the INITIATE OLC command to complete the transaction.
- Any program (PSB) that is currently scheduled has a program, database, or transaction change or deletion. This includes Wait for Input (WFI) and Fast Path transactions. All WFI and Fast Path regions that reference changed or deleted routing codes, programs, or databases must be stopped before entering the INITIATE OLC PHASE(COMMIT).
- An I/O error occurs while reading the inactive MFS FORMAT library directory or the resident index (\$\$IMSDIR) member.
- A /START DATABASE command is in progress for any database that is changed or deleted.
- A /DBDUMP or /DBRECOVERY command is in progress for any database that is changed or deleted.
- An IMS that participated in the prepare phase was shut down normally or ended abnormally. The online change must be aborted and started over.

- OM routed the command to an IMS where local online change is enabled.
- The OLCSTAT data set is not locked for global online change. The INITIATE OLC PHASE(PREPARE) command locks the OLCSTAT data set, so that no IMS systems can initialize during the global online change. The commit command is rejected if the lock is not set. The INITIATE OLC PHASE(PREPARE) command might not have completed successfully or the OLCSTAT data set contents might be invalid.
- An IFP region is running. The INITIATE OLC PHASE(COMMIT) command is rejected because an active route code exists. All IFP regions must be terminated before issuing a COMMIT.

IMS does not reject the INITIATE OLC PHASE(COMMIT) command if the online change indirectly affects transactions (having work in progress) that reference resources in the ACB library or in the MODBLKS data set that are directly affected by the online change. These transactions themselves are not being changed (no attribute on the TRANSACT macro is being changed), but they reference a PDIR, PSB, or DMB that is affected by the online change. A transaction can be indirectly affected by an online change in one of the following situations:

- The transaction references a PSB directory (PDIR) control block in the IMS.MODBLKS data set that is being changed.
- The transaction references a PSB in the ACB library that is being changed.
- The transaction references a PSB directory (PDIR) control block in the IMS.MODBLKS data set which in turn references a database that is being changed online.
- The transaction references a PSB in the ACB library (IMS.ACBLIB) that references a database that is being changed online.

Operator action might be required to prevent the preceding conditions. For example, if a program or database is scheduled, the operator must either wait until the program or database is finished before the INITIATE OLC PHASE(COMMIT) command is entered or issue the /STOP, /PSTOP, or UPDATE TRAN command for the associated transaction.

If IMS is in an IMSplex and Resource Manager (RM) is using a resource structure, the transactions being added by the online change are registered to RM if they are not already registered to RM. If any error occurs during the CSLRMUPD request to register the transactions, the /MODIFY or INITIATE OLC command fails and IMS will be in a COMMIT2F state.

If an INITIATE OLC PHASE(COMMIT) command results in the IMS remaining in a COMMIT2F state, a completion code of the error that caused it is returned to OM. If the error can be fixed, the INITIATE OLC PHASE(COMMIT) can be reissued and CSLRMUPD tried again and the online change completed. If the error cannot be fixed, the IMS must be canceled and warm started as the online change is not complete.

TYPE()

Specifies the types of resources that are changed online. The resources are as follows:

ACBLIB

Causes IMS to prepare to add, change, or delete database descriptors (DMB) and program descriptors (PSB) to ACBLIB. The online environment is switched from the active ACBLIB to the inactive ACBLIB containing new or changed DMB and PSBs. ACBLIB members that are not found are displayed as CHANGED because a DDIR or PDIR exists in MODBLKS. Additions or deletions to ACBLIB require the MODBLKS parameter. Quiesces transactions to be changed or deleted and transactions that access databases or programs to be changed or deleted. Fast Path DEDBs are supported but Fast Path MSDBs are not supported.

ACBMBR

Specifies that an ACB library member online change process is to be performed for the specified ACB library member name or names. The command response lists all the members that are to be copied from the staging ACB library to the active ACB library during the COMMIT command processing.

When you issue either an INIT OLC PHASE(PREPARE) TYPE(ALL) command or an INIT OLC PHASE(PREPARE) TYPE(ACBLIB) command, IMS initiates a full online change process for either the ACB library or the ACB, FMT, and MODBLKS libraries. In either case, an ACB library member online change process is not involved.

After an INITIATE OLC PHASE(COMMIT) command, when the TYPE(ACBMBR) online change completes successfully, the active and inactive ACB library suffixes and the MODID are not updated in the OLCSTAT data set or in the IMS control blocks because ACB library member online change processing changes or adds ACB members directly into the active ACB library.

ALL Prepares to add, change, and delete resources for the ACBLIB, FMTLIB, or MODBLKS libraries. The BLDL function is performed for ACBLIB. ALL does not include the ACBMBR online change.

If the INITIATE OLC PHASE(PREPARE) command is specified with type ALL, IMS systems with MODBLKS online change enabled perform the MODBLKS online change and return a good completion code. IMS systems with DRD enabled ignore the MODBLKS keyword, perform the ACBLIB online change, FMTLIB online change, or both, and return a good completion code. DBCTLs with DRD enabled ignore the MODBLKS and FMTLIB keyword, perform an ACBLIB online change, and return a good completion code.

FMTLIB

Causes IMS to prepare to add, change, or delete MFS maps in the FMTLIB library that are produced by the MFS Language utility and Service utility. The online environment is switched from the active FMTLIB to the inactive FMTLIB containing new MFS maps produced by the MFS Language utility and Service utility. The FMTLIB parameter is ignored with DBCTL. There are no

restrictions on the use of MFS format blocks until the INITIATE OLC PHASE(COMMIT) command is entered.

MODBLKS

Causes IMS to prepare to add, change, or delete database, transaction, program, or RTCODE resources in the MODBLKS library or SMU security definitions in the MATRIX library.

Note: The MATRIX library is not supported by IMS Version 10 and later, because the MATRIX library is related to SMU security, which is not supported in IMS Version 10 and later. The only case where this library is supported by Version 10 and later is when the IMS Version 10 system or later coexists in an IMSplex with either an IMS Version 8 (using SMU security), an IMS Version 9 (using SMU security), or both, and the IMS Version 10 or later is the command master for an INIT OLC command. IMS Version 10 or later passes the command with this keyword to the other IMS systems in the IMSplex that support SMU security.

The online environment is switched from the active MODBLKS and MATRIX libraries to the inactive MODBLKS and MATRIX libraries. The MODBLKS library contains a subset of control blocks produced by IMS system definition and SMU security definitions. The MATRIX library contains SMU security definitions for resources defined in the MODBLKS library. Transactions to be changed or deleted and transactions that access databases or programs to be changed or deleted are quiesced.

MODBLKS is disabled if DRD is enabled for IMS. If DRD is enabled on all the IMS systems, the INITIATE OLC TYPE(MODBLKS) command fails. If DRD is enabled on some IMS systems, the INITIATE OLC PHASE(PREPARE) TYPE(MODBLKS) command succeeds with a warning return code indicating that the command was not applicable to some IMS systems. The IMS systems where online change for MODBLKS is enabled perform the MODBLKS online change. The IMS systems where DRD is enabled return a completion code of 1 (not applicable).

If the INITIATE OLC PHASE(PREPARE) command is specified with type MODBLKS and ACBLIB and/or FMTLIB, IMS systems with MODBLKS online change enabled perform the MODBLKS online change and return a good completion code. IMS systems with DRD enabled ignore the MODBLKS keyword, perform the ACBLIB online change, FMTLIB online change, or both, and return a good completion code. DBCTLs with DRD enabled ignore the MODBLKS and FMTLIB keyword, perform an ACBLIB online change, and return a good completion code.

Usage notes

The INITIATE OLC command can be issued to an IMSplex by using the Batch SPOC utility.

If an IMSplex is running with a Resource Manager (RM) environment (RMENV=Y in the DFSCGxxx PROCLIB member), the INITIATE OLC command initiates a phase of global online change of resources and coordinates the phase with all of the IMS systems in the IMSplex. The INITIATE OLC command is similar to the command sequence /MODIFY PREPARE and /MODIFY COMMIT, except that it

applies to an IMSplex-wide global online change. OM sends the INITIATE OLC command to one master IMS in the IMSplex. The command master IMS uses RM services to coordinate the online change with all participating IMS systems.

If the command master IMS in an IMSplex is running without an RM environment (RMENV=N in the DFSCGxxx PROCLIB member), the INITIATE OLC command is performed locally at the IMS to which the command was sent. The OLCSTAT data set must be unique for each IMS in the IMSplex that is running without an RM environment. The OLCSTAT data set cannot be shared between IMS systems and must be unique. If the OLCSTAT data set contains the name of an IMS other than the one processing the online change, the INITIATE OLC command is rejected. You can use the QUERY OLC command to display the contents of the OLCSTAT data set to determine which IMS member name is invalid. To correct the data set, you can use the Global Online Change utility, DFSUOLC0.

If the INITIATE OLC command is issued with a route list containing either the default Route All or multiple IMS systems that do not have RM running, the INITIATE OLC command must be issued separately to each IMS. To perform online change for IMS systems that do not have RM running, you must issue the INITIATE OLC command to each IMS. To determine which IMS systems are defined with RMENV=N in the DFSCGxxx PROCLIB member, you can issue the QUERY MEMBER SHOW(ATTRIB) command.

If some IMS systems in an IMSplex use RM services and some do not, you must ensure that the OLCSTAT data sets are properly defined to the IMS systems. The IMS systems that use RM services and global online change must share one OLCSTAT data set. Each IMS system that does not use RM services must have its own unique OLCSTAT data set.

If the INITIATE OLC PHASE(PREPARE) command is specified without an FRCABND or FRCNRML keyword and the command fails because one or more IMS systems are down or go down before the online change is committed, the online change must be aborted and started over. Issue the TERMINATE OLC command to terminate the online change.

The INITIATE OLC command master usually performs the online change phase locally first. If the online change phase fails locally, the command master usually skips sending the online change phase to the other IMS systems, sets a completion code for each other IMS indicating that the online change phase was not attempted, and terminates command processing. However, if the INITIATE OLC PHASE(COMMIT) command fails on the local IMS because of work in progress for resources that are directly affected by the online change, the command master still sends the commit phase 1 to the other IMS systems. The purpose is to report work in progress for all the IMS systems in the IMSplex, to facilitate completion of the work in progress.

In a mixed IMSplex, you might have some variations of IMS systems that support a particular type of online change and some that do not. At least one IMS in the IMSplex must successfully perform the online change phase for the command to be considered successful. If no IMS in the IMSplex supports the type of online change that the command is attempting, the command reason code indicates that none of the IMS systems performed the online change phase. If you enter an INITIATE OLC PHASE(PREPARE) command that does not apply to any IMS in the IMSplex, you must terminate the online change with a TERMINATE OLC command.

If the INITIATE OLC PHASE(COMMIT) command fails for any IMS before the OLCSTAT data set is updated, either correct the errors and try the commit again or terminate the online change with a TERMINATE OLC command. If the INITIATE OLC PHASE(COMMIT) command fails for any IMS after the OLCSTAT data set has been updated, correct the errors and try the commit again. The online change cannot be terminated.

If an IMS ends abnormally during online change and the INITIATE OLC PHASE(PREPARE) command was not specified with FRCABND, then issue the TERMINATE OLC command to terminate the online change. The INITIATE OLC PHASE(COMMIT) command is not permitted in this case. If an IMS ends abnormally during online change and the INITIATE OLC PHASE(PREPARE) command was specified with FRCABND, then the INITIATE OLC PHASE(COMMIT) command is permitted.

Type-1 and type-2 commands that come from the OM interface are rejected during the commit phase, if the command changes resources. Commands that change resources could interfere with the online change of the resources. Type-1 and type-2 commands that come from the OM interface are permitted during the commit phase, if the command displays resources such as QUERY or /DISPLAY. Type-1 commands that are entered from the system console or an IMS terminal are queued during the online change commit phase. These commands run after the online change is committed or aborted.

Each IMS participating in the global online change does not issue the same synchronous online change messages to the master terminal or system console that it does for a local online change. The OM command response contains information equivalent to the online change messages that appear for the local online change, such as the DFS3499 message contents.

Each IMS participating in the global online change might issue asynchronous online change messages to the system console, such as DFS3400, DFS3445, and DFS3498.

The INITIATE OLC PHASE(PREPARE) TYPE(ALL) command ignores the following resource definitions on IMS systems where dynamic resource definition is enabled: database directories (DDIRs), program directories (PDIRs), Fast Path routing codes (RCTEs), and scheduler message blocks (SMBs, which are also known as transactions). INITIATE OLC PHASE(PREPARE) specified with TYPE MODBLKS alone or with other keywords is rejected on the IMS systems where dynamic resource definition is enabled, but processed on the IMS systems where dynamic resource definition is not enabled. The INITIATE OLC PHASE(COMMIT) command master updates the OLCSTAT data set to switch the MODBLKS data set, even in the case where the master has dynamic resource definition enabled and the MODBLKS online change does not apply. The MODBLKS data set is switched in the OLCSTAT data set in case another IMS in the IMSplex does not have dynamic resource definition enabled. If the INITIATE OLC PHASE(PREPARE) command is specified with TYPE MODBLKS and there is only one IMS in the IMSplex and it has dynamic resource definition enabled, the command is rejected and the OLCSTAT data set is not updated.

The OM command timeout default of 300 seconds (5 minutes) might not be enough time for the online change phase to complete. You might have to specify a timeout value on the command based on the needs of the installation. To change

the timeout value, use the TIMEOUT parameter of the CSLOMCMD command request or specify a Wait (timeout) value when you issue the INITIATE OLC command from TSO SPOC.

An online change of a PSB or DBD removes the member from the 31-bit pool as well as from the 64-bit pool.

Output fields

The following table shows the output fields for an INITIATE OLC command. The columns in the table are as follows:

Short label

Contains the short label generated in the XML output.

Keyword

Identifies the keyword on the command that caused the field to be generated. N/A appears for output fields that are always returned.

Meaning

Provides a brief description of the output field.

Table 249. INITIATE OLC output field descriptions

Short label	Keyword	Meaning
ACBL	TYPE(ACBLIN,FMTLIB,MODBLKS,ALL)	The current ACBLIB library suffix (if prepare succeeded or commit succeeded that did not include ACBLIB), or the new ACBLIB library suffix (if commit succeeded for ACBLIB). The ACBLIB suffix is returned if the online change prepare phase or commit phase is successful. Suffix A means that ACBLIBA is current. Suffix B means that ACBLIBB is current.
ACBS	TYPE(ACBMBR)	Value of an IMS system.
ADD	TYPE(ACBMBR)	Resource added. The ACB member is found in the staging ACBLIB and not in the active ACBLIB. The ACB member is to be added to the active ACBLIB.
CC	N/A	Completion code returned by IMS member that performed the global online change phase. Completion code is always returned.
CCTXT	<i>error</i>	Completion code text that briefly explains the meaning of the nonzero completion code.
CHG	TYPE(ACBMBR)	Resource changed. The ACB member is found in the staging ACBLIB and the active ACBLIB. The ACB member is to be changed in the active ACBLIB.
CPY	TYPE(ACBMBR)	Resource copied. The ACB member is found in the staging ACBLIB and not in the active ACBLIB. The ACB member does not have a PDIR for a PSB or a DDIR for a DBD in an IMS system. The ACB member is to be copied from the staging to the active ACBLIB. The ACB resource is not available until a PDIR for a PSB or a DDIR for a DBD is created.
DBD	TYPE(ACBMBR)	DBD resource name

Table 249. INITIATE OLC output field descriptions (continued)

Short label	Keyword	Meaning
ERRT	N/A	Error text returned by IMS member that failed performing the global online change phase. Error text might be returned if the completion code is nonzero.
FMTL	TYPE(ACBLIN,FMTLIB,MODBLKS,ALL)	The current FMTLIB library suffix (if prepare succeeded or commit succeeded that did not include FMTLIB), or the new FMTLIB library suffix (if commit succeeded for FMTLIB). The FMTLIB suffix is returned if the online change prepare phase or commit phase is successful. Suffix A means that FMTLIBA is current. Suffix B means that FMTLIBB is current.
IMSMBR	N/A	IMS member that performed the global online change phase. The IMS member name is always returned.
MBR	N/A	IMSplex member that built the line of output. IMS identifier of the IMS that is the master of this online change phase. IMS identifier is always returned.
MODB	TYPE(ACBLIN,FMTLIB,MODBLKS,ALL)	The current MODBLKS library suffix (if prepare succeeded or commit succeeded that did not include MODBLKS), or the new MODBLKS library suffix (if commit succeeded for MODBLKS). The MODBLKS suffix is returned if the online change prepare phase or commit phase is successful. Suffix A means that MODBLKSA and MATRIXA are current. Suffix B means that MODBLKSB and MATRIXB are current.
MODI	TYPE(ACBLIN,FMTLIB,MODBLKS,ALL)	The current modify ID (if prepare succeeded), or new modify ID (if commit succeeded). The modify ID - 1 indicates the number of global online changes that have been performed. The modify ID is returned if the online change prepare phase or commit phase is successful.
PSB	TYPE(ACBMBR)	PSB resource name
RSC	TYPE(ACBSHR)	Resource type is not known.
RFS	TYPE(ACBSHR)	Resource is refreshed in the active ACBLIB.

Return, reason, and completion codes

Two sets of return and reason codes are returned when a command is issued through the OM API. One set of codes is for the OM request and the other set of codes is for the command itself. The OM request return and reason codes that can be returned as a result of the INITIATE OLC command are standard for all commands entered through the OM API.

The return and reason codes returned by the INITIATE OLC command are passed from the OM API on to the SPOC application. These codes are encapsulated in XML tags similar to how the response to the command is encapsulated in XML

tags. The IBM-supplied TSO SPOC displays these codes, whereas a user-written SPOC application might choose not to display these codes.

Some reason codes are accompanied by a complete list of IMS systems and return codes. The reason code meaning indicates whether a list is returned. A partial list of IMS systems and return codes might be returned with any INITIATE OLC error reason code, if any output was built before the error was detected.

The following table includes the return and reason codes and a brief explanation of the codes. The return or reason code returned for the command might also indicate an error from a CSL request.

Table 250. Return and reason codes for INITIATE OLC

Return code	Reason code	Meaning
X'00000000'	X'00000000'	The INITIATE OLC command completed successfully. The INITIATE OLC command applies to all of the IMS systems listed in the OLCSTAT data set. Each IMS listed in the OLCSTAT data set is current with the online change libraries and required to participate in the online change. The FRCABND option was not specified. The FRCNRML option was not specified, either. If the INITIATE OLC PHASE(PREPARE) command was specified, all of the IMS systems listed in the OLCSTAT data set are now in an online change prepare state. If the INITIATE OLC PHASE(COMMIT) command was specified, all of the IMS systems listed in the OLCSTAT data set successfully committed the online change. An output line is built for each IMS listed in the OLCSTAT data set. Each output line contains the IMS member name and a completion code of zero.
X'00000004'	X'0000100C'	The command completed successfully, but was not applicable to one or more IMS systems for acceptable reasons. The INITIATE OLC command applies to all of the IMS systems listed in the OLCSTAT data set. Each IMS listed in the OLCSTAT data set is current with the online change libraries and required to participate in the online change (unless FRCABND or FRCNRML is specified). An output line is built for each IMS listed in the OLCSTAT data set. Each output line contains the IMS member name and a completion code. A nonzero completion code might be accompanied by error text. One or more of the IMS systems contain a completion code indicating that the online change phase did not apply to this IMS, such as the IMS state is shutdown and FRCSHUT was specified, the IMS state is abended and FRCABND was specified, the online change type does not apply to this IMS, or this IMS is already in the correct online change state. The INITIATE OLC completion code table contains the list of completion codes and error text that can be returned by the INITIATE OLC command.

Table 250. Return and reason codes for INITIATE OLC (continued)

Return code	Reason code	Meaning
X'00000004'	X'0000100D'	The specified online change type is not applicable to all the IMS systems in the OLCSTAT. Because the online change cannot be committed, use the TERMINATE OLC command to terminate the online change in progress. This error return and reason code combination is returned in the following situations: • If a MODBLKS type of online change process is attempted in an IMSplex where all IMS systems are DRD enabled • If an FMTLIB type of online change process is attempted in an IMSplex where all IMS systems are configured as DBCTL systems
X'00000008'	X'00002040'	The INITIATE OLC command is rejected because of an invalid filter. The INITIATE OLC PHASE(PREPARE) OPTION(BLDL) command can be specified only with TYPE(ACBLIB) or TYPE(ALL). The PSWD, TERMINAL, and TRANCMDs options can be specified only with TYPE(MODBLKS) or TYPE(ALL). The INITIATE OLC PHASE(COMMIT) command does not support TYPE or OPTION.
X'00000008'	X'00004300'	The command is not allowed, because online change for the MODBLKS data set is disabled (DFSDFxxx or DFSCGxxx is defined with MODBLKS=DYN). Dynamic resource definition is enabled.
X'0000000C'	X'00003000'	The INITIATE OLC command is successful for at least one IMS but not all IMS systems. The INITIATE OLC command applies to all of the IMS systems listed in the OLCSTAT data set. Each IMS listed in the OLCSTAT data set is current with the online change libraries and required to participate in the online change (unless FRCABND or FRCNRML is specified). An output line is built for each IMS listed in the OLCSTAT data set. Each output line contains the IMS member name and a completion code. A nonzero completion code might be accompanied by error text. One or more of the IMS systems returned an error completion code. The INITIATE OLC completion code table contains the list of completion codes and error text that can be returned by the INITIATE OLC command. If INITIATE OLC PHASE(PREPARE) fails, the online change must be aborted and started over. If INITIATE OLC PHASE(COMMIT) fails and you want to try the commit again, correct the problem, and issue the INITIATE OLC PHASE(COMMIT) command again. To abort the online change, issue the TERMINATE OLC command. If the INITIATE OLC PHASE(PREPARE) command failed or the INITIATE OLC PHASE(COMMIT) command failed before the commit master updated the OLCSTAT data set, the online change is aborted. See 'INITIATE OLC error handling' for more details.

Table 250. Return and reason codes for INITIATE OLC (continued)

Return code	Reason code	Meaning
X'0000000C'	X'00003004'	The INITIATE OLC command failed for all of the IMS systems. The INITIATE OLC command applies to all of the IMS systems listed in the OLCSTAT data set. Each IMS listed in the OLCSTAT data set is current with the online change libraries and required to participate in the online change (unless FRCABND or FRCNRML is specified). An output line is built for each IMS listed in the OLCSTAT data set. Each output line contains the IMS member name and a completion code. A nonzero completion code might be accompanied by error text. The INITIATE OLC completion code table contains the list of completion codes and error text that can be returned by the INITIATE OLC command. If INITIATE OLC PHASE(PREPARE) fails for all of the IMS systems listed in the OLCSTAT data set, no IMS is in an online change state. You can try the online change again with another INITIATE OLC PHASE(PREPARE) command. If INITIATE OLC PHASE(COMMIT) fails and you want to try the commit again, correct the problem, and then issue the INITIATE OLC PHASE(COMMIT) command again. To terminate the online change, issue the TERMINATE OLC command. If the INITIATE OLC PHASE(PREPARE) command failed or the INITIATE OLC PHASE(COMMIT) command failed before the commit master updated the OLCSTAT data set, the online change is terminated. For more details, see "INITIATE OLC error handling" on page 689.
X'00000010'	X'00004004'	The INITIATE OLC command failed because there is no CQS. RM attempted to access the process resource on the resource structure, but it failed because CQS is not available. The online change phase might have succeeded on one or more IMS systems. For more details, see "INITIATE OLC error handling" on page 689.
X'00000010'	X'0000400C'	The INITIATE OLC command failed because it is invalid for an XRF alternate.
X'00000010'	X'00004014'	The INITIATE OLC command failed because it is invalid for an RSR tracker.
X'00000010'	X'0000401C'	The INITIATE OLC command failed because it is invalid for an FDBR region.
X'00000010'	X'00004018'	The INITIATE OLC command failed because the RM resource structure is not available. The online change phase might have succeeded on one or more IMS systems. For more details, see "INITIATE OLC error handling" on page 689.
X'00000010'	X'00004100'	The INITIATE OLC PHASE(PREPARE) command is rejected because the resource structure is full. RM failed trying to create the process resource on the resource structure.

Table 250. Return and reason codes for INITIATE OLC (continued)

Return code	Reason code	Meaning
X'00000010'	X'00004104'	The INITIATE OLC command failed because RM is not available. The online change phase might have succeeded on one or more IMS systems. Either there is no RM address space, or RM is active but not registered to SCI because CQS or the resource structure is not available. For more details, see “INITIATE OLC error handling” on page 689.
X'00000010'	X'00004108'	The INITIATE OLC command failed because SCI is not available. The online change phase might have succeeded on one or more IMS systems. For more details, see “INITIATE OLC error handling” on page 689.
X'00000010'	X'0000410C'	The INITIATE OLC command is rejected, because global online change is not enabled. Local online change is enabled. Use the /MODIFY command for local online change. If your IMSplex is made up of some IMS systems that support global online change and some that support local online change, route the INITIATE OLC command to an IMS that is enabled for global online change.
X'00000010'	X'0000410D'	Online change prepare has already been done. Another prepare command is not allowed. The only commands that are allowed when IMS is in this state are INITIATE OLC PHASE(COMMIT) or TERMINATE OLC.
X'00000010'	X'0000410E'	Online change prepare has not been done. An online change prepare command must complete successfully before a commit command is attempted.
X'00000010'	X'0000410F'	The online change has already been committed, so it cannot be terminated. However, an error occurred that prevented the commitment from being fully completed. For example, one of the IMS systems that participates in the online change was unable to complete commit phase 2 or commit phase 3, or an IMS response to RM timed out and the commit master could not determine whether the online change commit succeeded on the other IMS systems. Another commit command is required to complete the online change commitment.
X'00000010'	X'00004110'	The INITIATE OLC command is rejected, because the command does not apply to the online change state of the command master. INITIATE OLC PHASE(COMMIT) is rejected if the command master is not in an online change prepare state. INITIATE OLC PHASE(COMMIT) is rejected if routed to an IMS that already successfully completed commit phase 3. INITIATE OLC PHASE(PREPARE) is rejected if the command master is already in an online change prepare state. For more details, see “INITIATE OLC error handling” on page 689.

Table 250. Return and reason codes for INITIATE OLC (continued)

Return code	Reason code	Meaning
X'00000010'	X'00004111'	The INITIATE OLC command failed because the command master is not in the OLCSTAT data set.
X'00000010'	X'00004112'	The PREPARE command cannot be processed, because the OLCSTAT is locked.
X'00000010'	X'00004114'	The INITIATE OLC command failed because of an error accessing the OLCSTAT data set. The online change phase might have succeeded on one or more IMS systems. A DFS2843 message is sent to the OM output exit as unsolicited output. For more details, see "INITIATE OLC error handling" on page 689.
X'00000010'	X'00004118'	The INITIATE OLC command failed because of an error allocating the OLCSTAT data set. The online change phase might have succeeded on one or more IMS systems. A DFS2848 message is sent to the OM output exit as unsolicited output. For more details, see "INITIATE OLC error handling" on page 689.
X'00000010'	X'0000411C'	The INITIATE OLC command failed because of an error in the OLCSTAT data set contents. One or more of the values is invalid. A DFS2844 message is sent to the OM output exit as unsolicited output.
X'00000010'	X'00004120'	The INITIATE OLC command is rejected because an online change command is already in progress on this IMS. The command in progress might be INITIATE OLC, TERMINATE OLC, or /DISPLAY MODIFY.
X'00000010'	X'00004124'	The INITIATE OLC PHASE(PREPARE) command is rejected, because another process of the same type is already in progress. Processes include another OLC command or a DRD command such as CREATE DB or DELETE DB for a DEDB. Wait until the other process has completed.
X'00000010'	X'0000412C'	The OLCSTAT data set contains the name of an IMS other than the IMS processing the online change. Use DFSUOLC0 to correct the data set.
X'00000010'	X'00004303'	At least one IMS in the OLCSTAT is at a lower level than required for the TYPE(ACBMBR) online change.
X'00000010'	X'00004304'	Data set version is invalid. The OLCSTAT is initialized to an invalid version for the type of online change requested. For example, version 1 is invalid for TYPE(ACBMBR) member online change. Or, the data set is initialized to version 2 and one or more IMS systems are lower than IMS Version 10.
X'00000010'	X'00004305'	IMS version mismatch. There is a mismatch between the version of the IMS in the OLCSTAT and the actual version of IMS that is currently running. The actual version of IMS is returned from the CSLSCQRY request. The OLCSTAT must be reinitialized so that the IMS is at the correct version.

Table 250. Return and reason codes for INITIATE OLC (continued)

Return code	Reason code	Meaning
X'00000010'	X'0000501C'	The INITIATE OLC command is rejected because an IMODULE GETMAIN storage request failed.
X'00000014'	X'00005000'	The INITIATE OLC command is rejected because an IMODULE GETSTOR storage request failed.
X'00000014'	X'00005004'	The INITIATE OLC command failed because a DFSOCMD response buffer could not be obtained. The online change phase might have succeeded on one or more IMS systems. For more details, see "INITIATE OLC error handling" on page 689.
X'00000014'	X'0000500C'	The INITIATE OLC command failed because an AWE could not be obtained.
X'00000014'	X'00005100'	The INITIATE OLC command failed because of an RM error. The online change phase might have succeeded on one or more IMS systems. The RM error might be caused by a resource structure failure that causes RM to lose knowledge of an IMSplex-wide process. For more details, see "INITIATE OLC error handling" on page 689.
X'00000014'	X'00005104'	The INITIATE OLC command failed because of a CQS error. The online change phase might have succeeded on one or more IMS systems. For more details, see "INITIATE OLC error handling" on page 689.
X'00000014'	X'00005108'	The INITIATE OLC command failed because of an SCI error. The online change phase might have succeeded on one or more IMS systems. For more details, see "INITIATE OLC error handling" on page 689.
X'00000014'	X'0000510C'	Another RM process step is in progress. If this reason code is returned after the previous COMMIT command timed out, try the COMMIT command again.
X'00000014'	X'00005FFF'	The INITIATE OLC command failed because of an internal IMS error. The online change phase might have succeeded on one or more IMS systems. For more details, see "INITIATE OLC error handling" on page 689.

The INITIATE command (with the OLC keyword) can result in errors that leave one or more of the IMS systems in the IMSplex in various online change states. The following table contains the possible completion codes that can be returned as a result of issuing an INITIATE OLC command. The table also includes a brief explanation of the code and provides the error text if applicable.

Table 251. Completion codes for the INITIATE OLC command

Completion code	Meaning	ERROR TEXT (uppercase)
0	The online change prepare phase or commit phase completed successfully.	

Table 251. Completion codes for the INITIATE OLC command (continued)

Completion code	Meaning	ERROR TEXT (uppercase)
1	The online change type does not apply to this IMS. For example, an FMTLIB online change does not apply to a DBCTL IMS. This IMS keeps status indicating that it is participating in the online change. This IMS is included in the OLCSTAT data set IMS list after a successful commit phase 1. For another example, a MODBLKS online change does not apply to an IMS where dynamic resource definition is enabled (DFSDFxxx or DFSCGxxx is defined with MODBLKS=DYN).	
2	The online change phase was not attempted by this IMS for one of the following reasons: • The online change phase master encountered an error and did not direct this IMS to perform the online change phase. • The online change phase master rejected the online change because one or more IMS systems are down and the FRCNRML or FRCABND keyword was not specified on the INITIATE OLC PHASE(PREPARE) command. The online change phase master did not direct this IMS to perform the online change phase.	
3	This IMS is already in the correct online change state. The INITIATE OLC command must have been tried again after a previous INITIATE OLC command resulted in a mix of successes and failures. This IMS keeps status indicating that it is participating in the online change. This IMS is included in the OLCSTAT data set IMS list after a successful commit phase 1.	
4	The online change commit phase is incomplete on this IMS. One or more online change commit phases have been completed on this IMS. All online change commit phases were not sent to this IMS due to errors.	
5	The ACBMBR OLC is complete; however, during COMMIT processing after the OLCSTAT was updated, an error was encountered and one or more members that have been added or changed with the ACBMBR OLC are unusable. Any programs that are not usable are marked bad with a reason code of MOLCCOMMIT. Any databases that are not usable are marked bad with a reason code of MOLCFAIL.	OLC COMPLETE, SOME MBRS UNUSABLE
1D	The OLC directive cannot be processed, because a takeover is in progress.	XRF TAKEOVER IS IN PROGRESS

Table 251. Completion codes for the INITIATE OLC command (continued)

Completion code	Meaning	ERROR TEXT (uppercase)
57	The queue structure is unavailable. IMS is unable to check if there is a global queue count for transactions to be added, changed, or deleted. Commit is not permitted to proceed. The structure might be unavailable for one of the following reasons: • CQS is unavailable • The MSGQ structure failed and it has not been rebuilt yet • CQS lost connectivity to the MSGQ structure	THE QUEUE STRUCTURE IS UNAVAILABLE.
58	An IMS is not registered to RM. An OLCSTAT data set contains an IMS that is not registered to RM. The INITIATE command fails for that IMS. If the INITIATE OLC PHASE(PREPARE) command is issued to an IMS that is registered to RM and the OLCSTAT data set contains an IMS system that is not registered to RM, the command fails. The unregistered IMS command-line response is cc=58. To initiate online change, you must remove the unregistered IMS from the OLCSTAT data set. To remove the IMS, perform the following steps: 1. Issue QRY MEMBER TYPE(IMS) SHOW(ATTRIB) or SHOW(ALL) to verify the IMS that received the cc=58 was initialized with RMENV=N. 2. Unlock the OLCSTAT data set using the DFSUOLC0 utility. When online change is in progress it is necessary for the utility to delete the invalid member name. 3. Delete the invalid IMSID from the OLCSTAT data set using the DFSUOLC0 utility. 4. Issue TERM OLC to terminate the OLC with the valid IMS systems. 5. Reissue the OLC.	
60	IMODULE GETMAIN storage error.	
61	DFSBCB storage error.	
62	HIOP storage error.	
63	WKAP storage error.	
70	Module load error.	Module name (8 characters), module type (8 characters). The module type can be 'SECURITY'.
71	Module locate error.	Module name (8 characters), module type (8 characters). The module type can be 'SECURITY'.
72	Randomizer load error.	FP area randomizer name (8 characters).

Table 251. Completion codes for the INITIATE OLC command (continued)

Completion code	Meaning	ERROR TEXT (uppercase)
80	Data set error.	Function (8 characters), ddname (8 characters), return code (8 bytes), and error detail (8 characters). Function can be one of the following: BLDL Data set BLDL error. BUSY The data set is busy. The detail contains the job name that has the data set. DIR Data set directory error. EMPTY Library is empty. ENQUEUE Data set enqueue error. EOF Data set end-of-file (EOF) error. OPEN Data set open error. Error detail can be 'DLS REG'. READ Data set read error. WRITE Data set write error. DDname can be ACBLIBA, ACBLIBB, FMTLIBA, FMTLIBB, MATRIBA, MATRIBB, MODBLKSA, MODBLKSB, or MODSTAT. Return code is the data set service return code. Reason code is the data set service reason code.
90	Internal error	Module name that detected internal error (8 characters), unused (8 characters), return code or function code (8 bytes), and error detail (8 characters).
91	The online change prepare phase, commit phase, or abort phase timed out before this IMS responded to the online change prepare or commit phase. The online change prepare phase or commit phase might have succeeded on this IMS. Issue QUERY MEMBER TYPE(IMS) to determine the online change state of this IMS.	

Table 251. Completion codes for the INITIATE OLC command (continued)

Completion code	Meaning	ERROR TEXT (uppercase)
B0	Resource definition error.	Resource type (8 characters), resource name (8 characters), error detail (16 characters). The resource type can be AREA, DB, DMB, PSB, SECURITY, or SMB. The resource name can be a resource name, ACBLIB or MODBLKS. The error detail can be one of the following: CISIZE ERROR An attempt to add the area name to the DEDB failed. The CI size of the area exceeds the Fast Path buffer size (BSIZ=) of the IMS online control region. CPCTRAN CONFLICT The online change command attempted to add a transaction name that conflicts with a CPIC transaction name. Tranname specifies the transaction that exists as a CPIC transaction. DESC CONFLICT The online change command attempted to add a transaction name that conflicts with a descriptor name. Tranname specifies the transaction that exists as a descriptor name. DUPLICATE A duplicate area name was found in the named DEDB DBD defined in the IMS system. The area name, that was defined in the DD1 operand on one of the AREA statements in the DBDGEN, is defined in another DEDB DBDGEN or is defined within the DEDB DBDGEN. INCOMPATIBLE The DMB in the inactive ACBLIB is not compatible with IMS. The level of the inactive library is not compatible with the current IMS release. PDIR NAME The online change attempted to change the program name of the transaction, but the program does not exist, nor is it being added by online change. The program name for a local transaction must exist or be added with the same online change.

Table 251. Completion codes for the INITIATE OLC command (continued)

Completion code	Meaning	ERROR TEXT (uppercase)
B0	Resource definition error (continued).	INCONSISTENT IMS detected an inconsistency between the indicated security module and the definition of the new blocks in the inactive MODBLKS data set. Either the security option was requested on the online change command or the prevailing security option is YES or FORCE. In the module name, <i>nnms</i> is the specific table name, where <i>s</i> is the suffix. LTERM CONFLICT The online change command attempted to add a transaction name that conflicts with a dynamic lterm name. Tranname specifies the transaction that exists as a dynamically created LTERM. The error detail can be one of the following (continued): MSNAME CONFLICT The online change command attempted to add a transaction name that conflicts with an MSNAME. Tranname specifies the transaction that exists as an MSNAME. NOT DEFINED Control block was not defined in the active library during the online prepare phase. This is an internal error that should not occur. NO BLOCKS Control blocks were missing from the inactive library during the online prepare phase.

Table 251. Completion codes for the INITIATE OLC command (continued)

Completion code	Meaning	ERROR TEXT (uppercase)
B0	Resource definition error (continued).	NO FP INSTALLED An attempt was made to add a data entry database (DEDB) to an IMS system that does not have Fast Path installed.
		NO OTHREADS An attempt was made to add a data entry database (DEDB) to an IMS system that was not initialized with DEDBs. No output threads (OTHREADS) were initialized and no I/O will be possible to the added DEDB.
		PARTITION EXISTS A database partition by that name exists.
		RSRC CONFLICT The online change command is attempting to add a transaction name that conflicts with another message destination resource in the Resource Manager (RM). The resource can be an LTERM, CPIC transaction, MSNAME, or descriptor. Tranname specifies the transaction that exists as another resource type.
		UNSUPPORTED MSDB The online change attempted to add an MSDB or change a DEDB to an MSDB, which is not permitted.
B1		Resource type (8 characters), resource name (8 characters), error detail (16 characters). The resource name is the name of the resource as it is defined to IMS, such as the database name, the program name, or the transaction name. The resource type can be DATABASE, DMB, FORMAT, PROGRAM, PSB, RTCODE, or TRAN.

Table 251. Completion codes for the INITIATE OLC command (continued)

Completion code	Meaning	ERROR TEXT (uppercase)
B1	Resource state error. The online change phase failed on this IMS because of the state of the specified resource. Many of the resource states indicate work is in progress for resources to be changed or deleted by online change. Online change commit detected a resource in a state that results in commit failure. This is the first resource for which an error is detected. IMS is returned to an online change prepare state. Issue a /DISPLAY MODIFY command to display the work in progress for resources to be changed or deleted by online change. Resolve the work in progress, then attempt the INITIATE OLC PHASE(COMMIT) command again.	The error detail can be one of the following: ACTIVE The routing code <i>rtcode</i> is active. AREA OPEN An area associated with the FP DEDB is open. AREA STARTED An area associated with the FP DEDB is started. CONVERSATION The transaction to be changed or deleted or the transaction referencing a program or database to be changed or deleted is in conversation. Error details continued in next row.
B1	Resource state error (continued).	DBD ACTIVE A /DBDUMP command is active for the database. DBR ACTIVE A /DBRECOVERY command is active for the database. DBR NEEDED A /DBRECOVERY command is needed for the database resource. Online change was initiated to either change or delete one or more HALDB databases which have not been taken offline with a /DBR command. DEP REGS ACTIVE Dependent regions using the FP DEDB are active. Error details continued in next row.

Table 251. Completion codes for the INITIATE OLC command (continued)

Completion code	Meaning	ERROR TEXT (uppercase)
B1	Resource state error (continued).	Error detail (continued): DYNAMIC OR CPIC The transaction being added exists and is not dynamic or CPIC. This is an internal error that should not occur. ELIGIBLE SCHD The named transaction is eligible for scheduling and cannot be deleted by online change. Stop the transaction before attempting another online change commit. INTERNAL ERROR The resource control block is not found in the active IMS, or the resource control block exists. These are internal errors that should not occur. IN USE The resource is in use. A transaction has queuing in progress (either terminal input program-to-program switch). A database is in use. PSB SCHEDULED A program referencing a database to be changed or deleted is scheduled. QUEUEING Messages are queued to the transaction or program. SCHEDULED The named resource (a transaction or program to be changed or deleted, or a program referencing a database to be changed or deleted) is scheduled. SUSPENDED The transaction to be changed or deleted is on the suspend queue.

Table 251. Completion codes for the INITIATE OLC command (continued)

Completion code	Meaning	ERROR TEXT (uppercase)
B2	IMS state error.	IMS state error (32 characters). The IMS state can be one of the following: ABENDED This IMS ended abnormally since the last successful online change. Online change is not permitted if any IMS ended abnormally since the last online change, unless the FRCABND option is specified on prepare. If the online change phase was rejected, issue TERMINATE OLC to abort the online change, correct the problem, and try the online change again. If an online change specified with the FRCABND option succeeds, this IMS might have to cold start. CHECKPOINT IN PROGRESS This IMS has checkpoint in progress. NOT-REACHABLE The online change phase is rejected because this IMS is NOT-REACHABLE. The SCI on the OS image where this IMS is active is down. Restart the SCI and reissue the INITIATE OLC or TERMINATE OLC command. OLC ALREADY COMMITTED The online change phase is rejected because online change is already committed. All IMS systems have completed commit phase 1 and the OLCSTAT data set was updated. OLC NOT IN PROGRESS The online change phase is rejected because this IMS is not in an online change state.

Table 251. Completion codes for the INITIATE OLC command (continued)

Completion code	Meaning	ERROR TEXT (uppercase)
B2	IMS state error (continued).	IMS state error (32 characters). The IMS state can be one of the following: OLC PHASE IN PROGRESS The online change phase is rejected because this IMS has an online change phase already in progress. RECOVERY IN PROGRESS The online change command is rejected because the online recovery service is already in progress. RESOLVE DB INDOUBTS This IMS has DB indoubts. You must resolve the DB indoubts either by reconnecting the coordinator controller and IMS or by using an operator command. RESTART IN PROGRESS This IMS has restart in progress. RESTART NOT COMPLETE This IMS initialized before the online change was initiated, but has not completed restart. The online prepare or abort phase is rejected as long as this IMS is in this state. Cancel this IMS, then abort the online change before attempting the online change prepare phase again. SHUTDOWN This IMS was shut down normally since the last successful online change. Online change is not permitted if any IMS was shut down normally since the last online change, unless the FRCNRML option is specified on prepare. If the online change phase was rejected, issue TERMINATE OLC to terminate the online change, correct the problem, and try the online change again. If an online change specified with the FRCNRML option succeeds, this IMS might have to cold start.
120	The INIT OLC TYPE(ACBMBR) online change failed.	Staging ACBLIB is empty.
121	The INIT OLC TYPE(ACBMBR) online change failed.	Resource in command has no change.
122	The INIT OLC TYPE(ACBMBR) online change failed.	Not all PSBs are rebuilt for this DMB.
123	The INIT OLC TYPE(ACBMBR) online change failed.	Staging library level is not compatible with the current IMS.
124	The INIT OLC TYPE(ACBMBR) online change failed.	DOPT PSB will not be copied to the active ACBLIB.

Table 251. Completion codes for the INITIATE OLC command (continued)

Completion code	Meaning	ERROR TEXT (uppercase)
125	The INIT OLC TYPE(ACBMBR) online change failed.	No PSB is rebuilt for this change DMB.
126	The INIT OLC TYPE(ACBMBR) online change failed.	The previous member OLC failed in the commit phase 1 processing. The terminate OLC command must be entered to terminate the pending member OLC.
127	The INIT OLC TYPE(ACBMBR) online change failed.	COMMIT MEMBER failure.
128	The INIT OLC TYPE(ACBMBR) online change failed.	REFRESH MBR failure.
129	The INIT OLC TYPE(ACBMBR) online change failed.	Mismatch in ACBSHR= values among IMS systems in the OLCSTAT.
130	The INIT OLC TYPE(ACBMBR) online change failed.	Allocation of staging ACBLIB failed.
131	The INIT OLC TYPE(ACBMBR) online change failed.	Allocation of active ACBLIB failed.
132	The INIT OLC TYPE(ACBMBR) online change failed.	Open of staging ACBLIB failed.
133	The INIT OLC TYPE(ACBMBR) online change failed.	IO error of active ACBLIB.
134	The INIT OLC TYPE(ACBMBR) online change failed.	Open of active ACBLIB failed.
135	The INIT OLC TYPE(ACBMBR) online change failed.	IO error of staging ACBLIB.
136	The INIT OLC TYPE(ACBMBR) online change failed because there were more than the maximum supported concatenations for the active ACB library.	
14A	Command failed for the IMS because its SCI was not active. When SCI is not active, the IMS is not reachable.	NOT-REACHABLE
14B	Command failed for the IMS because it shut down normally during command processing.	SHUTDOWN
14C	Command failed for the IMS because it terminated abnormally during command processing.	ABENDED
180	During an INIT OLC PHASE(PREPARE) command processing, the load of the DFSMDA member for the inactive ACBLIB failed. Message DFS0887A is issued on the system console.	DATASET ERROR MDA LOAD
181	During an INIT OLC PHASE(PREPARE) command processing, the allocation of the inactive ACBLIB failed. Message DFS2500W is issued on the system console.	DATASET ERROR ALLOCATE

Examples

The following are examples of the INITIATE OLC command.

Example 1 for INITIATE OLC command

TSO SPOC input:

```
INITIATE OLC PHASE(PREPARE) TYPE(MODBLKS,ACBLIB)
```

TSO SPOC output:

MbrName	Member	CC	ACBLIB	FMTLIB	MODBLKS	ModId
IMS3	IMS2	0				
IMS3	IMS3	0	B	A	B	1
IMS3	SYS3	0				

OM API input:

```
CMD (INITIATE OLC PHASE(PREPARE) TYPE(MODBLKS,ACBLIB))
```

OM API output:

```
<imsout>
<ctl>
<omname>OM10M </omname>
<omvsn>1.1.0</omvsn>
<xmlvsn>1 </xmlvsn>
<stime>2003.163 15:40:53.336327</stime>
<stotime>2003.163 15:41:08.282146</stotime>
<staseq>B7C4AC11FED070C6</staseq>
<stoseq>B7C4AC203FB220C1</stoseq>
<rqsttkn1>USRT011 10084053</rqsttkn1>
<rc>0200000C</rc>
<rsn>00003000</rsn>
</ctl>
<cmderr>
<mbr name="IMS2 ">
<typ>IMS </typ>
<styp>DBDC </styp>
<rc>02000004</rc>
<rsn>00001008</rsn>
</mbr>
<mbr name="SYS3 ">
<typ>IMS </typ>
<styp>DBDC </styp>
<rc>02000004</rc>
<rsn>00001008</rsn>
</mbr>
</cmderr>
<cmd>
<master>IMS3 </master>
<userid>USRT011 </userid>
<verb>INIT</verb>
<kwd>OLC </kwd>
<input>INITIATE OLC PHASE(PREPARE) TYPE(MODBLKS,ACBLIB)</input>
</cmd>
<cmdrsphdr>
<hdr slbl="MBR" llbl="MbrName" scope="LCL" sort="n" key="0" scroll="yes" len="8"
dtype="CHAR" align="left" />
<hdr slbl="IMSMBR" llbl="Member" scope="LCL" sort="a" key="1" scroll="no" len="8"
dtype="CHAR" align="left" />
<hdr slbl="CC" llbl="CC" scope="LCL" sort="n" key="0" scroll="yes" len="4"
dtype="INT" align="right" />
<hdr slbl="ACBL" llbl="ACBLIB" scope="GBL" sort="n" key="0" scroll="yes" len="1"
dtype="CHAR" align="right" />
<hdr slbl="FMTL" llbl="FMTLIB" scope="GBL" sort="n" key="0" scroll="yes" len="1"
```

```

dtype="CHAR" align="right" />
<hdr slbl="MODB" llbl="MODBLKS" scope="GBL" sort="n" key="0" scroll="yes" len="1"
dtype="CHAR" align="right"/>
<hdr slbl="MODI" llbl="ModId" scope="GBL" sort="n" key="0" scroll="yes" len="8"
dtype="CHAR" align="right"/>
</cmdrsphdr>
<cmdrspdata>
<rsp>MBR(IMS3 ) IMSMBR(SYS3 ) CC( 0) </rsp>
<rsp>MBR(IMS3 ) IMSMBR(IMS2 ) CC( 0) </rsp>
<rsp>MBR(IMS3 ) IMSMBR(IMS3 ) CC( 0) ACBL(B) FMTL(A) MODB(B) MODI( 1)
</rsp>
</cmdrspdata>
</imsout>

```

Explanation: The IMSplex consists of three IMS systems: SYS3, IMS2, and IMS3. All three of the IMS systems complete the online change prepare phase successfully for the MODBLKS library. IMS3 is the master of the prepare phase. The current online change libraries are ACBLIBB, FMTLIBA, and MODBLKSB. The current modify ID is 1.

Example 2 for INITIATE OLC command

TSO SPOC input:

```
INITIATE OLC PHASE(COMMIT)
```

TSO SPOC output:

MemName	Member	CC	ACBLIB	FMTLIB	MODBLKS	ModId
IMS3	IMS2	0				
IMS3	IMS3	0	B	A	A	2
IMS3	SYS3	0				

OM API input:

```
CMD (INITIATE OLC PHASE(COMMIT))
```

OM API output:

```

<imsout>
<ctl>
<omname>OM10M </omname>
<omvsn>1.1.0</omvsn>
<xmlvsn>1 </xmlvsn>
<stime>2002.163 16:26:14.660563</stime>
<stotime>2002.16316:26:22.293891</stotime>
<staseq>B7C4B635409D30C6</staseq>
<stoseq>B7C4B63C88383347</stoseq>
<rqsttkn1>USRT011 10092614</rqsttkn1>
<rc>0200000C</rc>
<rsn>00003000</rsn>
</ctl>
<cmderr>
<mbr name="IMS2 ">
<typ>IMS </typ>
<styp>DBDC </styp>
<rc>02000004</rc>
<rsn>00001008</rsn>
</mbr>
<mbr name="SYS3 ">
<typ>IMS </typ>
<styp>DBDC </styp>
<rc>02000004</rc>
<rsn>00001008</rsn>
</mbr>
</cmderr>

```



```

<cmd>
<master>IMS3      </master>
<userid>USRT011 </userid>
<verb>INIT</verb>
<kwd>OLC          </kwd>
<input>INITIATE OLC PHASE(COMMIT) </input>
</cmd>
<cmdrsphdr>
<hdr slbl="MBR"   llbl="MbrName" scope="LCL" sort="n" key="0" scroll="yes" len="8"
  dtype="CHAR" align="left" />
<hdr slbl="IMSMR" llbl="Member"  scope="LCL" sort="a" key="1" scroll="no"  len="8"
  dtype="CHAR" align="left" />
<hdr slbl="CC"     llbl="CC"      scope="LCL" sort="n" key="0" scroll="yes" len="4"
  dtype="INT"  align="right" />
<hdr slbl="ACBL"   llbl="ACBLIB"  scope="GBL" sort="n" key="0" scroll="yes" len="1"
  dtype="CHAR" align="right" />
<hdr slbl="FTL"    llbl="FMTLIB"  scope="GBL" sort="n" key="0" scroll="yes" len="1"
  dtype="CHAR" align="right" />
<hdr slbl="MODB"   llbl="MODBLKS" scope="GBL" sort="n" key="0" scroll="yes" len="1"
  dtype="CHAR" align="right" />
<hdr slbl="MODI"   llbl="ModId"   scope="GBL" sort="n" key="0" scroll="yes" len="8"
  dtype="CHAR" align="right" />
</cmdrsphdr>
<cmdrspdata>
<rsp>MBR(IMS3      ) IMSMR(SYS3      ) CC(    0) </rsp>
<rsp>MBR(IMS3      ) IMSMR(IMS2      ) CC(    0) </rsp>
<rsp>MBR(IMS3      ) IMSMR(IMS3      ) CC(    0) ACBL(B) FMTL(A) MODB(A) MODI(      2)
</rsp>
</cmdrspdata>
</imsout>

```

Explanation: A global online change commit is initiated and completes successfully.

Example 3 for INITIATE OLC command

TSO SPOC input:

```
INITIATE OLC PHASE(PREPARE) TYPE(ACBMBR) NAME(OLCDB105 OLCDX111)
```

TSO SPOC output:

MbrName	Member	CC	ACBSHR	DBDName	PSBName	ADD
IMS2	IMS1	0	Y			
IMS2	IMS2	0	Y			
IMS2	IMS1	0		OLCDB105		Y
IMS2	IMS2	0		OLCDB105		Y
IMS2	IMS1	0		OLCDB111		Y
IMS2	IMS2	0		OLCDB111		Y
IMS2	IMS1	0		OLCDI111		Y
IMS2	IMS2	0		OLCDI111		Y
IMS2	IMS1	0		OLCDX111		Y
IMS2	IMS2	0		OLCDX111		Y
IMS2	IMS1	0			OLCPB105	Y
IMS2	IMS2	0			OLCPB105	Y
IMS2	IMS1	0			OLCPB111	Y
IMS2	IMS2	0			OLCPB111	Y

OM API input:

```
CMD (INITIATE OLC PHASE(PREPARE) TYPE(ACBMBR) NAME(OLCDB105 OLCDX111))
```

OM API output:

```

<imsout>
<ctl>
<omname>OM10M </omname>

```

```

<omvsn>1.3.0</omvsn>
<xmlvsn>20 </xmlvsn>
<statime>2006.268 17:31:50.028126</statime>
<stotime>2006.268 17:31:50.672287</stotime>
<staseq>BF75AD9623B5EAE3</staseq>
<stoseq>BF75AD96C0F9F723</stoseq>
<rqsttkn1>USRT001 10103150</rqsttkn1>
<rc>0200000C</rc>
<rsn>00003000</rsn>
<rsnmsg>CSLN023I</rsnmsg>
<rsntxt>At least one request was successful.</rsntxt>
</ctl>
<cmderr>
<mb name="IMS1 ">
<typ>IMS </typ>
<styp>DBDC </styp>
<rc>02000004</rc>
<rsn>00001008</rsn>
<rsntxt>Command ROUTE list overridden w/ANY</rsntxt>
</mb>
</cmderr>
<cmd>
<master>IMS2 </master>
<userid>USRT001 </userid>
<verb>INIT</verb>
<kwd>OLC </kwd>
<input>INIT OLC PHASE(PREPARE) TYPE(ACBMBR) NAME(OLCDB105 OLCDX111)
</input>
</cmd>
<cmdrsphdr>
<hdr slbl="MBR" llbl="MbrName" scope="LCL" sort="n" key="0"
  scroll="yes" len="8" dtype="CHAR" align="left" />
<hdr slbl="MSMBR" llbl="Member" scope="LCL" sort="a" key="4"
  scroll="no" len="8" dtype="CHAR" align="left" />
<hdr slbl="CC" llbl="CC" scope="LCL" sort="n" key="0" scroll="yes"
  len="4" dtype="INT" align="right" />
<hdr slbl="CCTXT" llbl="CCText" scope="LCL" sort="n" key="0"
  scroll="yes" len="*" dtype="CHAR" align="left" skipb="yes" />
<hdr slbl="ACBS" llbl="ACBSHR" scope="LCL" sort="n" key="0"
  scroll="yes" len="1" dtype="CHAR" align="left" skipb="yes" />
<hdr slbl="RSC" llbl="RSCName" scope="LCL" sort="a" key="3" scroll="no"
  len="8" dtype="CHAR" align="left" skipb="yes" />
<hdr slbl="DBD" llbl="DBDName" scope="LCL" sort="a" key="2" scroll="no"
  len="8" dtype="CHAR" align="left" skipb="yes" />
<hdr slbl="PSB" llbl="PSBName" scope="LCL" sort="a" key="1" scroll="no"
  len="8" dtype="CHAR" align="left" skipb="yes" />
<hdr slbl="ADD" llbl="ADD" scope="LCL" sort="n" key="0" scroll="yes"
  len="1" dtype="CHAR" align="left" skipb="yes" />
<hdr slbl="CHG" llbl="CHNG" scope="LCL" sort="n" key="0" scroll="yes"
  len="1" dtype="CHAR" align="left" skipb="yes" />
<hdr slbl="CPY" llbl="COPY" scope="LCL" sort="n" key="0" scroll="yes"
  len="1" dtype="CHAR" align="left" skipb="yes" />
<hdr slbl="RFS" llbl="RFSH" scope="LCL" sort="n" key="0" scroll="yes"
  len="1" dtype="CHAR" align="left" skipb="yes" />
</cmdrsphdr>
<cmdrspdata>
<rsp>MBR(IMS2 ) IMSMBR(IMS1 ) CC( 0) ACBS(Y) </rsp>
<rsp>MBR(IMS2 ) IMSMBR(IMS1 ) CC( 0) DBD(OLCDB105) ADD(Y) </rsp>
<rsp>MBR(IMS2 ) IMSMBR(IMS1 ) CC( 0) DBD(OLCDX111) ADD(Y) </rsp>
<rsp>MBR(IMS2 ) IMSMBR(IMS1 ) CC( 0) DBD(OLCDB111) ADD(Y) </rsp>
<rsp>MBR(IMS2 ) IMSMBR(IMS1 ) CC( 0) DBD(OLCDI111) ADD(Y) </rsp>
<rsp>MBR(IMS2 ) IMSMBR(IMS1 ) CC( 0) PSB(OLCPB105) ADD(Y) </rsp>
<rsp>MBR(IMS2 ) IMSMBR(IMS1 ) CC( 0) PSB(OLCPB111) ADD(Y) </rsp>
<rsp>MBR(IMS2 ) IMSMBR(IMS2 ) CC( 0) ACBS(Y) </rsp>
<rsp>MBR(IMS2 ) IMSMBR(IMS2 ) CC( 0) DBD(OLCDB105) ADD(Y) </rsp>
<rsp>MBR(IMS2 ) IMSMBR(IMS2 ) CC( 0) DBD(OLCDX111) ADD(Y) </rsp>
<rsp>MBR(IMS2 ) IMSMBR(IMS2 ) CC( 0) DBD(OLCDB111) ADD(Y) </rsp>

```

```

<rsp>MBR(IMS2      ) IMSMBR(IMS2      ) CC(    0) DBD(OLCDI111) ADD(Y) </rsp>
<rsp>MBR(IMS2      ) IMSMBR(IMS2      ) CC(    0) PSB(OLCPB105) ADD(Y) </rsp>
<rsp>MBR(IMS2      ) IMSMBR(IMS2      ) CC(    0) PSB(OLCPB111) ADD(Y) </rsp>
</cmdrspdata>

```

Explanation: The INIT OLC PHASE(PREPARE) TYPE(ACBMBR) NAME(OLCDB105 OLCDX111) command is issued. IMS2 is the command master. IMS1 and IMS2 are in the OLCSTAT data set. The ACBSHR=Y is defined at all IMS systems so only the command master writes to the ACBLIB. The online change prepare phase is successful at all IMS systems. The command master returns to the OM the members that are to be added, changed, or copied from the staging ACBLIB to the active ACBLIB.

You can issue the INIT OLC PHASE(COMMIT) command to complete the online change.

Example 4 for INITIATE OLC command

TSO SPOC input:

```
INITIATE OLC PHASE(PREPARE) TYPE(ACBMBR) NAME(OLCDB105)
```

TSO SPOC output:

MbrName	Member	CC	CCText	ACBSHR	RSCName	DBDName	PSBName	ADD
IMS2	IMS1	0		N				
IMS2	IMS2	0		N				
IMS2	IMS2	10	NO RESOURCES FOUND		OLCDB105			
IMS2	IMS1	0				OLCDB105		Y
IMS2	IMS1	0					OLCPB105	Y

OM API input:

```
CMD (INITIATE OLC PHASE(PREPARE) TYPE(ACBMBR) NAME(OLCDB105))
```

OM API output:

```

<imsout>
<ctl>
<omname>OM10M </omname>
<omvsn>1.3.0</omvsn>
<xmlvsn>20 </xmlvsn>
<stime>2006.268 18:08:10.305797</stime>
<stotime>2006.268 18:08:10.993076</stotime>
<staseq>BF75B5B56A1054E3</staseq>
<stoseq>BF75B5B611DB442C</stoseq>
<rqsttkn1>USRT001 10110810</rqsttkn1>
<rc>0200000C</rc>
<rsn>0000300C</rsn>
<rsnmsg>CSLN055I</rsnmsg>
<rsntxt>The command completed with warning(s).</rsntxt>
</ctl>
<cmderr>
<mbr name="IMS2 ">
<typ>IMS </typ>
<styp>DBDC </styp>
<rc>00000004</rc>
<rsn>0000100C</rsn>
<rsntxt>Some down or not applicable</rsntxt>
</mbr>
<mbr name="IMS1 ">
<typ>IMS </typ>
<styp>DBDC </styp>
<rc>02000004</rc>
<rsn>00001008</rsn>

```

```

<rsntxt>Command ROUTE list overridden w/ANY</rsntxt>
</mbr>
</cmderr>
<cmd>
<master>IMS2      </master>
<userid>USRT001 </userid>
<verb>INIT</verb>
<kwd>OLC          </kwd>
<input>INIT OLC PHASE(PREPARE) TYPE(ACBMBR) NAME(OLCDB105) </input>
</cmd>
<cmdrsphdr>
<hdr s1b1="MBR" l1b1="MbrName" scope="LCL" sort="n" key="0"
  scroll="yes" len="8" dtype="CHAR" align="left" />
<hdr s1b1="MSMBR" l1b1="Member" scope="LCL" sort="a" key="4"
  scroll="no" len="8" dtype="CHAR" align="left" />
<hdr s1b1="CC" l1b1="CC" scope="LCL" sort="n" key="0" scroll="yes"
  len="4" dtype="INT" align="right" />
<hdr s1b1="CCTXT" l1b1="CCText" scope="LCL" sort="n" key="0"
  scroll="yes" len="*" dtype="CHAR" align="left" skipb="yes" />
<hdr s1b1="ACBS" l1b1="ACBSHR" scope="LCL" sort="n" key="0"
  scroll="yes" len="1" dtype="CHAR" align="left" skipb="yes" />
<hdr s1b1="RSC" l1b1="RSCName" scope="LCL" sort="a" key="3" scroll="no"
  len="8" dtype="CHAR" align="left" skipb="yes" />
<hdr s1b1="DBD" l1b1="DBDName" scope="LCL" sort="a" key="2" scroll="no"
  len="8" dtype="CHAR" align="left" skipb="yes" />
<hdr s1b1="PSB" l1b1="PSBName" scope="LCL" sort="a" key="1" scroll="no"
  len="8" dtype="CHAR" align="left" skipb="yes" />
<hdr s1b1="ADD" l1b1="ADD" scope="LCL" sort="n" key="0" scroll="yes"
  len="1" dtype="CHAR" align="left" skipb="yes" />
<hdr s1b1="CHG" l1b1="CHNG" scope="LCL" sort="n" key="0" scroll="yes"
  len="1" dtype="CHAR" align="left" skipb="yes" />
<hdr s1b1="CPY" l1b1="COPY" scope="LCL" sort="n" key="0" scroll="yes"
  len="1" dtype="CHAR" align="left" skipb="yes" />
<hdr s1b1="RFS" l1b1="RFSH" scope="LCL" sort="n" key="0" scroll="yes"
  len="1" dtype="CHAR" align="left" skipb="yes" />
</cmdrsphdr>
<cmdrspdata>
<rsp>MBR(IMS2      ) IMSMBR(IMS1      ) CC(    0) ACBS(N) </rsp>
<rsp>MBR(IMS2      ) IMSMBR(IMS1      ) CC(    0) DBD(OLCDB105) ADD(Y) </rsp>
<rsp>MBR(IMS2      ) IMSMBR(IMS1      ) CC(    0) PSB(OLCPB105) ADD(Y) </rsp>
<rsp>MBR(IMS2      ) IMSMBR(IMS2      ) CC(    0) ACBS(N) </rsp>
<rsp>MBR(IMS2      ) IMSMBR(IMS2      ) CC(   10) CCTXT(NO RESOURCES FOUND)
  RSC(OLCDB105) </rsp>
</cmdrspdata>
</imsout>

```

Explanation: The INIT OLC PHASE(PREPARE) TYPE(ACBMBR) NAME(OLCDB105) command is issued. IMS2 is the command master. IMS1 and IMS2 are in the OLCSTAT data set. The ACBSHR=N is defined at all IMS systems. All IMS systems will write to their own ACBLIB.

The online change prepare phase is successful at IMS1 and IMS3. The online change is not applicable at IMS2 because member DBD1 is not found in IMS2 staging ACBLIB and active ACBLIB.

All sharing IMS systems return the member information to the command master. The command master returns to the OM the members that are to be added, changed, or copied from the staging ACBLIB to the active ACBLIB.

You can issue the INIT OLC PHASE(COMMIT) command to complete the online change.

Example 5 for INITIATE OLC command

TSO SPOC input:

```
INITIATE OLC PHASE(PREPARE) TYPE(ACBMBR) NAME(OLCDB105 OLCDX111)
```

TSO SPOC output:

Member	CC	CCText	ACBSHR	DBDName	PSBName	ADD
IMS2	IMS1	1	CMD NOT APPLICABLE TO THIS IMS	N		
IMS2	IMS2	0				
IMS2	IMS2	0		OLCDB105		Y
IMS2	IMS2	0		OLCDB111		Y
IMS2	IMS2	0		OLCDI111		Y
IMS2	IMS2	0		OLCDX111		Y
IMS2	IMS2	0			OLCPB105	Y
IMS2	IMS2	0			OLCPB111	Y

OM API input:

```
CMD (INITIATE OLC PHASE(PREPARE) TYPE(ACBMBR) NAME(OLCDB105 OLCDX111))
```

OM API output:

```
<imsout>
<ctl>
<omname>OM10M </omname>
<omvsn>1.3.0</omvsn>
<xmlvsn>20 </xmlvsn>
<statime>2006.275 22:29:51.356740</statime>
<stotime>2006.275 22:34:25.572982</stotime>
<staseq>BF7EBD4154744026</staseq>
<stoseq>BF7EBE46D7C761E4</stoseq>
<rqsttkn1>USRT001 10152951</rqsttkn1>
<rc>0200000C</rc>
<rsn>0000300C</rsn>
<rsnmsg>CSLN055I</rsnmsg>
<rsntxt>The command completed with warning(s).</rsntxt>
</ctl>
<cmderr>
<mbr name="IMS2 ">
<typ>IMS </typ>
<styp>DBDC </styp>
<rc>00000004</rc>
<rsn>0000100C</rsn>
<rsntxt>Some down or not applicable</rsntxt>
</mbr>
</cmderr>
<cmd>
<master>IMS2 </master>
<userid>USRT001 </userid>
<verb>INIT</verb>
<kwd>OLC </kwd>
<input>INITIATE OLC PHASE(PREPARE) TYPE(ACBMBR) NAME(OLCDB105 OLCDX111)
</input>
</cmd>
<cmdrsphdr>
<hdr s1b1="MBR" l1b1="MbrName" scope="LCL" sort="n" key="0"
  scroll="yes" len="8" dtype="CHAR" align="left" />
<hdr s1b1="MSMBR" l1b1="Member" scope="LCL" sort="a" key="4"
  scroll="no" len="8" dtype="CHAR" align="left" />
<hdr s1b1="CC" l1b1="CC" scope="LCL" sort="n" key="0" scroll="yes"
  len="4" dtype="INT" align="right" />
<hdr s1b1="CCTXT" l1b1="CCText" scope="LCL" sort="n" key="0"
  scroll="yes" len="*" dtype="CHAR" align="left" skipb="yes" />
<hdr s1b1="ACBS" l1b1="ACBSHR" scope="LCL" sort="n" key="0"
  scroll="yes" len="1" dtype="CHAR" align="left" skipb="yes" />
<hdr s1b1="RSC" l1b1="RSCName" scope="LCL" sort="a" key="3" scroll="no"
  len="8" dtype="CHAR" align="left" skipb="yes" />
```

```

<hdr slbl="DBD" llbl="DBDName" scope="LCL" sort="a" key="2" scroll="no"
  len="8" dtype="CHAR" align="left" skipb="yes" />
<hdr slbl="PSB" llbl="PSBName" scope="LCL" sort="a" key="1" scroll="no"
  len="8" dtype="CHAR" align="left" skipb="yes" />
<hdr slbl="ADD" llbl="ADD" scope="LCL" sort="n" key="0" scroll="yes"
  len="1" dtype="CHAR" align="left" skipb="yes" />
<hdr slbl="CHG" llbl="CHNG" scope="LCL" sort="n" key="0" scroll="yes"
  len="1" dtype="CHAR" align="left" skipb="yes" />
<hdr slbl="CPY" llbl="COPY" scope="LCL" sort="n" key="0" scroll="yes"
  len="1" dtype="CHAR" align="left" skipb="yes" />
<hdr slbl="RFS" llbl="RFSH" scope="LCL" sort="n" key="0" scroll="yes"
  len="1" dtype="CHAR" align="left" skipb="yes" />
</cmdrsphdr>
<cmdrspdata>
<rsp>MBR(IMS2 ) IMSMBR(IMS1 ) CC( 1) CCTXT(CMD NOT APPLICABLE
  TO THIS IMS) ACBS(N) </rsp>
<rsp>MBR(IMS2 ) IMSMBR(IMS2 ) CC( 0) ACBS(N) </rsp>
<rsp>MBR(IMS2 ) IMSMBR(IMS2 ) CC( 0) DBD(OLCDB105) ADD(Y) </rsp>
<rsp>MBR(IMS2 ) IMSMBR(IMS2 ) CC( 0) DBD(OLCDX111) ADD(Y) </rsp>
<rsp>MBR(IMS2 ) IMSMBR(IMS2 ) CC( 0) DBD(OLCDB111) ADD(Y) </rsp>
<rsp>MBR(IMS2 ) IMSMBR(IMS2 ) CC( 0) DBD(OLCDI111) ADD(Y) </rsp>
<rsp>MBR(IMS2 ) IMSMBR(IMS2 ) CC( 0) PSB(OLCPB105) ADD(Y) </rsp>
<rsp>MBR(IMS2 ) IMSMBR(IMS2 ) CC( 0) PSB(OLCPB111) ADD(Y) </rsp>
</cmdrspdata>
</imsout>

```

Explanation: The INIT OLC PHASE(PREPARE) TYPE(ACBMBR) NAME(OLCDB105 OLCDX111) command is issued. IMS2 is the command master. IMS1 and IMS2 are in the OLCSTAT data set. The ACBSHR=N is defined at all IMS systems. All IMS systems will write to their own ACBLIB.

The online change prepare phase is successful at IMS1 and IMS3. The online change prepare phase fails at IMS2 because PSBY is not found in IMS2 staging ACBLIB and PSBY is found in IMS2 active ACBLIB. This implies a member deletion for PSBY. The command fails with a return and reason code of LIST | SOME because member online change does not support deleting members.

All sharing IMS systems return the member information to the command master. The command master returns to the OM the members that are to be added, changed, or copied from the staging ACBLIB to the active ACBLIB.

You must issue the TERM OLC command to terminate the online change. You must add PSBY to the staging ACBLIB for member online change or perform a full library switch online change to have PSBY deleted.

Explanation: The INIT OLC PHASE(PREPARE) TYPE(ACBMBR) NAME(OLCDB105) command is issued. IMS2 is the command master. IMS1 and IMS2 are in the OLCSTAT data set. The ACBSHR=N is defined at all IMS systems. All IMS systems will write to their own ACBLIB.

The online change prepare phase is successful at IMS1 and IMS3. The online change is not applicable at IMS2 because member DBD1 is not found in IMS2 staging ACBLIB and active ACBLIB.

All sharing IMS systems return the member information to the command master. The command master returns to the OM the members that are to be added, changed, or copied from the staging ACBLIB to the active ACBLIB.

You can issue the INIT OLC PHASE(COMMIT) command to complete the online change.

Related concepts:

➡ How to interpret CSL request return and reason codes (System Programming APIs)

Related reference:

Chapter 2, “Command keywords and their synonyms,” on page 57

Chapter 41, “/MODIFY command,” on page 711

➡ Global Online Change utility (DFSUOLC0) (System Utilities)

INITIATE OLC error handling

The INITIATE OLC command can result in errors that leave one or more of the IMS systems in the IMSplex in various online change states. Issue the QUERY MEMBER command and the QUERY OLC command to help you determine whether to terminate the online change or try the INITIATE OLC command again.

Before attempting online change, issue the QUERY OLC LIBRARY(OLCSTAT) SHOW(MODID) command to get the current modify id. If the INITIATE OLC command fails, issue the QUERY OLC LIBRARY(OLCSTAT) SHOW(MODID) command again, to see if the modify id is the same. If the modify id increased by 1, the online change is considered to be successfully completed.

If the INITIATE OLC command fails, issue the QUERY MEMBER TYPE(IMS) SHOW(STATUS) command to display the online change state of all the IMS systems in the IMSplex. Evaluate the QUERY MEMBER TYPE(IMS) SHOW(STATUS) output to help you to determine what to do:

- None of the IMS systems in an online change state

If the INITIATE OLC PHASE(PREPARE) command failed on all of the IMS systems in the IMSplex, none of them are in an online change state. This QUERY OLC LIBRARY(OLCSTAT) SHOW(MODID) command output shows the same modify id as the QUERY OLC LIBRARY(OLCSTAT) SHOW(MODID) command issued before the INITIATE OLC PHASE(PREPARE) command. If you want to attempt online change again, issue another INITIATE OLC PHASE(PREPARE) command.

If an INITIATE OLC PHASE(COMMIT) command successfully completes commit phase 3 on all the IMS systems but fails because of an error such as a command timeout, then no IMS will remain in an online change state. The QUERY MEMBER TYPE(IMS) SHOW(STATUS) command output shows no IMS in an online change state, so no further action is needed. The online change successfully completed.

If an INITIATE OLC PHASE(PREPARE) command failed for all the IMS systems in the IMSplex, but Resource Manager (RM) still has information about the process, then the online change needs to be terminated. This is a very rare case where the command master initiates the online change process with RM, an error occurs, or the online change prepare phase fails on all the IMS systems, and the command master is unable to terminate the online change process with RM. RM issues a CSLR2200 message but no CSLR2201 message. The QUERY MEMBER TYPE(IMS) SHOW(STATUS) command output shows no IMS in an online change state. If you try to initiate an online change again with another INITIATE OLC PHASE(PREPARE) command, it is rejected. You must terminate the online change with a TERMINATE OLC command.

- Some of the IMS systems in a prepare complete state

If the INITIATE OLC PHASE(PREPARE) command fails and some of the IMS systems show a status of online change prepare complete (OLCPREPC), then the

prepare phase succeeded on some of the IMS systems. You must terminate the online change with the TERMINATE OLC command. The IMS systems that have a status of OLCPREPC remain in an online change prepare complete state until you abort the online change.

- All IMS systems in a prepare complete state

If the INITIATE OLC PHASE(PREPARE) or INITIATE OLC PHASE(COMMIT) command fails and all of the IMS systems are in a prepare complete state (OLCPREPC) and the master shows a global status of online change prepare complete (OLCPREPC), then the prepare succeeded. You can issue INITIATE OLC PHASE(COMMIT) if you want to proceed with the online change. You can issue TERMINATE OLC if you want to abort the online change.

If the specified INITIATE OLC PHASE(PREPARE) command did not apply to any IMS in the IMSplex, the command is rejected, but all of the IMS systems show a status of OLCPREPC. For example, if the IMSplex consists of only DBCTL subsystems, then the INITIATE OLC PHASE(PREPARE) TYPE(FMTLIB) command does not apply to any of the IMS systems and is rejected. However, all of the IMS systems will show a status of OLCPREPC, indicating they are participating in the online change. If this situation occurs, you must terminate the online change. INITIATE OLC PHASE(COMMIT) will be rejected, since the online change applies to no IMS in the IMSplex.

- Some IMS systems in prepare complete and commit phase 1 complete state

If an INITIATE OLC PHASE(COMMIT) command fails during commit phase 1, some of the IMS systems may be in a prepare complete state (OLCPREPC) and some of the IMS systems may be in a commit phase 1 complete state (OLCCMT1C). The commit phase failed before the master updated the OLCSTAT data set, so the online change is not committed. You may correct the problem and try the commit again with the INITIATE OLC PHASE(COMMIT) command. Or, you may decide to abort the online change with the TERMINATE OLC command.

The IMS systems that are in an online change state remain in an online change state until you abort the online change or commit the online change.

- All IMS systems in a commit phase 1 complete state

If an INITIATE OLC PHASE(COMMIT) command fails after commit phase 1 is completed, all of the IMS systems are in a commit phase 1 complete state (OLCCMT1C).

If the error occurs before the master updates the OLCSTAT data set, then the online change is not yet successful. You may abort the online change with the TERMINATE OLC command or attempt the commit again with another INITIATE OLC PHASE(COMMIT) command.

If the error occurs after the master updates the OLCSTAT data set, then the online change is successful. You may not abort the online change. You must attempt the commit again with another INITIATE OLC PHASE(COMMIT) command to finish up the online change. The INITIATE OLC PHASE(COMMIT) command finishes the online change by completing commit phase 2.

The IMS systems that are in an online change state remain in an online change state until you abort the online change or commit the online change.

You can determine if the OLCSTAT data set has been updated by checking the modify id. Issue the QUERY OLC LIBRARY(OLCSTAT) SHOW(MODID) command. Check if the modify id returned is different from the modify id returned by the INITIATE OLC PHASE(PREPARE) command, or the modify id returned by a QUERY OLC LIBRARY(OLCSTAT) SHOW(MODID) command issued before the INITIATE OLC PHASE(COMMIT) command.

- Some IMS systems in commit phase 1 complete state and some in commit phase 2 complete state

If an INITIATE OLC PHASE(COMMIT) command fails during commit phase 2, some of the IMS systems may be in a commit phase 1 complete state (OLCCMT1C) and some may have completed commit phase 2 and be in a commit phase2 complete state (OLCCMT2C). The INITIATE OLC PHASE(COMMIT) command failed after commit phase 1 completed on all of the IMS systems and the master updated the OLCSTAT data set. Once the OLCSTAT data set is updated, the online change is considered to be successful and cannot be aborted. You must finish the online change commit phase 2 by issuing the INITIATE OLC PHASE(COMMIT) command again. The INITIATE OLC PHASE(COMMIT) command finishes the online change by completing commit phase 2.

The IMS systems that are in an online change state remain in an online change state until you finish the online change with an INITIATE OLC PHASE(COMMIT) command.

- All IMS systems in commit phase 2 complete state

If an INITIATE OLC PHASE(COMMIT) command fails during commit phase 2 or commit phase 3, all of the IMS systems may end up in a commit phase 2 complete state (OLCCMT2C). The INITIATE OLC PHASE(COMMIT) command failed after commit phase 1 completed on all of the IMS systems and the master updated the OLCSTAT data set. Once the OLCSTAT data set is updated, the online change is considered to be successful and can not be aborted. you must finish the online change commit phase 2 and commit phase 3 by issuing the INITIATE OLC PHASE(COMMIT) command again.

The IMS systems that are in an online change state remain in an online change state until you finish the online change with an INITIATE OLC PHASE(COMMIT) command.

- Some IMS systems in commit phase 2 complete state and some not in online change state

If an INITIATE OLC PHASE(COMMIT) command fails during commit phase 3, some of the IMS systems may be in a commit phase 2 complete state (OLCCMT2C) and some may have completed commit phase 3 and no longer be in an online change state. The INITIATE OLC PHASE(COMMIT) command failed after commit phase 1 completed on all of the IMS systems and master updated the OLCSTAT data set. Once the OLCSTAT data set is updated, the online change is considered to be successful and can not be aborted. You must finish the online change commit phase 3 by issuing the INITIATE OLC PHASE(COMMIT) command again, routing it to an IMS that is still in a commit phase 2 complete state. The INITIATE OLC PHASE(COMMIT) command finishes the online change by completing commit phase 3.

The IMS systems that are in an online change state remain in an online change state until you finish the online change with an INITIATE OLC PHASE(COMMIT) command.

- One IMS in commit phase 3 failed state

If an INITIATE OLC PHASE(COMMIT) command fails during commit phase 3 and the command master associated with this command determines the command was not successful at other IMS systems, the commit phase 3 fails and the command master exits with an error. At this point, the command master is left in an online change state. Issue another INITIATE OLC PHASE(COMMIT) command routed to the master (perhaps with a longer command timeout value) to complete the commit phase 3 cleanup of online change information.

Errors unique to the processing of this command are returned as a completion code. A completion code is returned for an IMS participating in the online change phase.

INITIATE OLREORG command

Use the INITIATE OLREORG command to begin or resume online reorganization of the specified HALDB partition or partitions.

This command can be issued in either a type-1 format (/INITIATE OLREORG) or a type-2 format (INITIATE OLREORG).

Subsections:

- “Environment”
- “Syntax”
- “Keywords”
- “Usage notes” on page 694
- “Command responses for /INITIATE OLREORG” on page 694
- “Output fields” on page 695
- “Return, reason, and completion codes” on page 695
- “Examples” on page 697

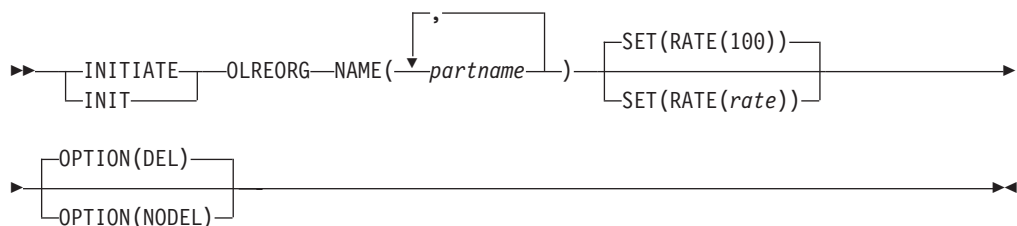
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) from which the INITIATE command and keywords can be issued.

Table 252. Valid environments for the INITIATE OLREORG command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
INITIATE OLREORG	X	X	
NAME	X	X	
SET	X	X	
OPTION	X	X	

Syntax



Keywords

The following keywords are valid for the /INITIATE OLREORG command:

NAME()

Specifies the name of a HALDB partition.

You can specify only PHDAM or PHIDAM partition names. You cannot use the wildcard character (*). For example, you cannot specify DBPART*.

When you use the type-2 version of this command, you can specify multiple partition names.

When you use the type-1 version of this command, you can specify only one partition name.

SET(RATE)

Specifies the RATE at which the HALDB OLR runs.

rate

You can specify a value of 1 to 100 for the rate values. A HALDB OLRs impact on the system is affected by the available system resources, by total system utilization (including other HALDB OLRs), by total logging volume, by log contention, and by the intensity at which this reorganization was requested to run. These same factors also affect the speed at which the reorganization runs.

You can use the RATE parameter to control the intensity at which the reorganization runs. This can affect both the reorganization's speed and its impact on the rest of the system. The value you specify for rate is the percentage of elapsed time to be devoted to copying records. The remaining time is to be an intentionally introduced delay in the copying process that minimizes the reorganization's impact on other IMS work and on the whole system.

A rate value of 50 specifies that 50% of the elapsed time be spent copying records and the remaining 50% be spent in a delay. This causes the reorganization to run approximately twice as long as it would have run with a rate value of 100.

RATE(100) is the default.

OPTION()

You can specify the following values on the OPTION keyword:

DEL | NODEL

Specifies whether IMS attempts to delete the inactive data sets after the reorganization process is complete. DEL and NODEL are mutually exclusive keywords.

When DEL is specified, IMS attempts to delete the inactive data sets when the reorganization process is complete. IMS attempts to delete the data sets regardless of who created the data sets or when the data sets were created.

When NODEL is specified, IMS does not attempt to delete the inactive data sets when the reorganization process is complete.

Attention: If the HALDB OLR is stopped before completion, the OPTION(NODEL) specification is not retained by IMS. You must specify OPTION(NODEL) on the INITIATE OLREORG command to resume the stopped HALDB OLR. You can also specify OPTION(NODEL) on the UPDATE OLREORG command.

If the partition is tracked at an RSR tracker site, the DEL or NODEL value in effect at the completion of the HALDB OLR also determines whether the

inactive data sets for the shadow partition are deleted when the tracking of the online reorganization is completed.

Usage notes

When the /INITIATE OLREORG command is complete and the integrated HALDB Online Reorganization function (OLR) is initiated successfully, a DFS0725I message with a completion code of 0 is sent back to the system console and the MTO as an asynchronous message. If the /INITIATE OLREORG command is issued from a terminal that is not the MTO or system console, the DFS0725I message is also sent to the terminal asynchronously. The DFS0725I message is not sent back to an AOI program that issues the /INITIATE OLREORG command. If the /INITIATE OLREORG command is issued from an LU 6.2 application, the LU 6.2 program receives the DFS0725I message followed by the DFS058I INITIATE COMMAND COMPLETED message.

A type X'22' log record is created when INITIATE OLREORG is issued. The command is non-recoverable and is not reprocessed when IMS is restarted.

The type-1 /INIT OLREORG command can be entered at an IMS terminal, MTO, system console, APPC, OTMA application, or a CMD or ICMD call. You can issue /INIT OLREORG as a type-1 command from a non-OM API using the first three command characters; for example, /INI OLREORG. The type-1 command is processed at the IMS where the command was entered. However, when you issue INIT OLREORG as a type-2 command from an OM API, the only valid command verb form is INIT or INITIATE.

This command can be issued to an IMSplex by using the Batch SPOC utility.

While the database is being quiesced, this command cannot be processed successfully.

Part of the HALDB OLR processing involves:

- The creation of the output data sets at the beginning of the online reorganization
- The optional deletion of the inactive data sets when the HALDB OLR is completed

If the partition is tracked at an RSR tracker site, the OPTION value (DEL or NODEL) that is in effect at the completion of the HALDB OLR also determines whether the inactive data sets for the shadow partition are deleted at the completion of the tracking of the reorganization.

The output for this command is defined in XML and is available to automation programs that communicate with OM if the command is entered from OM API. When entered as a type-1 command, the command output is in message format.

When a HALDB OLR is completed, a DFS2974I message is sent to the system console indicating that the OLR is complete. The command response indicates if an OLR is initiated.

Command responses for /INITIATE OLREORG

When you issue the type-1 /INITIATE OLREORG command, the command response is returned in a message format.

When the command is completed successfully, message DFS0725I with a completion code of 0 is returned to the system console and to the master terminal. If the command results in an error, a nonzero completion code or an error message is returned to the master terminal and system console.

If the command results in an error, an error message is returned to the entering terminal. One or more of the following messages might also be returned:

DFS0725I INITIATE|UPDATE|TERMINATE OLREORG COMMAND FOR DB dbnamexx COMPLETE.
CC= nn
where: dbnamexx is the HALDB partition name entered on the command
nn is the completion code

- DFS058 - INITIATE COMMAND IN PROGRESS
- DFS107 - REQUIRED KEYWORD NOT PRESENT
- DFS110 - COMMAND KEYWORD OLREORG INVALID FOR yyyyyyyy (tracker, XRF alt)
- DFS128 - TOO FEW KEYWORDS
- DFS136 - COMMAND xxxxxxxxxxxx INVALID FOR yyyyyyyy (tracker, XRF alt)
- DFS165 - COMMAND VERB IS INVALID
- DFS2026 - NO WKAP STORAGE
- DFS2038 - INSUFFICIENT STORAGE AVAILABLE TO PROCESS COMMAND
- DFS2262 - TOO MANY DATABASE PARAMETERS
- DFS3630 - GENERIC PARAMETER NOT ALLOWED

Output fields

This section describes the responses from the OM API for the INITIATE OLREORG command. The following table shows the INITIATE OLREORG output fields and a description of each field:

Short label

The short label that is generated in the XML output. This field does not apply to the /INITIATE command.

Show Keyword

The command keyword that caused the field to be generated. N/A appears for output fields that are always returned.

Meaning

A brief description of the output field.

Table 253. Output fields for INITIATE OLREORG command

Short label	Show Keyword	Meaning
PART	N/A	Partition name.
MBR	N/A	The IMS that processed the command and built the command response line.
CC	N/A	Completion code.

Return, reason, and completion codes

The OM return and reason codes that might be returned as a result of the INITIATE OLREORG command are standard for all commands that are entered through the OM API.

| The following table includes the return and reason codes and a brief explanation of
| the codes. The return or reason code returned for the command might also indicate
| an error from a CSL request.

Table 254. Return and reason codes for the INITIATE OLREORG command

Return code	Reason code	Meaning
X'00000000'	X'00000000'	The INITIATE OLREORG command completed successfully.
X'00000004'	X'00001010'	No matches found for filter.
X'00000008'	X'00002008'	Insufficient number of keywords.
X'00000008'	X'00002020'	Invalid rate value.
X'00000008'	X'00002040'	No filter, an invalid filter, or an insufficient number of filters was specified.
X'0000000C'	X'00003000'	At least one request was successful.
X'0000000C'	X'00003004'	None of the requests was successful.
X'00000010'	X'0000400C'	Command issued on an XRF alternate.
X'00000010'	X'00004014'	Command issued on an RSR tracker.
X'00000010'	X'00004030'	Command is invalid for LSO=Y.
X'00000014'	X'00005000'	A GETMAIN error occurred.

The following table includes an explanation of the completion codes. Errors that are unique to the processing of INITIATE OLREORG command are returned as completion codes. A completion code is returned for each action against a HALDB partition. Also, if the type-1 /INITIATE OLREORG command is entered, the completion codes are displayed in the DFS0725I message.

Table 255. Completion codes for the INITIATE OLREORG command

Completion code	Completion code text	Meaning
0		The INITIATE OLREORG command completed successfully for the partition.
10		Resource name is invalid.
14		Resource is not a partition name.
17	ANOTHER CMD IN PROGRESS	The INITIATE OLREORG command failed because IMS was already processing another command that was issued against the same database.
1C		Resource is a partitioned secondary index.
20		HALDB OLR is already in progress.
24		No OLR is in progress.
28		No DMB is loaded.
90		Internal error. The command entered is not processed because of an internal error.
AE		Dynamic allocation error.
C1		OLR database directory (DDIR) is missing.
C3		OLR partition is either stopped or locked, or is in an input-only access state.
C4		OLR partition is being recovered.
C5		OLR partition access is not UPDATE or EXCLUSIVE.
C6		OLR scheduling failed.

Table 255. Completion codes for the INITIATE OLREORG command (continued)

Completion code	Completion code text	Meaning
C7		OLR partition is not authorized.
C8		OLR master database is either stopped or locked, or is in an input-only access state.
C9		OLR master database access is not UPDATE or EXCLUSIVE.
CA		OLR ownership setting failed.
CC	OLR IS ACTIVE FOR DATABASE	The INITIATE OLREORG command failed because the OLR function is already reorganizing one or more partitions in the database.
CD		HALDB OLR was attempted for an RSR-covered HALDB.
CE		HALDB OLR cannot access all the data in the partition because an EEQE exists.
CF		Parameter value conflict, or invalid parameter value.
DA		The command processing failed because the database is being recalled from HSM.
E7		The database command could not be processed because a command that specifies START(QUIESCE) is in progress.

Examples

The following are examples of the INITIATE OLREORG command.

Example 1 for /INITIATE OLREORG command

Entry ET:

```
/INITIATE OLREORG NAME(HALDBPRT) SET(RATE(50))
```

Response ET:

```
DFS058I INITIATE COMMAND IN PROGRESS
DFS0725I INITIATE OLREORG COMMAND FOR DB HALDBPRT COMPLETE. CC=0
```

System Console or MTO:

```
DFS2970I - OLR STARTED FOR NAME=HALDBPRT
DFS0725I INITIATE OLREORG COMMAND FOR DB HALDBPRT COMPLETE. CC= 0
```

Explanation: The /INITIATE OLREORG command for the partition named HALDBPRT is issued from a terminal, resulting in the message, DFS058I INITIATE COMMAND IN PROGRESS being sent to that entering terminal. When OLR is started successfully, the DFS0725I and DFS2970I messages are sent to the system console and to the MTO. The DFS0725I message is also sent to the entering terminal if the entering terminal is not the system console, MTO, AOI program.

Example 2 for /INITIATE OLREORG command

Entry ET:

```
/INIT OLREORG NAME(PDHDOKA) SET(RATE(5))
```

Response ET:

```
DFS058I INITIATE COMMAND IN PROGRESS
DFS0725I INITIATE OLREORG COMMAND FOR DB PDHDOKA  COMPLETE. CC=0
```

Response MTO or System console:

```
DFS2970I - OLR STARTED FOR NAME=PDHDOKA
DFS0725I INITIATE OLREORG COMMAND FOR DB PDHDOKA  COMPLETE. CC=0
```

Explanation: The INIT OLREORG command for the partition named PDHDOKA is issued from a terminal, resulting in the DFS058I INITIATE COMMAND IN PROGRESS message being sent to that entering terminal. The DFS0725I message is also sent to the entering terminal if the entering terminal is not the system console, the MTO, or an AOI program.

When OLR is started successfully, the DFS0725I and the DFS2970 messages are sent to the system console and to the MTO.

Example 3 for INITIATE OLREORG command

TSO SPOC Input:

```
INIT OLREORG NAME(PDHDOKA,PDHDOKB) SET(RATE(5))
```

TSO SPOC output:

Partition	MbrName	CC
PDHDOKA	IMSA	0
PDHDOKA	IMS1	C3
PDHDOKB	IMSA	0
PDHDOKB	IMS1	C3

OM API Input:

```
CMD (INIT OLREORG NAME(PDHDOKA,PDHDOKB) SET(RATE(5)))
```

OM API output:

```
<imsout>
<ctl>
<omname>OM10M  </omname>
<omvsn>1.2.0</omvsn>
<xm1vsn>1  </xm1vsn>
<statime>2003.168 21:19:06.827362</statime>
<stotime>2003.168 21:19:07.036292</stotime>
<staseq>B99629BFEC66256E</staseq>
<stoseq>B99629C01F684F44</stoseq>
<rqsttkn1>USRT005 10141906</rqsttkn1>
<rc>00000000</rc>
<rsn>00000000</rsn>
</ctl>
<cmd>
<master>IMSA  </master>
<userid>USRT005 </userid>
<verb>INIT</verb>
<kwd>OLREORG  </kwd>
<input>INIT OLREORG NAME(PDHDOKA,PDHDOKB) SET(RATE(5)) </input>
</cmd>
<cmdrsphdr>
<hdr slbl="PART" llbl="Partition" scope="LCL" sort="A" key="1"
  scroll="NO" len="9" dtype="CHAR" align="left" />
<hdr slbl="MBR" llbl="MbrName" scope="LCL" sort="N" key="0" scroll="NO"
  len="8" dtype="CHAR" align="left" />
<hdr slbl="CC" llbl="CC" scope="LCL" sort="N" key="0" scroll="YES"
```



```

len="4" dtype="INT" align="right" />
</cmdrsphdr>
<cmdrspdata><rsp> PART(PDHDOKA ) MBR(IMSA    ) CC(    0) </rsp>
<rsp> PART(PDHDOKB ) MBR(IMSA    ) CC(    0) </rsp>
<rsp> PART(PDHDOKA ) MBR(IMS1    ) CC(   C3) </rsp>
<rsp> PART(PDHDOKB ) MBR(IMS1    ) CC(   C3) </rsp>
</cmdrspdata>
</imsout>

```

Explanation: The INIT OLREORG command is issued from TSO SPOC for partitions PDHDOKA and PDHDOKB. The command is routed to IMSA and IMS1. The command is successful at IMSA for both partitions, but is not successful at IMS1 for both partitions.

Related concepts:

 How to interpret CSL request return and reason codes (System Programming APIs)

Related reference:

Chapter 2, “Command keywords and their synonyms,” on page 57

Chapter 38. /LOCK command

The /LOCK command stops the sending and receiving of messages to and from a terminal, stops the scheduling of messages containing a specific transaction code, stops the scheduling of a specific program, and stops the use of a database.

Queuing of output messages for a particular communication line, terminal, or transaction code is not affected.

Subsections:

- “Environment”
- “Syntax”
- “Keywords” on page 702
- “Usage notes” on page 703
- “Equivalent IMS type-2 commands” on page 704
- “Examples” on page 704

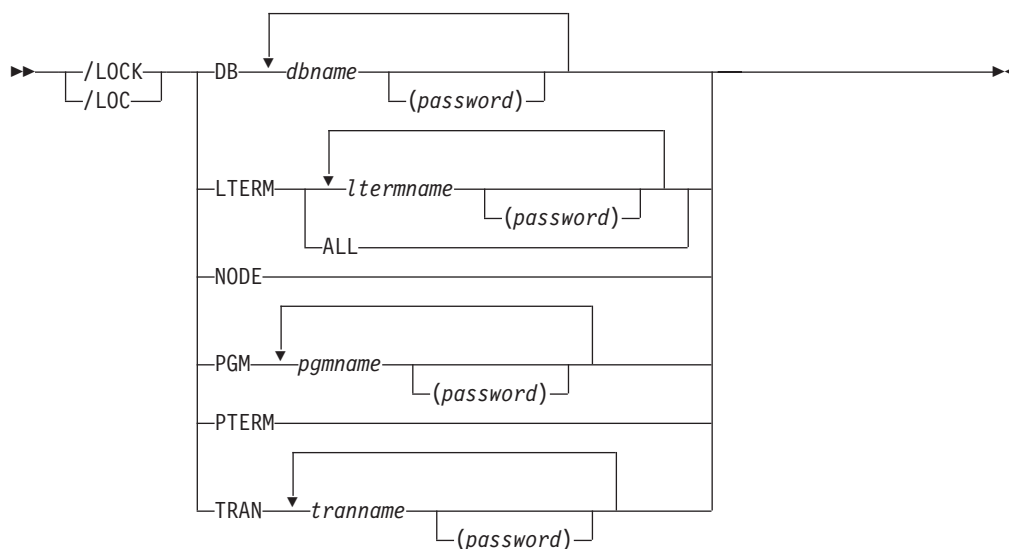
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 256. Valid environments for the /LOCK command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/LOCK	X	X	X
DB	X	X	
LTERM	X		X
NODE	X		X
PGM	X	X	X
PTERM	X		X
TRAN	X		X

Syntax



Keywords

The following keywords are valid for the /LOCK command:

DB LOCK prevents subsequently scheduled programs from accessing the database. The /LOCK DB command does not close the database or affect currently scheduled programs.

If the database is a DEDB or MSDB, programs using the database will not be scheduled. For other databases, the programs will still be scheduled. If the INIT call was issued, however, a call against the database will result in either a 3303 pseudoabend or a BA status code.

For DBCTL, CCTL can specify LONG or SHORT when it schedules a PSB. If the database is currently scheduled to a LONG thread, the command is rejected. If not, the thread completes before the database is acted upon. If the thread completes, a commit point or transaction termination is the result.

While the database is being quiesced, this command cannot be processed successfully.

LTERM

Specifies the logical terminal for which sending and receiving of messages is to be stopped. /LOCK LTERM applies only to logical terminals associated with the entering physical terminal.

The /LOCK LTERM ALL command can only be used when none of the logical terminals associated with the entering physical terminal have passwords.

NODE

Specifies that the sending and receiving of messages for the VTAM node associated with the entering physical terminal is to be stopped.

PGM

Specifies the program for which scheduling is to be stopped.

PTERM

Specifies that the sending and receiving of messages for the entering physical terminal is to be stopped.

TRAN

Specifies that scheduling of messages containing this transaction code is to be stopped. The /LOCK TRAN command cannot be used with Fast Path exclusive transactions but can be used with Fast Path potential transactions.

The /LOCK TRAN command cannot be used for CPI Communications driven programs.

Usage notes

The /LOCK command can be used on HALDB databases.

The output of the /LOCK DB command is changed when the command is entered through the OM API. In this case, the DFS058I message is not returned to OM. The command response returned to OM contains one or more of the following messages: DFS0488I, DFS3466I, or DFS132. The OM API does not support the /LOCK command without any keywords.

The /LOCK command can be issued by APPC and OTMA clients.

This command can be issued to an IMSplex by using the Batch SPOC utility.

A resource name can be defined with password protection in SAF for the DB, LTERM, PGM, and TRAN keywords. If the parameter, LOCKSEC=Y (N is the default) is specified on the DFSPBxxx IMS.PROCLIB member, IMS calls the SAF and user exit calls. If the resource is not defined to SAF, or is defined and is authorized to the user, the command is processed. If the resource is defined to SAF but not authorized for use, the command is rejected with a DFS3689W message.

The password associated with a signed on user, and specified after a command resource parameter, will be used to perform a reverification check, if the resource is defined to RACF with 'REVERIFY' specified in the APPLDATA field. Passwords can be mixed case or uppercase depending on what is specified on the PSWDC keyword in the DFSPBxxx IMS.PROCLIB member. If the resource passes the RACF authorization check, and RVFY=Y is specified as an IMS startup parameter, IMS will verify that the password following the parameter is the same as the password entered during signon for the user that entered the command. If 'REVERIFY' is specified for a resource, but a password is not provided, or the wrong password is provided, the command processing for that resource will be rejected.

The /LOCK LTERM, NODE, and PTERM commands apply only to the entering physical terminal. The /LOCK DB | PGM | TRAN command is only valid if entered from the master terminal, the system console, a TCO script, or an AOI application program.

Issuing the /LOCK command for a physical terminal, logical terminals, or nodes prevents application program output from being sent (assuming nonresponse mode transactions) and message switches from any other terminals. Output message queuing continues for the locked physical terminal. The /STOP LTERM command can be used instead of the /LOCK LTERM command, because both stop the sending and receiving of messages to the physical terminal.

If the terminals are on a switched communication network and a physical or logical terminal disconnection occurs, an implied /UNLOCK command is processed against the physical terminal and inquiry logical terminal.

The `/LOCK` command cannot be used with logical terminals assigned to deallocated users.

When you enter this command, the database name can be an existing non-HALDB, a HALDB master, or a HALDB partition. A command against a HALDB partition operates exactly like a command against a non-HALDB with the exception of the `/START DB` and the `UPDATE DB START(ACCESS)` commands. A HALDB partition is not allocated during the command unless it was previously authorized but not allocated, the `OPEN` keyword was specified, or the partition has EEQEs. The partition is allocated at first reference.

The HALDB partition reflects conditions such as `STOPPED`, `LOCKED`, or `NOTOPEN`. When a HALDB partition is stopped, it must be explicitly started again. Commands with the keyword `ALL` and commands against a HALDB master do not change the `STOPPED` and `LOCKED` indicators in each HALDB partition.

When the command target is a HALDB master, processing acts on all HALDB partitions. For example, if the `IMS` command is `/DBR` on the HALDB master, all of the HALDB partitions are closed, deallocated, and deauthorized. Only the HALDB master displays `STOPPED` (each HALDB partition does not display `STOPPED` unless it was itself stopped). If a `/DBR` command was issued against a HALDB master, the display output of a `/DISPLAY DB` command shows the HALDB master (as `STOPPED`), but does not display the status of the partitions.

Each partition inherits the access limitations of its HALDB master. If the `/DBD` command is issued against a HALDB master, all of its partitions close. A subsequent reference to any of the partitions results in the partition opening for input, although the partition's access might be `UPDATE` or `EXCLUSIVE`. The `DBRC` authorization state reflects the limited access.

Equivalent IMS type-2 commands

The following table shows variations of the `/LOCK` command and the `IMS` type-2 commands that perform similar functions.

Table 257. Type-2 equivalents for the /LOCK command

Task	/LOCK command	Similar IMS type-2 command
Stops the use of a database.	/LOCK DB <i>dbname</i>	UPDATE DB NAME(<i>dbname</i>) SET(LOCK(ON))
Locks a program.	/LOCK PGM <i>pgmname</i>	UPDATE PGM NAME(<i>pgmname</i>) SET(LOCK(ON))
Locks a transaction.	/LOCK TRAN <i>tranname</i>	UPDATE TRAN NAME(<i>tranname</i>) SET(LOCK(ON))

Examples

The following are examples of the `/LOCK` command:

Example 1 for /LOCK command

Entry ET:
 /LOCK DB TREEFARM

Response ET:

DFS058I LOCK COMMAND COMPLETED

Explanation: Application programs that use the MSDB database named TREEFARM are no longer scheduled. Transaction input can continue.

Example 2 for /LOCK command

Entry ET:

/LOCK LTERM ALL

Response ET:

DFS058I LOCK COMMAND COMPLETED

Explanation: Output is queued but not sent to the logical terminals associated with the physical terminal from which the /LOCK command was entered.

Example 3 for /LOCK command

Entry ET:

/LOCK PGM APPLETRE

Response ET:

DFS058I LOCK COMMAND COMPLETED

Explanation: Program APPLETRE can no longer be scheduled.

Example 4 for /LOCK command

Entry ET:

/LOCK PTERM

Response ET:

DFS058I LOCK COMMAND COMPLETED

Explanation: Application program output (if nonresponse mode transaction) and message switches from other terminals are not sent to the entering physical terminal. Output is queued for later transmission when the terminal is unlocked.

Example 5 for /LOCK command

Entry ET:

/LOCK TRAN SEED

Response ET:

DFS058I LOCK COMMAND COMPLETED

Explanation: The application program for transaction code SEED can no longer be scheduled. Transaction input can continue.

Entry ET:

/LOCK TRAN TXCDLM06

Response ET:

DFS058I LOCK COMMAND COMPLETED EXCEPT TRANSACTION
TXCDLM06

Explanation: TXCDLM06 is a Fast Path exclusive transaction. The /LOCK command cannot stop the scheduling of Fast Path exclusive transactions.

Related concepts:

 [Sharing secondary index databases \(Database Administration\)](#)

Related reference:

 [UPDATE DB command \(Commands\)](#)

 [UPDATE PGM command \(Commands\)](#)

 [UPDATE TRAN command \(Commands\)](#)

Chapter 39. /LOG command

The /LOG command writes a single-segment message to the IMS system log. Any text can be logged, including transaction codes or command streams.

Subsections:

- "Environment"
- "Syntax"
- "Keywords"
- "Usage notes"
- "Example"

Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) from which the command can be issued.

Table 258. Valid environments for the /LOG command

Command	DB/DC	DBCTL	DCCTL
/LOG	X	X	X

Syntax

►► /LOG *text* ◀◀

Keywords

The following keywords are valid for the /LOG command:

text

An alphanumeric character message to be logged.

Usage notes

An X'02' log record is produced and contains the text. This command applies only to the currently entered message segment and does not establish a continuing operational mode.

This command can be issued to an IMSplex using the Batch SPOC utility.

Example

Entry ET:

/LOG TODAY IS MONDAY

Response ET:

DFS058I LOG COMMAND COMPLETED

Explanation: An X'02' log record containing the text

TODAY IS MONDAY

is written to the IMS system log.

Chapter 40. /LOOPTEST command

The /LOOPTEST command is a multisegment command that creates an output write loop that tests for output errors.

It causes a single-segment message to be repeatedly transmitted to the terminal being tested.

Subsections:

- "Environment"
- "Syntax"
- "Usage notes"
- "Example" on page 710

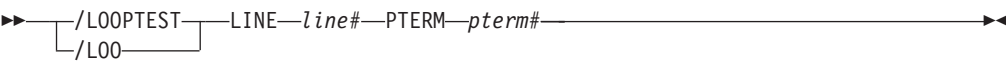
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 259. Valid environments for the /LOOPTEST command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/LOOPTEST	X		X
LINE	X		X
PTERM	X		X

Syntax



Usage notes

Multisegment input is combined into a single segment for output transmission. For the terminal in looptest mode to receive the complete message, the cumulative output segment must not exceed the terminal's output size restrictions.

/LOOPTEST requires an EOM indication to denote end-of-message; an EOS indication must be included for all segments that precede the last segment.

/LOOPTEST causes all I/O error detection and notification procedures within IMS to be bypassed. Depending on the types of errors involved, some write loops might result in high processor utilization.

The /END command terminates looptest mode.

LINE, PTERM

- | Specifies the communication line or physical terminal to be placed into looptest mode. If the terminal in looptest mode is attached to a multipoint line, the
- |

entire line must be stopped and idle before the /LOOPTEST command is allowed. /LOOPTEST is not allowed on VTAM-attached terminals.

If the device specified is not powered on and ready, intervention-required messages will be sent to the master terminal.

The /DISPLAY LINE PTERM command identifies a terminal in looptest mode.

Example

Entry ET:

```
/LOOPTEST LINE 5 PTERM 1 (EOS)
DATA TEST (EOS)
12345 (EOM)
```

Response ET:

```
DFS058I  LOOPTEST COMMAND COMPLETED
```

Response RT:

```
DATA TEST 12345
DATA TEST 12345
and so forth.
```

Explanation: DATA TEST 12345 is repetitively sent to PTERM 1 on LINE 5.

Related reference:

“How to enter IMS commands” on page 2

Chapter 41. /MODIFY command

The /MODIFY command controls the modification of IMS resources online.

It switches the online environment from the active ACBLIB, FORMAT, and MODBLKS libraries to the inactive libraries containing the new or changed resource descriptions.

Subsections:

- “Environment”
- “Syntax”
- “Keywords” on page 712
- “Usage notes” on page 715
- “Examples” on page 716

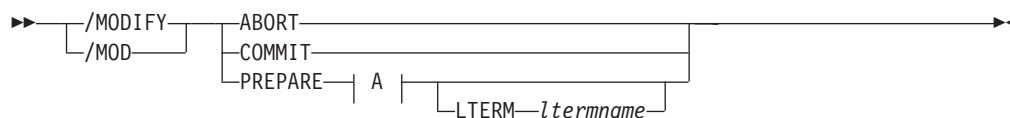
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 260. Valid environments for the /MODIFY command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/MODIFY	X	X	X
ABORT	X	X	X
COMMIT	X	X	X
LTERM	X		X
PREPARE	X	X	X

Syntax



A:



Keywords

The following keywords are valid for the /MODIFY command:

ABORT

Resets the status that was set by the /MODIFY PREPARE command after a /MODIFY PREPARE, or can be used if the /MODIFY COMMIT was not successful and the operator chooses not to attempt the online change at that time.

COMMIT

Brings all the newly defined resources online, updates the changed resources, and invalidates the deleted resources.

If ALL was specified on the /MODIFY PREPARE command, the ACBLIB, FMTLIB, and MODBLKS changes must be successful or the /MODIFY COMMIT will be rejected. When COMMIT is successful, the modifications will persist across all IMS restarts. If FMTLIB is entered, most new and in-progress requests will be queued for processing after the /MODIFY COMMIT command is completed.

If MODBLKS or ACBLIB is specified, work in progress for changed or deleted resources in the IMS.ACBLIB data set or in the IMS.MODBLKS data set that are directly affected must be completed, or the /MODIFY command is rejected.

If DRD is enabled and /MODIFY PREPARE ALL was specified, the /MODIFY COMMIT command does not swap the MODBLKS library suffix. The DFS3499 message shows the same MODBLKS suffix before and after the online change.

IMS does not reject the /MODIFY COMMIT command if the online change indirectly affects transactions (having work in progress) that reference resources in the ACB library or in the MODBLKS data set that are directly affected by the online change. These transactions themselves are not being changed (no attribute on the TRANSACT macro is being changed), but they reference a PDIR, PSB, or DMB that is affected by the online change. A transaction can be indirectly affected by an online change in one of the following situations:

- The transaction references a PSB directory (PDIR) control block in the IMS.MODBLKS data set that is being changed
- The transaction references a PSB in the ACB library (IMS.ACBLIB) that is being changed online
- The transaction references a PSB directory (PDIR) control block in the IMS.MODBLKS data set which in turn references a database that is being changed online
- The transaction references a PSB in the ACB library (IMS.ACBLIB) that references a database that is being changed online

/DISPLAY MODIFY is used to display the work that was in progress prior to the entering of /MODIFY COMMIT.

IMS will prevent messages entered from terminals from being queued to transactions, but program-to-program switches from applications can still occur. Therefore, a /DISPLAY MODIFY command can indicate that no work is pending for the resources to be modified or deleted, but the /MODIFY COMMIT might be rejected. If this occurs, the new work must be allowed to complete and then the /MODIFY COMMIT command must be reentered.

/MODIFY COMMIT is rejected if:

- A /MODIFY PREPARE command was not previously entered.

- Transactions to be deleted have messages queued.
- Transactions to be changed by the following system definition keywords have messages queued:
 - MSGTYPE
 - INQUIRY
 - FPATH
 - EDIT
 - SPA
- Transactions to be changed by keywords not shown in the previous bullet have messages queued, and the transactions have not been the object of a /STOP or /PSTOP command.
- Transactions with access to programs or databases to be changed or deleted are prevented from updating, and the transactions have not been the object of a /STOP or /PSTOP command. When a transaction shows a status of USTOP during a /DISPLAY TRAN, the /STOP command might need to be entered, because the /PSTOP command might not enable the /MODIFY command to complete the transaction.
- Any program (PSB) that is currently scheduled has a program, database, or transaction change or deletion. This includes Wait for Input (WFI) and Fast Path transactions. All WFI and Fast Path regions that reference changed or deleted routing codes, programs, or databases must be stopped before entering the /MODIFY COMMIT.
- An I/O error occurs while reading the inactive MFS FORMAT library directory or the resident index (\$\$IMSDIR) member.
- A /START DATABASE command is in progress for any database that is changed or deleted.
- A /DBDUMP or /DBRECOVERY command is in progress for any database that is changed or deleted.

Operator action might be required to prevent the preceding conditions. For example, if a program or database is scheduled, the operator should either wait until the program or database is finished before the /MODIFY COMMIT command is entered, or the operator should issue /STOP or /PSTOP for the associated transaction.

If IMS is in an IMSplex and Resource Manager (RM) is using a resource structure, the transactions being added by the online change are registered to RM if they are not already registered to RM. If any error occurs during the CSLRMUPD request to register the transactions, the /MODIFY or INITIATE 0LC command will fail and IMS will be in a COMMIT2F state.

If a /MODIFY COMMIT command results in the COMMIT2F state, the command is rejected with a DFS178 message. A DFS3308 message is sent to the system console with the CSLRMUPD return/reason code. The IMS remains in a COMMIT2F state and the /MODIFY cannot be committed or aborted. The IMS must be canceled and warm started as the online change is not complete.

PREPARE

/MODIFY PREPARE is not recovered across an emergency restart and must be reentered after restart if the /MODIFY COMMIT did not complete prior to an IMS failure.

The parameters in the following table are valid with /MODIFY PREPARE. The environments in which the parameters are valid are also shown in this table.

Table 261. /MODIFY PREPARE parameters environments

Parameter	DB/DC	DBCTL	DCCTL
ACBLIB	X	X	X
ALL	X	X ¹	X
BLDL	X	X	X
FMTLIB	X		X
LTERM	X		X
MODBLKS	X	X	X
RACF	X		X

Note:

1. Only applies to ACBLIB, MODBLKS, and BLDL.

ACBLIB

Quiesces the transactions to be changed or deleted and transactions that access databases or programs to be changed or deleted. ACBLIB members that are not found are displayed as CHANGED because a DDIR or PDIR exists in MODBLKS. Additions or deletions to ACBLIB require the MODBLKS parameter.

If a DMB is being added to the ACBLIB with no MODBLKS change (no DMB exists in the active ACBLIB and a DMB exists in the inactive ACBLIB), then the display will show ADDED instead of CHANGED. If a DMB is being deleted from the ACBLIB with no MODBLKS change (DMB exists in the active ACBLIB and no DMB exists in the inactive ACBLIB), then the display will show DELETED instead of CHANGED. No MODBLKS change means a DDIR exists in the MODBLKS and the same MODBLKS is used before and after the online change.

ALL

Indicates that /MODIFY PREPARE is to be performed for ACBLIB, FMTLIB, RACF, MODBLKS and BLDL.

BLDL

Causes information message DFS3498I to be issued for each PSB or DMB not found in ACBLIB. This message does not affect the success of the command.

FMTLIB

Indicates that there will be no restrictions on the use of MFS format blocks until the /MODIFY COMMIT command is entered.

LTERM *ltermname*

Specifies a logical terminal to receive lists of added, changed, or deleted resources.

MODBLKS

Causes IMS to prepare to bring the changes or deletions defined by the new system definition to IMS. Using MODBLKS also quiesces the transactions to be changed or deleted and transactions that access databases or programs to be changed or deleted. This command is rejected if it is issued on an IMS that has DRD enabled.

RACF

Use of the RACF data space invalidates the IMS online change support for RACF with the /MODIFY command. The IMS online change support is still valid, though, when the RACF data space is not being used.

The message DFS3432 RACF PARAMETER INVALID IF RACF DATA SPACE IS USED is issued if the RACF parameter is used on the /MODIFY PREPARE command when the RACF data space is being used. You can use the RACF command SETROPTS RACLIST (classname) REFRESH to refresh the RACF resource profiles in the RACF data space without requiring the IMS applications to suspend work.

Usage notes

The following table lists the resources and parameters available to the /MODIFY command:

Table 262. Resources and parameters available to the /MODIFY command

Parameter	Library	Description
ACBLIB	IMS.ACBLIBx ¹	Contains database and program descriptors such as DMBs and PSBs.
FMTLIB	IMS.FORMATx ¹	Contains MFS maps produced by the MFS language utility and service utility. The FMTLIB parameter is not valid with DBCTL.
MODBLKS	IMS.MODBLKSx ¹	Contains a subset of control blocks produced by IMS system definition.
RACF		RACF in-storage profiles. The RACF parameter is not valid with DBCTL.

Note:

1. x = A or B
2. Use the SETROPTS RACLIST(CIMS) REFRESH command to refresh RACF updates.

The correct sequence for /MODIFY commands is PREPARE followed by COMMIT. If the online change is not to be completed, the /MODIFY ABORT command is used. The /MODIFY PREPARE command specifies which resources are to be changed or deleted. Depending on the parameters entered, the system will initiate quiescing of appropriate resources. COMMIT initiates the changes entered in a preceding PREPARE. If a previously entered /MODIFY PREPARE command is to be canceled, ABORT must be entered.

An IMS automated operator program can issue the /MODIFY PREPARE and /MODIFY ABORT commands, but it cannot issue the /MODIFY COMMIT command. Thus, you can automatically prepare or abort online change.

If this command is used to delete a database, IMS closes the database and makes it unavailable to programs. Also, if the database is authorized for DBRC, /MODIFY deauthorizes it.

Fast Path DEDBs are supported by the /MODIFY command, but Fast Path MSDBs are not supported.

In an IMSplex, /MODIFY is not supported if coordinated online change is enabled. This command can be issued to an IMSplex using the Batch SPOC utility.

If DRD is enabled, the /MODIFY command specified with the MODBLKS keyword alone or with other keywords is rejected. The command /MODIFY PREPARE ALL ignores resources in the MODBLKS data set. If IMS is started without the MODBLKS DD cards, the MODBLKS-name field in the DFS3499 message is blank, which means that the MODBLKS data set is not applicable. This

is consistent with what DBCTL does with FMTLIB. If IMS is started with the MODBLKS DD statements, the MODBLKS-name field is displayed, with a name suffix of A during prepare and during commit, which means that the MODBLKS libraries were not changed. The ACBLIB and FMTLIB data sets are still supported if DRD is enabled.

An online change of a PSB or DBD will remove the member from the 31-bit pool as well as the 64-bit pool.

Examples

The following are examples of the /MODIFY command:

Example 1 for /MODIFY command

This is an example of a successful PREPARE, COMMIT sequence. In this example, DRD is not enabled. First, the command /MODIFY PREPARE ALL is issued.

Entry ET:

```
/MODIFY PREPARE ALL
```

Response ET:

```
DFS3499I ACTIVE DDNAMES MODBLKSA IMSACBA FORMATA MODSTAT ID: 103
```

Explanation: The modifications are brought online to IMS during a subsequent successful /MODIFY COMMIT command. The ddnames of the active data sets and the current MODSTAT identifier are shown. This message is the normal response.

Example 2 for /MODIFY command

The following example show the modifications from a /MODIFY PREPARE ACBLIB LTERM WTOR command.

Entry ET:

```
/MODIFY PREPARE ACBLIB LTERM WTOR
```

Response ET:

```
DFS3499I ACTIVE DDNAMES: MODBLKSA IMSACBA FORMATA MODSTAT ID:
DFS3430I THE FOLLOWING MODIFICATIONS WILL OCCUR DURING /MODIFY COMMIT:
DFS3430I DMB      OLCDB115      CHANGED
DFS3430I DMB      OLCDB116      CHANGED
DFS3430I DMB      OLCDB117      CHANGED
DFS3430I DMB      OLCDB118      CHANGED
DFS3430I DMB      OLCDB119      CHANGED
DFS3430I PSB      BMP255        NOT CHANGED(DMB CHANGED ONLY)
DFS3430I END OF MODIFICATIONS
```

Explanation: The PSB references a DBD that is changed, but it is not required to be rebuilt. The DBDs' PSB copies are purged, and the PSB is read from ACBLIB the next time it is scheduled.

Chapter 42. /MONITOR command

The /MONITOR command stops output from being sent to programmable remote stations (System/3). Input and output message queuing are allowed to continue.

The /MONITOR command can be used to reset conditions previously established by the /START, /RSTART, /STOP, /PSTOP, or /PURGE command.

This command can be issued to an IMSplex using the Batch SPOC utility.

Subsections:

- "Environment"
- "Syntax"
- "Keywords"
- "Example"

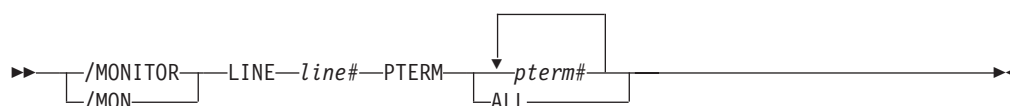
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the command and keywords.

Table 263. Valid environments for the /MONITOR command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/MONITOR	X		X
LINE	X		X
PTERM	X		X

Syntax



Keywords

The following keywords are valid for the /MONITOR command:

LINE, PTERM

Specifies the communication line or physical terminal for which output is being stopped.

Example

Entry ET:

```
/MONITOR LINE 4 PTERM 3
```

Response ET:

```
DFS058I MONITOR COMMAND COMPLETED
```

Response RT:

DFS059I TERMINAL MONITORED

Explanation: No further output is allowed to PTERM 3 on LINE 4.

Chapter 43. /MSASSIGN command

The /MSASSIGN command alters the assignments of the following multisystem resources: LINK, MSPLINK, MSNAME, and SYSID. These assignments include logical link to physical link, remote system identification (SYSID) to logical link, logical link path (MSNAME) to logical link, and transaction to a local or remote system.

Subsections:

- “Environment”
- “Syntax”
- “Keywords” on page 720
- “Usage notes” on page 720
- “Equivalent IMS type-2 commands” on page 721
- “Examples” on page 721

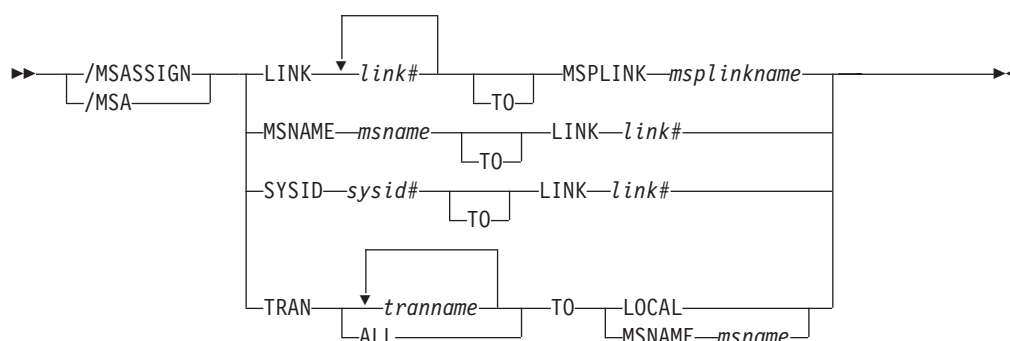
Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the commands and keywords.

Table 264. Valid environments for the /MSASSIGN command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/MSASSIGN	X		X
LINK	X		X
LOCAL	X		X
MSNAME	X		X
MSPLINK	X		X
SYSID	X		X
TRAN	X		X

Syntax



Keywords

The following keywords are valid for the /MSASSIGN command:

LINK

Specifies the logical link in a multiple system configuration.

Logical links can be assigned to physical links for input/output purposes. Only one logical link at a time can be assigned to a physical link (except for VTAM MSPLINKs, which can have multiple logical links assigned to them). The logical link must be stopped and idle for this assignment. Systems can only communicate with each other across a logical link established through specification of the same partner ID in both systems.

This type of assignment must be synchronized between the master terminal operators of the two systems. If a connection becomes inoperable while a transmission is in progress, this type of assignment allows switching to an alternate connection and proceeding with the unfinished transmission.

LOCAL

Specifies the local system. that is the subsystem in which the command is issued. The command /MSASSIGN TRAN p1 TO LOCAL assigns transaction p1 to the local system.

MSNAME

Specifies the logical link path in a multiple systems configuration.

MSPLINK

Specifies the physical link in a multiple subsystem configuration.

The command /MSASSIGN LINK p1 MSPLINK p2 assigns the logical link p1 to the physical link p2 for input and output purposes.

SYSID

Specifies the system identification of a remote system in a multiple system configuration. Remote SYSIDs can be assigned to logical links for output purposes. More than one SYSID (=MSNAME) can be assigned to one logical link. A remote SYSID (=MSNAME) cannot be assigned to another logical link if a message is currently transmitting on the connection corresponding to this SYSID. Therefore, the logical link must be stopped and idle for this assignment.

TRAN

Specifies the transaction to be assigned to either the local or the remote system.

For successful completion of the command:

- The transactions must be stopped.
- When assigning a remote transaction to local, a local APPLCTN macro (no SYSID parameter) for the corresponding program (PSB) must have been included in the system definition. There must be a local as well as a remote PSB of the same name defined during system definition.

The /MSASSIGN TRAN command cannot be used for the CPI Communications driven transaction program.

Usage notes

All changes made by an /MSASSIGN command remain until changed with another /MSASSIGN command or an IMS cold start is performed. After the /MSASSIGN command is used, /MSVERIFY should be used to ensure that the assignment produced a valid configuration.

The /MSASSIGN TRAN tranname TO LOCAL command sets the remote system ID to be the same as the local system ID. It is equivalent to the command UPDATE TRAN NAME(tranname) SET(REMOTE(N),SIDR(localsysid),SIDL(localsysid)).

This command can be issued to an IMSplex by using the Batch SPOC utility.

Equivalent IMS type-2 commands

The following table shows variations of the /MSASSIGN command and the IMS type-2 commands that perform similar functions.

Table 265. Type-2 equivalents for the /MSASSIGN command

Task	/MSASSIGN command	Similar IMS type-2 command
Changes the transaction so that it is local and runs on the local system.	/MSASSIGN TRAN tranname TO LOCAL	UPDATE TRAN NAME(tranname) SET(REMOTE(N))
Changes the transaction so that it is remote, and assign it to a specific logical link path.	/MSASSIGN TRAN tranname TO MSNAME msname	UPDATE TRAN NAME(tranname) SET(MSNAME(name))

Examples

The following are examples of the /MSASSIGN command:

Example 1 for /MSASSIGN command

Entry ET:

/MSASSIGN LINK 2 TO MSPLINK BBB

Response ET:

DFS058I MSASSIGN COMMAND COMPLETED

Explanation: The input system now has a logical connection to physical link BBB for all the SYSIDs assigned to link 2.

Example 2 for /MSASSIGN command

Entry ET:

/MSASSIGN MSNAME BOSTON TO LINK 3

Response ET:

DFS058I MSASSIGN COMMAND COMPLETED

Explanation: The MSNAME BOSTON and its associated SYSID (19) have been reassigned to link 3. Link 3 can be used to associate all its SYSIDs with a main storage-to-main storage connection as opposed to a channel-to-channel or a bisynchronous connection.

Example 3 for /MSASSIGN command

Entry ET:

/MSASSIGN SYSID 19 TO LINK 2

Response ET:

DFS058I MSASSIGN COMMAND COMPLETED

Explanation: SYSID 19 might have been originally assigned to link 1 in the remote system and known by the MSNAME of CHICAGO. In this example, SYSID 19 (CHICAGO) is reassigned to link 2. This assignment can be made when both link 1 and link 2 are connected to the same two IMS systems and link 1 is inoperable.

Example 4 for /MSASSIGN command

Entry ET:

```
/MSASSIGN TRAN XYZ TO MSNAME LNKY
```

Response ET:

```
DFS058I  MSASSIGN COMMAND COMPLETED
```

Explanation: Local and remote SYSIDs of transaction XYZ are assigned to the link associated with MSNAME LNKY.

Related reference:



UPDATE TRAN command (Commands)



UPDATE MSNAME command (Commands)

Chapter 44. /MSVERIFY command

The /MSVERIFY command verifies local transactions and local LTERMs for corresponding remote transactions and remote LTERMs.

The /MSVERIFY command also verifies the consistency of the attributes of corresponding transactions. For instance, Fast Path exclusive transactions cause an error message to be returned because the transactions can only be processed as local transactions. Defined paths that are usable between the two systems can also be verified with this command.

Subsections:

- “Environment”
- “Syntax”
- “Keywords”
- “Usage notes” on page 724
- “Examples” on page 724

Environment

The following table lists the environments (DB/DC, DBCTL, and DCCTL) in which you can use the commands and keywords.

Table 266. Valid environments for the /MSVERIFY command and keywords

Command / Keywords	DB/DC	DBCTL	DCCTL
/MSVERIFY	X		X
MSNAME	X		X
SYSID	X		X

Syntax

►► `/MSVERIFY` `MSNAME—msname` `SYSID—sysid#` ◄◄
 `/MSV` `SYSID—sysid#`

Keywords

The following keywords are valid for the /MSVERIFY command:

MSNAME

Specifies the logical link path in a multiple systems configuration.

SYSID

Specifies the remote system identification of a system in a multiple systems configuration.

Usage notes

The IMS Multiple Systems Verification utility is run offline following system definition. The /MSVERIFY command is used during online execution when verification of two systems is desired, such as after an /MSASSIGN command has been entered.

Restrictions: The /MSVERIFY command has the following restrictions:

- Only one remote system can be specified for each /MSVERIFY command.
- The /MSVERIFY command does not apply to Intersystem Communication (ISC) or directed routing.

Examples

The following are examples of the /MSVERIFY command:

Example 1 for /MSVERIFY command

Entry ET:

```
/MSVERIFY MSNAME ABC
```

Response ET:

```
DFS2234I MSVERIFY COMMAND IN PROGRESS FOR LOCAL  
SYSIDS 001,002,003,004 dddddd
```

Explanation: Assume SYSID numbers 001 through 004 are defined as local in the input system. dddddd is the time stamp.

Response ET:

```
DFS2243 TA11A IS NOT DEFINED AS TRANSACTION  
IN BOTH SYSTEMS.
```

Explanation: TA11A is defined as a remote transaction in one system but is not defined as a transaction in the partner system.

Response ET:

```
DFS2237I MSVERIFY COMPLETED FOR LOCAL SYSID 001  
ddddd
```

Explanation: Verification of local SYSID 001 is completed. The response message is repeated for local SYSIDs 002, 003, and 004 if all verify. dddddd is the time stamp.

Response ET:

```
DFS2235I SYSID 004 IS DEFINED AS LOCAL IN BOTH  
SYSTEMS. dddddd
```

Explanation: SYSID 004 has no corresponding remote SYSID. dddddd is the time stamp.

Remote SYSIDs are processed next.

Response ET:

```
DFS2236I MSVERIFY COMMAND IN PROGRESS FOR REMOTE  
SYSIDS 005,006,007,008 dddddd
```

Response ET:

```
DFS2237I MSVERIFY COMPLETED FOR SYSID 005  
dddddd
```

Explanation: The verification of one remote SYSID is completed. The response is repeated for remote SYSIDs 006, 007, and 008 if all verify. ddddd is the time stamp.

Example 2 for /MSVERIFY command

Entry ET:

```
/MSVERIFY SYSID 8
```

Explanation: The input system sends a list of its local SYSIDs to the remote system and then displays the following message on the input terminal.

Response ET:

```
DFS2234I MSVERIFY COMMAND IN PROGRESS FOR LOCAL SYSIDS  
001, 002, 003, 004 ddddd
```

Explanation: Assume SYSID numbers 001 through 004 are defined as local in the input system.

As the input system completes processing of the information returned for each of the input system's local SYSIDs, the following message is displayed on the input terminal:

Response RT:

```
DFS2237I MSVERIFY COMPLETED FOR SYSID 001  
dddddd
```

Explanation: The verification of local SYSID 001 is completed. The response message is repeated for local SYSIDs 002, 003, 004 if all verify. Verification is complete only if a DFS2237I message is received for every SYSID identified in the DFS2234I message. Definition and assignment errors can cause conditions that prevent these messages from being returned. Stopped or unassigned links can also prevent the return of the message. ddddd is the time stamp.

Remote SYSIDs are processed next. The input system sends all its pertinent information related to the remote system's local SYSIDs and displays the following message:

Response ET:

```
DFS2236I MSVERIFY COMMAND IN PROGRESS FOR REMOTE  
SYSIDS 005, 006, 007, and 008 ddddd
```

As the remote system completes processing of the information it received for each of its local SYSIDs, the following message is displayed on the input terminal. ddddd is the time stamp.

Response ET:

```
DFS2237I MSVERIFY COMPLETED FOR SYSID 005  
dddddd
```

Explanation: The verification of one remote SYSID is complete. The last response message is repeated for remote SYSIDs 006, 007, 008 if all verify. ddddd is the time stamp.

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Bibliography

This bibliography lists all of the publications in the IMS Version 11 library, supplemental publications, publication collections, and accessibility titles cited in the IMS Version 11 library.

IMS Version 11 library

Title	Acronym	Order number
<i>IMS Version 11 Application Programming</i>	APG	SC19-2428
<i>IMS Version 11 Application Programming APIs</i>	APR	SC19-2429
<i>IMS Version 11 Commands, Volume 1: IMS Commands A-M</i>	CR1	SC19-2430
<i>IMS Version 11 Commands, Volume 2: IMS Commands N-V</i>	CR2	SC19-2431
<i>IMS Version 11 Commands, Volume 3: IMS Component and z/OS Commands</i>	CR3	SC19-2432
<i>IMS Version 11 Communications and Connections</i>	CCG	SC19-2433
<i>IMS Version 11 Database Administration</i>	DAG	SC19-2434
<i>IMS Version 11 Database Utilities</i>	DUR	SC19-2435
<i>IMS Version 11 Diagnosis</i>	DGR	GC19-2436
<i>IMS Version 11 Exit Routines</i>	ERR	SC19-2437
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<i>IMS Version 11 Master Index and Glossary</i>	MIG	SC19-2440
<i>IMS Version 11 Messages and Codes, Volume 1: DFS Messages</i>	MC1	GC19-4232
<i>IMS Version 11 Messages and Codes, Volume 2: Non-DFS Messages</i>	MC2	GC19-4233
<i>IMS Version 11 Messages and Codes, Volume 3: IMS Abend Codes</i>	MC3	GC19-4234
<i>IMS Version 11 Messages and Codes, Volume 4: IMS Component Codes</i>	MC4	GC19-4235
<i>IMS Version 11 Operations and Automation</i>	OAG	SC19-2441
<i>IMS Version 11 Release Planning</i>	RPG	GC19-2442
<i>IMS Version 11 System Administration</i>	SAG	SC19-2443
<i>IMS Version 11 System Definition</i>	SDG	GC19-2444
<i>IMS Version 11 System Programming APIs</i>	SPR	SC19-2445
<i>IMS Version 11 System Utilities</i>	SUR	SC19-2446

Supplementary publications

Title	Order number
<i>IMS and SOA Executive Overview</i>	GC19-2516
<i>Program Directory for Information Management System Transaction and Database Servers V11.0</i>	GI10-8788
<i>IMS Version 11 Fact Sheet</i>	GC19-2451
<i>IRLM Messages and Codes</i>	GC19-2666

Publication collections

Title	Format	Order number
IMS Version 11 Product Kit	CD	SK5T-7375

Accessibility titles cited in the IMS Version 11 library

Title	Order number
<i>z/OS TSO/E Primer</i>	SA22-7787
<i>z/OS TSO/E User's Guide</i>	SA22-7794
<i>z/OS ISPF User's Guide Volume 1</i>	SC34-4822

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