MQSeries®

Command Reference

SC33-1369-11

MQSeries®

Command Reference

SC33-1369-11

Note!

Before using this information and the product it supports, be sure to read the general information under "Appendix I. Notices" on page 285.

Twelfth edition (March 2000)

This edition applies to the following products:
- MQSeries for AIX® Version 5.1
- MQSeries for AS/400® Version 5 Release 1
- MQSeries for AT&T GIS UNIX® Version 2 Release 2
- MQSeries for Digital OpenVMS AXP Version 2 Release 2
- MQSeries for Digital OpenVMS VAX Version 2 Release 2
- MQSeries for Digital UNIX (Compaq Tru64 UNIX) Version 2 Release 2.1
- MQSeries for HP-UX Version 5.1
- MQSeries for OS/2® Warp Version 5.1
- MQSeries for OS/390® Version 2 Release 1
- MQSeries for SINIX and DC/OSx Version 2 Release 2
- MQSeries for Sun Solaris Version 5.1
- MQSeries for Tandem NonStop Kernel Version 2 Release 2.0.1
- MQSeries for Windows NT® Version 5.1

and to all subsequent releases and modifications until otherwise indicated in new editions.

Contents

Figures

Tables

About this book

This book describes the MQSeries commands (MQSC), which system operators and administrators can use to manage queue managers on the following MQSeries platforms:

- Digital OpenVMS
- OS/2 Warp
- OS/390
- OS/400
- Tandem NSK
- UNIX operating systems
- Windows NT

The commands are listed in alphabetic order in "Chapter 2. The MQSeries commands" on page 11. A matrix at the start of each command description identifies platforms on which the command is valid. Table 2 on page 11 gives a list of all MQSC commands.

MQSeries for Windows® supports a subset of the MQSC commands. This subset is shown in Table 2 on page 11. For a description of the syntax of each command, see the *MQSeries for Windows Command Reference* (this is an online book shipped with MQSeries for Windows).

For information about building commands on your platform, see the following sections:

- "Appendix B. How to issue MQSC commands on Digital OpenVMS" on page 261
- "Appendix C. How to issue MQSC commands on OS/2 Warp" on page 265
- "Appendix D. How to issue MQSC commands on OS/390" on page 269
- "Appendix E. How to issue MQSC commands on OS/400" on page 271
- "Appendix F. How to issue MQSC commands on Tandem NSK" on page 273
- "Appendix G. How to issue MQSC commands on UNIX systems" on page 277
- "Appendix H. How to issue MQSC commands on Windows NT" on page 281

The term "UNIX systems" is used to denote the following UNIX operating systems:

- AIX
- AT&T GIS UNIX[1]
- HP-UX
- SINIX and DC/OSx
- Sun Solaris
- | Digital UNIX

Who this book is for

This book is intended for system programmers, system administrators, and system operators.

1. This platform has become NCR UNIX SVR4 MP-RAS, R3.0

How to use this book

First read those sections of the MQSeries *Administration Guide*, *System Management Guide*, or *System Administration* book for your platform that relate to the task you want to perform. When you have decided which commands you need to use, check their syntax in this book.

The syntax of the MQSeries commands is represented in *syntax diagrams*. How to read these diagrams is explained in “How to read syntax diagrams” on page 8. The parameters for each command are listed in the following order in the syntax diagrams:
- Parameters that are required are listed first, in alphabetic order.
- Parameters that are optional follow, again in alphabetic order.

There is a glossary and a bibliography at the back of the book.

Summary of changes

This section lists the changes that have been made to this book since previous editions. Changes for this edition are marked with vertical bars in the left-hand margin.

Changes for this edition (SC33-1369-11)

This edition includes the following new product releases:
- MQSeries for AS/400 V5.1
- MQSeries for Tandem NonStop Kernel V2.2.0.1

and the following new product:
- MQSeries for Digital UNIX (Compaq Tru64 UNIX) V2.2.1

Changes for the previous edition (SC33-1369-10)

This edition includes the following additions:
- Queue manager clusters have been added to the following products:
  - MQSeries for AIX V5.1
  - MQSeries for HP-UX V5.1
  - MQSeries for OS/2 Warp V5.1
  - MQSeries for OS/390 V2.1
  - MQSeries for Sun Solaris V5.1
  - MQSeries for Windows NT V5.1
- The following Queue Manager Cluster commands have been added to reflect queue manager cluster processing:
  - DISPLAY CLUSQMGR
  - DISPLAY QCLUSTER
  - REFRESH CLUSTER
  - RESET CLUSTER
- The following Queue Manager commands have been changed to reflect queue manager cluster processing:
  - ALTER QMGR
  - DISPLAY QMGR
  - RESUME QMGR
  - STOP QMGR
  - SUSPEND QMGR
- The following Namelist commands have been changed to reflect queue manager cluster processing:
  - ALTER NAMELIST
  - DEFINE NAMELIST
  - DELETE NAMELIST
  - DISPLAY NAMELIST
- Changes have also been made to the following commands:
  - ALTER CHANNEL
  - ALTER PROCESS
  - ALTER QALIAS
  - ALTER QLOCAL
  - ALTER QMODEL
  - ALTER QREMOTE

- DEFINE CHANNEL
- DEFINE PROCESS
- DEFINE QALIAS
- DEFINE QLOCAL
- DEFINE QMODEL
- DEFINE QREMOTE
- DELETE CHANNEL
- DISPLAY CHANNEL
- DISPLAY CHSTATUS
- DISPLAY QUEUE
- DISPLAY PROCESS
- DISPLAY STGCLASS
- DISPLAY THREAD
- DISPLAY USAGE
- PING CHANNEL
- REFRESH SECURITY
- RESET CHANNEL
- RESOLVE CHANNEL
- RESOLVE INDOUBT
- START CHANNEL
- START CHINIT
- START LISTENER
- STOP CHANNEL
- STOP CHINIT

Changes for the tenth edition (SC33-1369-09)

Changes for the tenth edition include:

- The book has been updated to contain information about the following changes to the MQSeries for AS/400 Version 4.2 product:
  - You can now specify more than one message, send, and receive exit.
  - You can now use distribution lists.
  - You can now request a channel heartbeat.
  - You can now define fast channels for nonpersistent messages.
  - You can now write exit programs to define receiver and client-connection channels automatically.
- The book has been updated to contain information about MQSeries for Tandem NonStop Kernel Version 2.2.0.1
- The rules for reading syntax diagrams have changed. These are described in "How to read syntax diagrams" on page 8.

Chapter 1. Using MQSeries commands

MQSeries commands (MQSC) provide a uniform method of issuing human-readable commands across MQSeries platforms. For information about *programmable command format* (PCF) commands (not available on OS/390) see the *MQSeries Programmable System Management* manual.

This chapter discusses:
- "Rules for using MQSeries commands"
- "Rules for naming MQSeries objects" on page 4
- "How to read syntax diagrams" on page 8

The general format of the commands is shown in "Chapter 2. The MQSeries commands" on page 11.

For information about how to issue the commands on your MQSeries platform, see:
- "Appendix B. How to issue MQSC commands on Digital OpenVMS" on page 261
- "Appendix C. How to issue MQSC commands on OS/2 Warp" on page 265
- "Appendix D. How to issue MQSC commands on OS/390" on page 269
- "Appendix E. How to issue MQSC commands on OS/400" on page 271
- "Appendix F. How to issue MQSC commands on Tandem NSK" on page 273
- "Appendix G. How to issue MQSC commands on UNIX systems" on page 277
- "Appendix H. How to issue MQSC commands on Windows NT" on page 281

For information about using MQSC commands on MQSeries for Windows, see the *MQSeries for Windows V2.1 User's Guide*.

Rules for using MQSeries commands

You should observe the following rules when using MQSeries commands:
- Each command starts with a primary keyword (a verb), and this is followed by a secondary keyword (a noun). This is then followed by the name or generic name of the object (in parentheses) if there is one, which there is on most commands. Following that, keywords can usually occur in any order; if a keyword has a corresponding value, the value must occur directly after the keyword to which it relates.

  Note: On OS/390, the secondary keyword does not have to be second.
- Keywords, parentheses, and values can be separated by any number of blanks and commas. A comma shown in the syntax diagrams can always be replaced by one or more blanks. There must be at least one blank immediately preceding each keyword (after the primary keyword) except on OS/390.
- Any number of blanks can occur at the beginning or end of the command, and between keywords, punctuation, and values. For example, the following command is valid:
  ```
  ALTER QLOCAL  ('Account'  )           TRIGDPTH  (  1)
  ```
  Blanks within a pair of quotation marks are significant.

Rules for using commands

- Additional commas can appear anywhere where blanks are allowed and are treated as if they were blanks (unless, of course, they are inside quoted strings).
- Repeated keywords are not allowed. Repeating a keyword with its 'NO' version, as in REPLACE NOREPLACE, is also not allowed.
- Strings that contain blanks, lowercase characters or special characters other than:
  - Period (.)
  - Forward slash (/)
  - Underscore (_)
  - Percent sign (%)

  must be enclosed in single quotation marks, unless they are:
  - Issued from the MQSeries for OS/390 operations and control panels
  - Generic names ending with an asterisk (on OS/400® these must be enclosed in single quotation marks)
  - A single asterisk (for example, TRACE(*)) (on OS/400 these must be enclosed in single quotation marks)
  - A range specification containing a colon (for example, CLASS(01:03))

  If the string itself contains a quotation mark, the quotation mark is represented by two single quotation marks. Lowercase characters not contained within quotation marks are folded to uppercase.
- A string containing no characters (that is, two single quotation marks with no space in between) is not valid.
- A left parenthesis followed by a right parenthesis, with no significant information in between, for example

  ```
  NAME ( )
  ```

  is not valid except where specifically noted.
- Keywords are not case sensitive – AltER, alter, and ALTER are all acceptable. Names that are not contained within quotation marks are converted to uppercase.
- Synonyms are defined for some keywords. For example, DEF is always a synonym for DEFINE, so DEF QLOCAL is valid. Synonyms are not, however, just minimum strings; DEFI is not a valid synonym for DEFINE.

  Note: There is no synonym for the DELETE keyword. This is to avoid accidental deletion of objects when using DEF, the synonym for DEFINE.

Characters with special meanings

The following characters have special meaning when you build MQSC commands:

	Blanks are used as separators. Multiple blanks are equivalent to a single blank, except in strings that have quotation marks (') round them.
,	Commas are used as separators. Multiple commas are equivalent to a single comma, except in strings that have quotation marks (') round them.
'	A single quotation mark indicates the beginning or end of a string. MQSeries leaves all characters that have quotation marks round them exactly as they are entered. The containing quotation marks are not included when calculating the length of the string.
''	Two quotation marks together inside a string are treated by MQSeries as one quotation mark, and the string is not terminated. The double quotation marks are treated as one character when calculating the length of the string.
(	An open parenthesis indicates the beginning of a parameter list.

)	A close parenthesis indicates the end of a parameter list.
:	A colon indicates an inclusive range. For example (1:5) means (1,2,3,4,5). This notation can be used only in TRACE commands.
*	An asterisk means "all". For example, DISPLAY TRACE (*) means display all traces, and DISPLAY QUEUE (PAY*) means display all queues whose names begin with PAY.

When you need to use any of these special characters in a field (for example as part of a description), you must enclose the whole string in single quotation marks.

Building command scripts

If you build the commands into a script, as when using:

- The CSQINP1, CSQINP2, and CSQINPX initialization data sets or the CSQUTIL batch utility on OS/390
- The STRMQMMQSC command on OS/400
- The runmqsc command on Digital OpenVMS, OS/2 Warp, Tandem NSK, UNIX systems, and Windows NT

follow these rules:

- Each command must start on a new line.
- On each platform, there might be platform-specific rules about the line length and record format. If scripts are to be readily portable to different platforms, the significant length of each line should be restricted to 72 characters.
  - On OS/390, scripts are held in a fixed-format data set, with a record length of 80. Only columns 1 through 72 can contain meaningful information; columns 73 through 80 are ignored.
  - On AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT, each line can be of any length up to the maximum allowed for your platform.
  - On other UNIX systems, and Digital OpenVMS, each line can be of any length up to and including 80 characters.
  - On Tandem NSK each line can be of any length up to and including 72 characters.
- A line must not end in a keyboard control character (for example, a tab).
- If the last nonblank character on a line is:
  - A minus sign (−), this indicates that the command is to be continued from the start of the next line.
  - A plus sign (+), this indicates that the command is to be continued from the first nonblank character in the next line. If you use + to continue a command remember to leave at least one blank before the next keyword (except on OS/390 where this is not necessary).

Either of these can occur within a keyword, data value, or quoted string. For example,

```
'Fr+
 ed'
```

and

```
'Fr-
ed'
```

(where the ‘e’ of the second line of the second example is in the first position of the line) are both equivalent to

```
'Fred'
```

MQSC commands that are contained within an Escape PCF (Programmable Command Format) command cannot be continued in this way. The entire command must be contained within a single Escape command. (For information about the PCF commands, see the *MQSeries Programmable System Management* manual.)

- + and − values used at the ends of lines are discarded when the command is reassembled into a single string.
- On AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT you can use a semicolon character (;) to terminate a command, even if you have entered a + character at the end of the previous line. You can also use the semicolon in the same way on OS/390 for commands issued from the CSQUTIL batch utility program.
- A line starting with an asterisk (*) in the first position is ignored. This can be used to insert comments into the file.

  A blank line is also ignored.

  If a line ends with a continuation character (− or +), the command continues with the next line that is not a comment line or a blank line.

Rules for naming MQSeries objects

MQSeries queue, process, namelist, channel, and storage class objects exist in separate object *name spaces*, and so objects from each type can all have the same name. However, an object cannot have the same name as any other object in the same name space. (For example, a local queue cannot have the same name as a model queue.) Names in MQSeries are case sensitive; however, you should remember that lowercase characters that are not contained within quotation marks are folded to uppercase.

The character set that can be used for naming all MQSeries objects is as follows:

- Uppercase A–Z
- Lowercase a–z (however, on systems using EBCDIC Katakana you cannot use lowercase characters, and there are also restrictions on the use of lowercase letters for OS/390 console support)
- Numerics 0–9
- Period (.)
- Forward slash (/)
- Underscore (_)
- Percent sign (%). The percent sign (%) is a special character to RACF®. If you are using RACF as the external security manager for MQSeries for OS/390, you

should not use % in object names. If you do, these names are not included in any security checks when RACF generic profiles are used.

Notes:

1. Leading or embedded blanks are not allowed.
2. You should avoid using names with leading or trailing underscores, because they cannot be handled by the MQSeries for OS/390 operations and control panels.
3. Any name that is less than the full field length can be padded to the right with blanks. All short names that are returned by the queue manager are always padded to the right with blanks.
4. Any structure to the names (for example, the use of the period or underscore) is not significant to the queue manager.
5. When using CL commands or menus on AS/400 systems, lowercase a-z, forward slash (/), and percent (%) are special characters. If you use any of these characters in a name, the name must be enclosed in quotation marks. Lowercase a-z characters are changed to uppercase if the name is not enclosed in quotation marks.

Queue names

Queues can have names up to 48 characters long.

Reserved queue names

Names that start with "SYSTEM." are reserved for queues defined by the queue manager. You can use the ALTER or DEFINE REPLACE commands to change these queue definitions to suit your installation. The following names are defined for MQSeries:

SYSTEM.ADMIN.CHANNEL.EVENT	Queue for channel events
SYSTEM.ADMIN.COMMAND.QUEUE	Queue to which PCF command messages are sent (**not** for OS/390)
SYSTEM.ADMIN.PERFM.EVENT	Queue for performance events
SYSTEM.ADMIN.QMGR.EVENT	Queue for queue-manager events
SYSTEM.CHANNEL.COMMAND	Queue used for distributed queuing on OS/390 using CICS
SYSTEM.CHANNEL.INITQ	Queue used for distributed queuing (without CICS on OS/390)
SYSTEM.CHANNEL.REPLY.INFO	Queue used for distributed queuing on OS/390 without CICS
SYSTEM.CHANNEL.SEQNO	Queue used for distributed queuing on OS/390 using CICS
SYSTEM.CHANNEL.SYNCQ	Queue used for distributed queuing (without CICS on OS/390)
SYSTEM.CICS.INITIATION.QUEUE	Queue used for triggering (**not** for OS/390)
SYSTEM.CLUSTER.COMMAND.QUEUE	Queue used to communicate repository changes between queue managers (AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT only)
SYSTEM.CLUSTER.REPOSITORY.QUEUE	Queue used to hold information about the repository (AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT only)

SYSTEM.CLUSTER.TRANSMIT.QUEUE	Transmission queue for all destinations managed by cluster support (AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT only)
SYSTEM.COMMAND.INPUT	Queue to which command messages are sent on OS/390
SYSTEM.COMMAND.REPLY.MODEL	Model queue definition for command replies (for OS/390)
SYSTEM.DEAD.LETTER.QUEUE	Dead-letter queue (**not** for OS/390)
SYSTEM.DEFAULT.ALIAS.QUEUE	Default alias queue definition
SYSTEM.DEFAULT.INITIATION.QUEUE	Queue used to trigger a specified process (**not** for OS/390)
SYSTEM.DEFAULT.LOCAL.QUEUE	Default local queue definition
SYSTEM.DEFAULT.MODEL.QUEUE	Default model queue definition
SYSTEM.DEFAULT.REMOTE.QUEUE	Default remote queue definition
SYSTEM.MQSC.REPLY.QUEUE	Model queue definition for MQSC command replies (**not** for OS/390)

Other object names

Processes, namelists, and clusters can have names up to 48 bytes long. Channels can have names up to 20 bytes long. Storage classes can have names up to 8 bytes long.

Reserved object names

Names that start with “SYSTEM.” are reserved for objects defined by the queue manager. You can use the ALTER or DEFINE REPLACE commands to change these object definitions to suit your installation. The following names are defined for MQSeries:

SYSTEM.ADMIN.SVRCONN	Server-connection channel used for remote administration of a queue manager by the MQSeries Explorer (remote administration is not available on OS/390)
SYSTEM.AUTO.RECEIVER	Default receiver channel for auto definition (**not** for AT&T GIS UNIX, Digital OpenVMS, Digital UNIX, OS/390, SINIX and DC/OSx, or Tandem NSK)
SYSTEM.AUTO.SVRCONN	Default server-connection channel for auto definition (**not** for AT&T GIS UNIX, Digital OpenVMS, Digital UNIX, OS/390, SINIX and DC/OSx, or Tandem NSK)
SYSTEM.DEF.CLNTCONN	Default client-connection channel definition
SYSTEM.DEF.CLUSRCVR	Default cluster-receiver channel definition (AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT only)
SYSTEM.DEF.CLUSSDR	Default cluster-sender channel definition (AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT only)
SYSTEM.DEF.RECEIVER	Default receiver channel definition
SYSTEM.DEF.REQUESTER	Default requester channel definition

SYSTEM.DEF.SENDER	Default sender channel definition
SYSTEM.DEF.SERVER	Default server channel definition
SYSTEM.DEF.SVRCONN	Default server-connection channel definition
SYSTEM.DEFAULT.NAMELIST	Default namelist definition (AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT only)
SYSTEM.DEFAULT.PROCESS	Default process definition
SYSTEMST	Default storage class definition (OS/390 only)

How to read syntax diagrams

This book contains syntax diagrams (sometimes referred to as "railroad" diagrams).

Each syntax diagram begins with a double right arrow and ends with a right and left arrow pair. Lines beginning with a single right arrow are continuation lines. You read a syntax diagram from left to right and from top to bottom, following the direction of the arrows.

Other conventions used in syntax diagrams are:

Table 1. How to read syntax diagrams

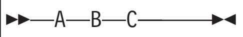
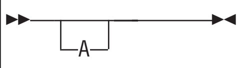
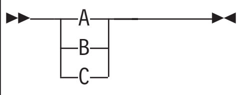
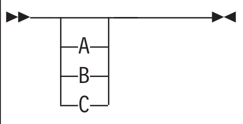
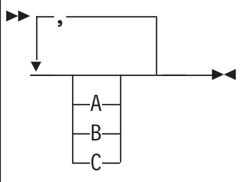
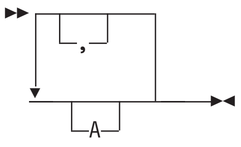
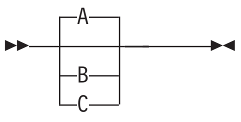
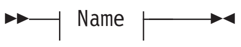
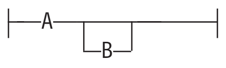
Convention	**Meaning**
	You must specify values A, B, and C. Required values are shown on the main line of a syntax diagram.
	You may specify value A. Optional values are shown below the main line of a syntax diagram.
	Values A, B, and C are alternatives, one of which you must specify.
	Values A, B, and C are alternatives, one of which you may specify.
	You may specify one or more of the values A, B, and C. Any required separator for multiple or repeated values (in this example, the comma (,)) is shown on the arrow.

Table 1. How to read syntax diagrams (continued)

Convention	Meaning
	You may specify value A multiple times. The separator in this example is optional.
	Values A, B, and C are alternatives, one of which you may specify. If you specify none of the values shown, the default A (the value shown above the main line) is used.
 **Name:** 	The syntax fragment Name is shown separately from the main syntax diagram.
Punctuation and uppercase values	Specify exactly as shown.
Lowercase values (for example, *name*)	Supply your own text in place of the *name* variable.

Chapter 2. The MQSeries commands

This chapter describes all the MQSeries commands (MQSC) that can be issued by operators and administrators. Table 2 shows which commands can be issued on each MQSeries platform:

Table 2. MQSeries operator and administrator commands

Command	**Digital Open VMS**	**OS/2 Warp**	**OS/390**	**OS/400**	**Tandem NSK**	**UNIX systems**	**Win-dows NT**	**Win-dows[1]**
ALTER CHANNEL	✓	✓	✓[2]	✓	✓	✓	✓	✓
ALTER NAMELIST		✓	✓	✓		✓[3]	✓	
ALTER PROCESS	✓	✓	✓	✓	✓	✓	✓	
ALTER QALIAS	✓	✓	✓	✓	✓	✓	✓	✓
ALTER QLOCAL	✓	✓	✓	✓	✓	✓	✓	✓
ALTER QMGR	✓	✓	✓	✓	✓	✓	✓	✓
ALTER QMODEL	✓	✓	✓	✓	✓	✓	✓	✓
ALTER QREMOTE	✓	✓	✓	✓	✓	✓	✓	✓
ALTER SECURITY			✓					
ALTER STGCLASS			✓					
ALTER TRACE			✓					
ARCHIVE LOG			✓					
CLEAR QLOCAL	✓	✓		✓	✓	✓	✓	✓
DEFINE BUFFPOOL			✓					
DEFINE CHANNEL	✓	✓	✓[2]	✓	✓	✓	✓	✓
DEFINE MAXSMSGS	✓[4]	✓[4]	✓	✓[4]	✓[4]	✓[4]	✓[4]	
DEFINE NAMELIST		✓	✓	✓		✓[3]	✓	
DEFINE PROCESS	✓	✓	✓	✓	✓	✓	✓	
DEFINE PSID			✓					
DEFINE QALIAS	✓	✓	✓	✓	✓	✓	✓	✓
DEFINE QLOCAL	✓	✓	✓	✓	✓	✓	✓	✓
DEFINE QMODEL	✓	✓	✓	✓	✓	✓	✓	✓
DEFINE QREMOTE	✓	✓	✓	✓	✓	✓	✓	✓
DEFINE STGCLASS			✓					
DELETE CHANNEL	✓	✓	✓[2]	✓	✓	✓	✓	✓
DELETE NAMELIST		✓	✓	✓		✓[3]	✓	
DELETE PROCESS	✓	✓	✓	✓	✓	✓	✓	
DELETE QALIAS	✓	✓	✓	✓	✓	✓	✓	✓
DELETE QLOCAL	✓	✓	✓	✓	✓	✓	✓	✓
DELETE QMODEL	✓	✓	✓	✓	✓	✓	✓	✓
DELETE QREMOTE	✓	✓	✓	✓	✓	✓	✓	✓
DELETE STGCLASS			✓					
DISPLAY CHANNEL	✓	✓	✓[2]	✓	✓	✓	✓	✓[5]
DISPLAY CHSTATUS	✓	✓	✓[2]	✓	✓	✓	✓	
DISPLAY CLUSQMGR		✓	✓	✓		✓[3]	✓	
DISPLAY CMDSERV			✓					

Table 2. MQSeries operator and administrator commands (continued)

Command	Digital Open VMS	OS/2 Warp	OS/390	OS/400	Tandem NSK	UNIX systems	Win-dows NT	Win-dows[1]
DISPLAY DQM			✓[2]					
DISPLAY MAXSMSGS	✓[4]	✓[4]	✓	✓[4]	✓[4]	✓[4]	✓[4]	
DISPLAY NAMELIST		✓	✓	✓		✓[3]	✓	
DISPLAY PROCESS	✓	✓	✓	✓	✓	✓	✓	
DISPLAY QALIAS[6]		✓	✓	✓		✓[3]	✓	
DISPLAY QCLUSTER[6]		✓	✓	✓		✓[3]	✓	
DISPLAY QLOCAL[6]		✓	✓	✓		✓[3]	✓	
DISPLAY QMGR	✓	✓	✓	✓	✓	✓	✓	✓[5]
DISPLAY QMODEL[6]		✓	✓	✓		✓[3]	✓	
DISPLAY QREMOTE[6]		✓	✓	✓		✓[3]	✓	
DISPLAY QUEUE	✓	✓	✓	✓	✓	✓	✓	✓[5]
DISPLAY SECURITY			✓					
DISPLAY STGCLASS			✓					
DISPLAY THREAD			✓					
DISPLAY TRACE			✓					
DISPLAY USAGE			✓					
PING CHANNEL	✓	✓	✓[2]	✓	✓	✓	✓	
PING QMGR	✓	✓		✓	✓	✓	✓	
RECOVER BSDS			✓					
REFRESH CLUSTER		✓	✓	✓		✓[3]	✓	
REFRESH SECURITY			✓					
RESET CHANNEL	✓	✓	✓[2]	✓	✓	✓	✓	✓
RESET CLUSTER		✓	✓	✓		✓[3]	✓	
RESET TPIPE			✓					
RESOLVE CHANNEL	✓	✓	✓[2]	✓	✓	✓	✓	✓
RESOLVE INDOUBT			✓					
RESUME QMGR		✓	✓	✓		✓[3]	✓	
RVERIFY SECURITY			✓					
START CHANNEL	✓	✓	✓[2]	✓	✓	✓	✓	✓
START CHINIT	✓	✓	✓[2]	✓		✓	✓	
START CMDSERV			✓					
START LISTENER		✓	✓[2]	✓			✓	
START QMGR			✓					
START TRACE			✓					
STOP CHANNEL	✓	✓	✓[2]	✓	✓	✓	✓	✓
STOP CHINIT			✓[2]					
STOP CMDSERV			✓					
STOP LISTENER			✓[2]					
STOP QMGR			✓					
STOP TRACE			✓					
SUSPEND QMGR		✓	✓	✓		✓[3]	✓	

Table 2. MQSeries operator and administrator commands (continued)

Command	Digital Open VMS	OS/2 Warp	OS/390	OS/400	Tandem NSK	UNIX systems	Win-dows NT	Win-dows[1]

Notes:

1. For a description of the syntax for commands on this platform, see the online *MQSeries for Windows Command Reference*.
2. On OS/390, this is valid only for channels used for distributed queuing without CICS. If you are using CICS for distributed queuing, the equivalent function is available using the CKMC transaction. See the *MQSeries Intercommunication* manual for information about this.
3. AIX, HP-UX, and Sun Solaris only.
4. This command is valid only on OS/390. For other platforms, use the MAXUMSGS keyword of the ALTER QMGR command instead.
5. MQSeries for Windows Version 2.1 only.
6. See "DISPLAY QUEUE" on page 197.

ALTER CHANNEL

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

Use ALTER CHANNEL to alter the attributes of a channel.

Notes:

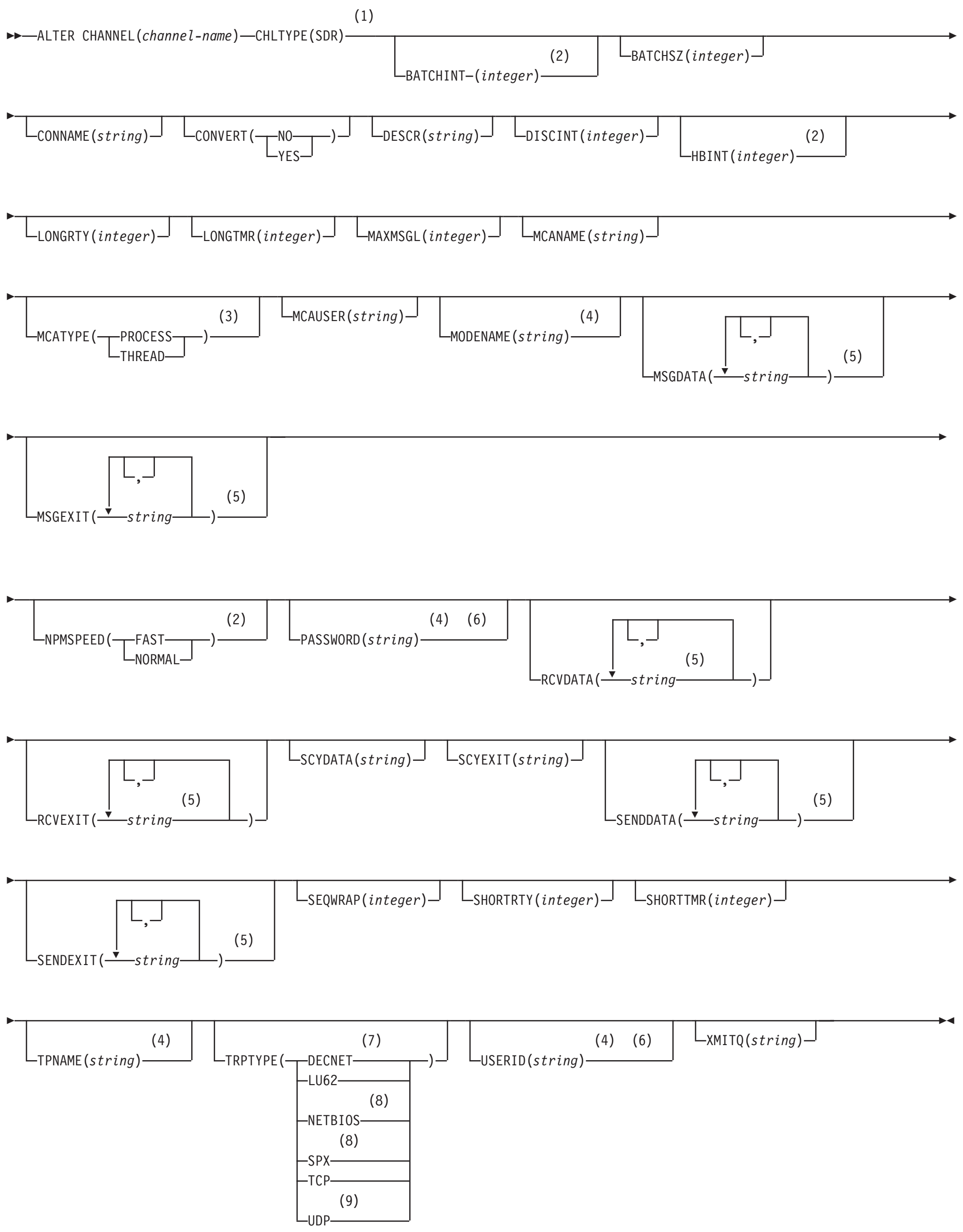
1. On OS/390, this is valid only for channels used for distributed queuing without CICS. If you are using CICS for distributed queuing, see Note 2 on page 13.
2. For cluster-sender channels, you can only alter channels that have been created manually.

Synonym: ALT CHL

There is a separate syntax diagram for each type of channel:
- "Sender channel" on page 15
- "Server channel" on page 17
- "Receiver channel" on page 19
- "Requester channel" on page 21
- "Client-connection channel" on page 23
- "Server-connection channel" on page 24
- "Cluster-sender channel" on page 25
- "Cluster-receiver channel" on page 27

Sender channel

ALTER CHANNEL



Notes:

1 This parameter must follow immediately after the channel name except on OS/390.

2 Valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

3 Valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

4 Valid only if TRPTYPE is LU62.

5 You can specify more than one value on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT only.

6 Not valid on OS/390.

7 Valid only on Digital OpenVMS.

8 Valid only on OS/2 Warp and Windows NT.

9 Valid only on AIX.

Server channel

ALTER CHANNEL

```
                                           (1)
►►──ALTER CHANNEL(channel-name)──CHLTYPE(SVR)──┬──────────────────────────────┬─┬───────────────────────┬──────►
                                               │                     (2)      │ │                   (3) │
                                               └─AUTOSTART(─┬─DISABLED─┬─)────┘ └─BATCHINT(integer)─────┘
                                                            └─ENABLED──┘

►─┬───────────────────┬─┬─────────────────┬─┬───────────────────┬─┬──────────────┬─┬───────────────────┬──────►
  └─BATCHSZ(integer)──┘ └─CONNAME(string)─┘ └─CONVERT(─┬─NO──┬─)─┘ └─DESCR(string)─┘ └─DISCINT(integer)──┘
                                                       └─YES─┘

►─┬─────────────────┬─┬──────────────────┬─┬──────────────────┬─┬──────────────────┬─┬─────────────────┬──────►
  │             (3) │ └─LONGRTY(integer)─┘ └─LONGTMR(integer)─┘ └─MAXMSGL(integer)─┘ └─MCANAME(string)─┘
  └─HBINT(integer)──┘

►─┬────────────────────────────┬─┬─────────────────┬─┬──────────────────┬─┬─────────────────────────┬─────►
  │                        (4) │ └─MCAUSER(string)─┘ │              (5) │ │       ┌─,──┐            │
  └─MCATYPE(─┬─PROCESS─┬─)─────┘                     └─MODENAME(string)─┘ │       │      (6)        │
             └─THREAD──┘                                                  │       ▼                 │
                                                                          └─MSGDATA(──┴─string─────┴─)─┘

►─┬──────────────────────────┬─┬─────────────────────────────┬─┬──────────────────────────┬──────────────────►
  │       ┌─,──┐             │ │                         (3) │ │                 (5)  (7) │
  │       │      (6)         │ └─NPMSPEED(─┬─FAST───┬─)──────┘ └─PASSWORD(string)─────────┘
  │       ▼                  │             └─NORMAL─┘
  └─MSGEXIT(──┴─string────┴─)─┘

►─┬──────────────────────────┬─┬──────────────────────────┬─┬──────────────────┬─┬─────────────────┬────────►
  │       ┌─,──┐             │ │       ┌─,──┐             │ └─SCYDATA(string)──┘ └─SCYEXIT(string)─┘
  │       │      (6)         │ │       │      (6)         │
  │       ▼                  │ │       ▼                  │
  └─RCVDATA(──┴─string────┴─)─┘ └─RCVEXIT(──┴─string────┴─)─┘

►─┬───────────────────────────┬─┬───────────────────────────┬─┬──────────────────┬─┬───────────────────┬────►
  │        ┌─,──┐             │ │        ┌─,──┐             │ └─SEQWRAP(integer)─┘ └─SHORTRTY(integer)─┘
  │        │      (6)         │ │        │      (6)         │
  │        ▼                  │ │        ▼                  │
  └─SENDDATA(──┴─string────┴─)─┘ └─SENDEXIT(──┴─string────┴─)─┘

►─┬───────────────────┬─┬────────────────┬─┬─────────────────────────────┬─┬─────────────────────┬──────────►
  └─SHORTTMR(integer)─┘ │            (5) │ │                 (8)         │ │           (5)  (7)  │
                        └─TPNAME(string)─┘ └─TRPTYPE(─┬─DECNET────────┬─)─┘ └─USERID(string)──────┘
                                                      ├─LU62──────────┤
                                                      │           (9) │
                                                      ├─NETBIOS───────┤
                                                      │    (9)        │
                                                      ├─SPX───────────┤
                                                      ├─TCP───────────┤
                                                      │    (10)       │
                                                      └─UDP───────────┘

►─┬───────────────┬──────────────────────────────────────────────────────────────────────────────────────►◄
  └─XMITQ(string)─┘
```

Notes:

1 This parameter must follow immediately after the channel name except on OS/390.

2 Valid only on Tandem NSK when TRPTYPE is LU62.

3 Valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

4 Valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

5 Valid only if TRPTYPE is LU62.

6 You can specify more than one value on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT only.

7 Not valid on OS/390.

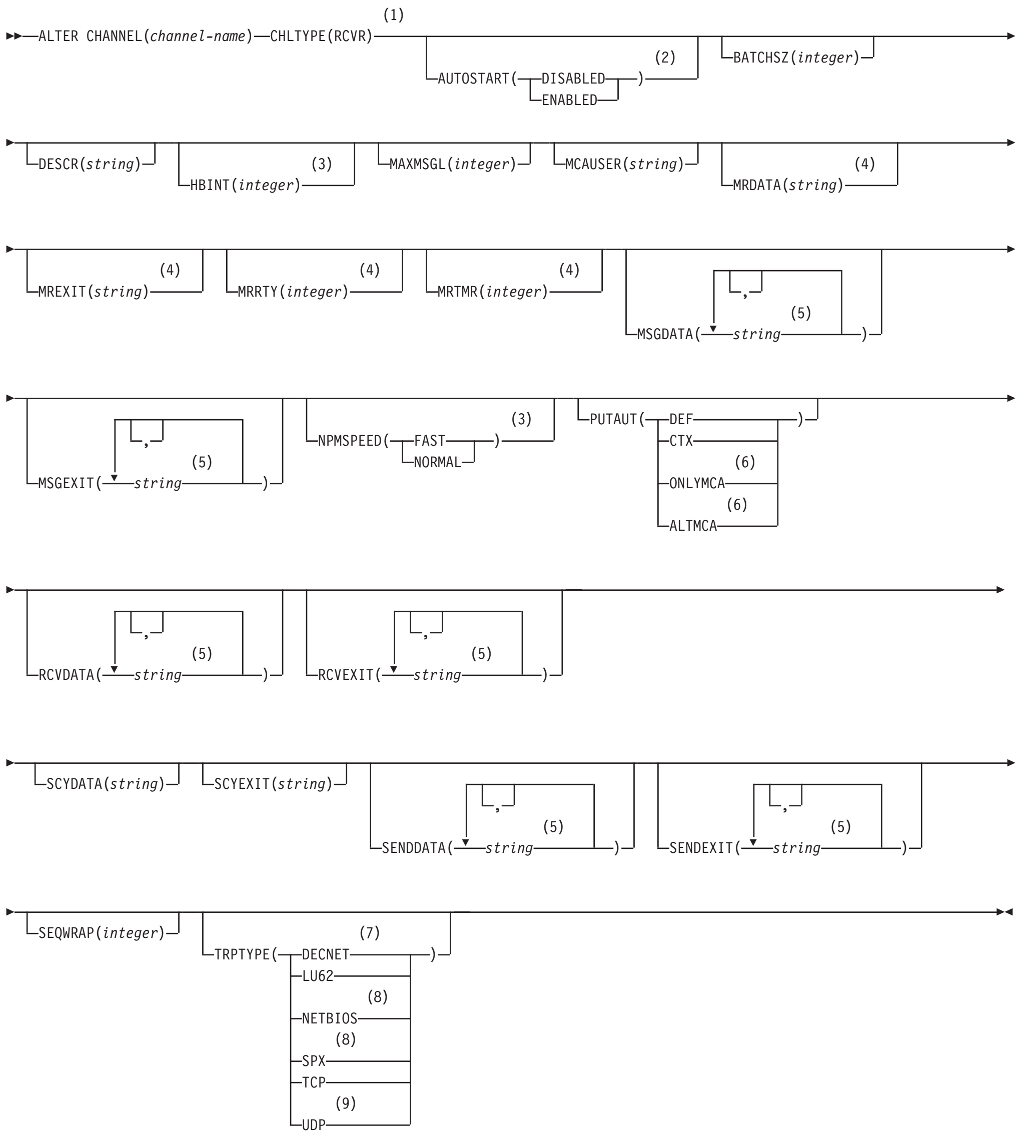
8 Valid only on Digital OpenVMS.

9 Valid only on OS/2 Warp and Windows NT.

10 Valid only on AIX.

Receiver channel

ALTER CHANNEL


ALTER CHANNEL(*channel-name*)
CHLTYPE(RCVR) (1)
AUTOSTART(DISABLED ENABLED) (2)
BATCHSZ(*integer*)
DESCR(*string*)
HBINT(*integer*) (3)
MAXMSGL(*integer*)
MCAUSER(*string*)
MRDATA(*string*) (4)
MREXIT(*string*) (4)
MRRTY(*integer*) (4)
MRTMR(*integer*) (4)
MSGDATA(*string*) , (5)
MSGEXIT(*string*) , (5)
NPMSPEED(FAST NORMAL) (3)
PUTAUT(DEF CTX ONLYMCA (6) ALTMCA (6))
RCVDATA(*string*) , (5)
RCVEXIT(*string*) , (5)
SCYDATA(*string*)
SCYEXIT(*string*)
SENDDATA(*string*) , (5)
SENDEXIT(*string*) , (5)
SEQWRAP(*integer*)
TRPTYPE(DECNET (7) LU62 NETBIOS (8) SPX (8) TCP UDP (9))

Notes:

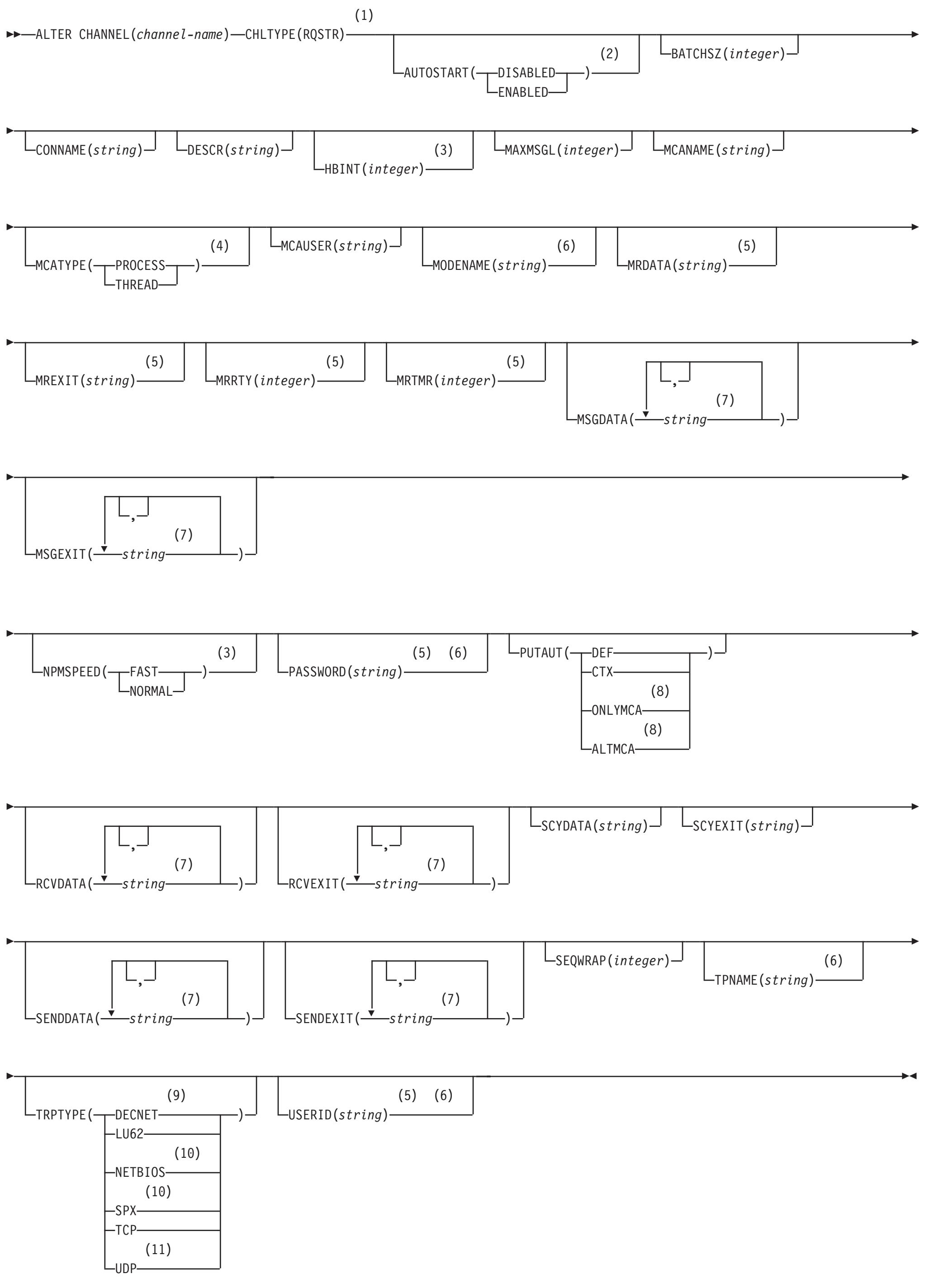
1. This parameter must follow immediately after the channel name except on OS/390.
2. Valid only on Tandem NSK when TRPTYPE is LU62.
3. Valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.
4. Not valid on OS/390.
5. You can specify more than one value on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT only.
6. Valid only on OS/390.
7. Valid only on Digital OpenVMS.

8 Valid only on OS/2 Warp and Windows NT.

9 Valid only on AIX.

Requester channel

ALTER CHANNEL



Notes:

1 This parameter must follow immediately after the channel name except on OS/390.

2 Valid only on Tandem NSK when TRPTYPE is LU62.

3 Valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

4 Valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

5 Not valid on OS/390.

6 Valid only if TRPTYPE is LU62.

7 You can specify more than one value on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT only.

8 Valid only on OS/390.

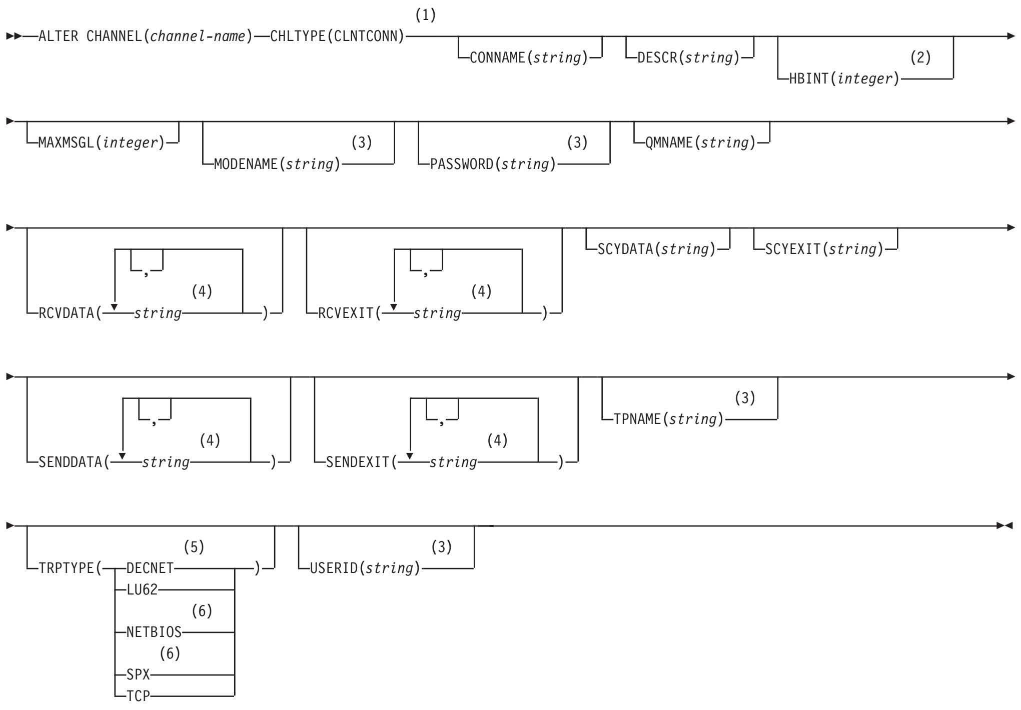
9 Valid only on Digital OpenVMS.

10 Valid only on OS/2 Warp and Windows NT.

11 Valid only on AIX.

Client-connection channel

ALTER CHANNEL



Notes:

1. This parameter must follow immediately after the channel name except on OS/390.
2. Valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.
3. Valid only if TRPTYPE is LU62.
4. You can specify more than one value on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT only.
5. Valid only on Digital OpenVMS.
6. Valid only for clients to be run on DOS, OS/2 Warp, Windows, and Windows NT.

Server-connection channel

ALTER CHANNEL

```
                                                  (1)
►►──ALTER CHANNEL(channel-name)──CHLTYPE(SVRCONN)────┬──────────────────────────────────┬─┬───────────────┬──────────►
                                                     │                           (2)    │ └─DESCR(string)─┘
                                                     └─AUTOSTART(──┬─DISABLED─┬──)──────┘
                                                                   └─ENABLED──┘

►─┬──────────────────────┬─┬──────────────────┬─┬─────────────────┬─┬──────────────────────────────────┬────────────────►
  │                (3)   │ └─MAXMSGL(integer)─┘ └─MCAUSER(string)─┘ │           (4)                    │
  └─HBINT(integer)───────┘                                          └─PUTAUT─────(──┬─DEF─────┬──)───┘
                                                                                    └─ONLYMCA─┘

►─┬─────────────────┬─┬─────────────────┬─┬───────────────────────────────┬─┬───────────────────────────────┬──────────►
  └─SCYDATA(string)─┘ └─SCYEXIT(string)─┘ │            ┌─,─┐              │ │            ┌─,─┐              │
                                          │            ▼        (5)       │ │            ▼        (5)       │
                                          └─SENDDATA(──────string─────)───┘ └─SENDEXIT(──────string─────)───┘

►─┬───────────────────────────────┬─┬───────────────────────────────┬─┬─────────────────────────────┬──────────────►◄
  │            ┌─,─┐              │ │            ┌─,─┐              │ │                (6)          │
  │            ▼        (5)       │ │            ▼        (5)       │ └─TRPTYPE(──┬─DECNET──────┬──)─┘
  └─RCVDATA(──────string─────)────┘ └─RCVEXIT(──────string─────)────┘             ├─LU62────────┤
                                                                                  │        (7)  │
                                                                                  ├─NETBIOS─────┤
                                                                                  │   (7)       │
                                                                                  ├─SPX─────────┤
                                                                                  └─TCP─────────┘
```

Notes:

1 This parameter must follow immediately after the channel name except on OS/390.

2 Valid only on Tandem NSK when TRPTYPE is LU62.

3 Valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

4 Valid only on OS/390.

5 You can specify more than one value on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT only.

6 Valid only on Digital OpenVMS.

7 Valid only for clients to be run on DOS, OS/2 Warp, Windows, and Windows NT.

Cluster-sender channel

ALTER CHANNEL

```
                                                (1)  (2)
>>──ALTER CHANNEL(channel-name)──CHLTYPE(CLUSSDR)──────┬──────────────────┬─┬─────────────────┬──────────────>
                                                       └─BATCHINT(integer)─┘ └─BATCHSZ(integer)─┘

>─┬──────────────────────┬─┬────────────────┬─┬─────────────────┬─┬──────────────────┬─┬───────────────┬──────>
  └─CLUSTER(clustername)─┘ └─CLUSNL(nlname)─┘ └─CONNAME(string)─┘ └─CONVERT(─┬─NO──┬─)─┘ └─DESCR(string)─┘
                                                                             └─YES─┘

>─┬──────────────────┬─┬────────────────┬─┬──────────────────┬─┬──────────────────┬─┬──────────────────┬──────>
  └─DISCINT(integer)─┘ └─HBINT(integer)─┘ └─LONGRTY(integer)─┘ └─LONGTMR(integer)─┘ └─MAXMSGL(integer)─┘

>─┬─────────────────┬─┬─────────────────────────────┬─┬─────────────────┬─┬─────────────────────┬─────────────>
  └─MCANAME(string)─┘ │                        (3)  │ └─MCAUSER(string)─┘ │                (4)  │
                      └─MCATYPE(─┬─PROCESS─┬─)──────┘                     └─MODENAME(string)────┘
                                 └─THREAD──┘

>─┬──────────────────────────────┬─┬─────────────────────────────┬─┬─────────────────────────────┬────────────>
  │          ┌─,──────┐          │ │          ┌─,──────┐         │ └─NPMSPEED(─┬─FAST───┬─)───────┘
  │          V        │    (5)   │ │          V        │   (5)   │             └─NORMAL─┘
  └─MSGDATA(───string─┴──)───────┘ └─MSGEXIT(───string─┴──)──────┘

>─┬─────────────────────────────┬─┬─────────────────────────────┬─┬─────────────────────────────┬─────────────>
  │                  (4)  (6)   │ │          ┌─,──────┐         │ │          ┌─,──────┐         │
  └─PASSWORD(string)────────────┘ │          V        │   (5)   │ │          V        │   (5)   │
                                  └─RCVDATA(───string─┴──)──────┘ └─RCVEXIT(───string─┴──)──────┘

>─┬─────────────────┬─┬─────────────────┬─┬──────────────────────────────┬─┬──────────────────────────────┬────>
  └─SCYDATA(string)─┘ └─SCYEXIT(string)─┘ │           ┌─,──────┐         │ │           ┌─,──────┐         │
                                          │           V        │   (5)   │ │           V        │   (5)   │
                                          └─SENDDATA(───string─┴──)──────┘ └─SENDEXIT(───string─┴──)──────┘

>─┬──────────────────┬─┬───────────────────┬─┬───────────────────┬─┬───────────────────┬─────────────────────>
  └─SEQWRAP(integer)─┘ └─SHORTRTY(integer)─┘ └─SHORTTMR(integer)─┘ │              (4)  │
                                                                   └─TPNAME(string)────┘

>─┬─────────────────────────┬─┬─────────────────────────┬────────────────────────────────────────────────────><
  └─TRPTYPE(─┬─LU62───────┬─)─┘ │            (4)  (6)   │
             │        (7) │     └─USERID(string)────────┘
             ├─NETBIOS────┤
             │    (7)     │
             ├─SPX────────┤
             ├─TCP────────┤
             │    (8)     │
             └─UDP────────┘
```

Notes:

1 This parameter must follow immediately after the channel name except on OS/390.

2 Valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

3 Valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

4 Valid only if TRPTYPE is LU62.

5 You can specify only one value on OS/390.

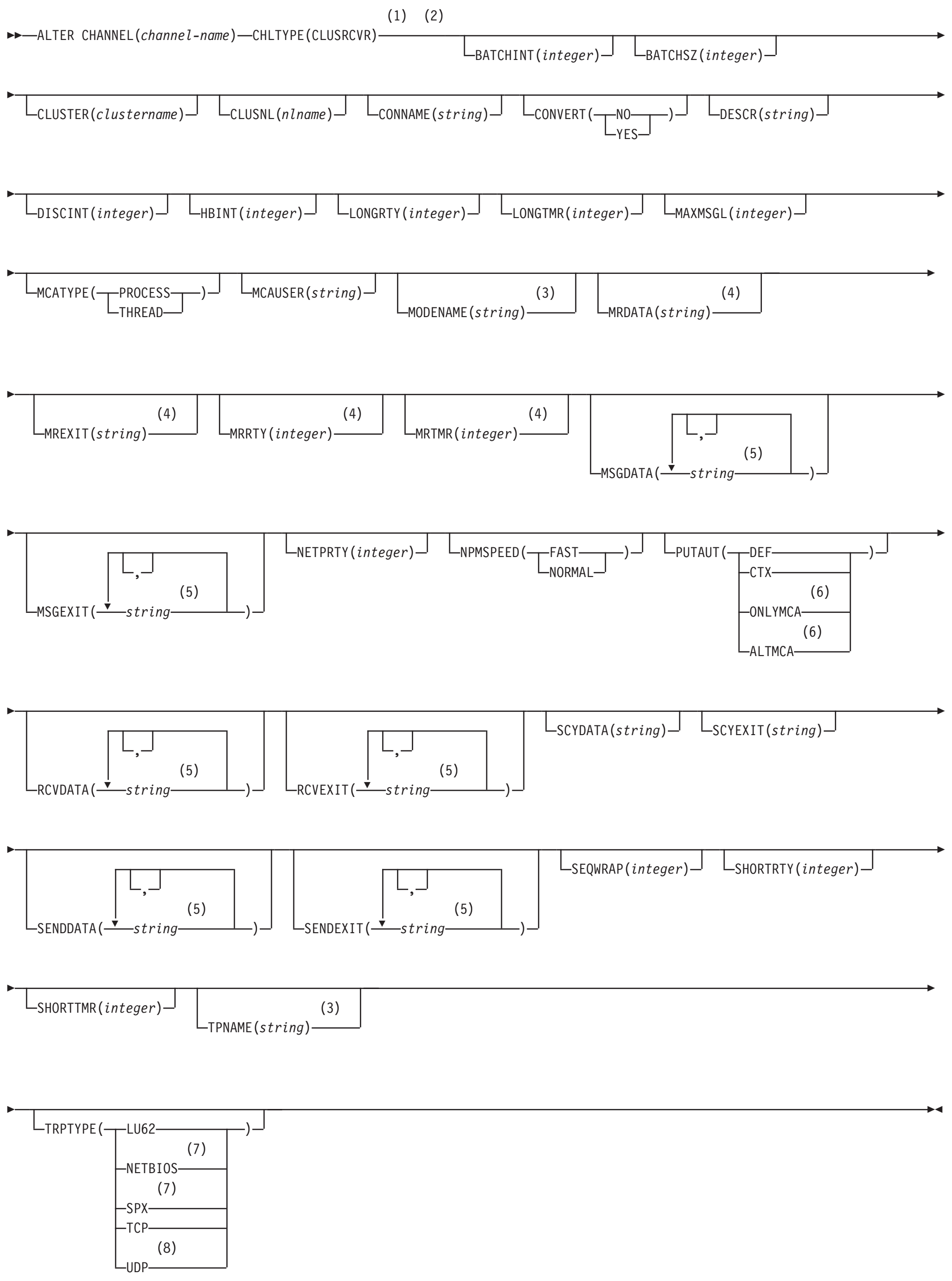
6 Not valid on OS/390.

7 Valid only on OS/2 Warp and Windows NT.

8 Valid only on AIX.

Cluster-receiver channel

ALTER CHANNEL



Notes:

1 This parameter must follow immediately after the channel name except on OS/390.

2 Valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

3 Valid only if TRPTYPE is LU62.

4 Not valid on OS/390.

5 You can specify one value only on OS/390.

6 Valid only on OS/390.

7 Valid only on OS/2 Warp and Windows NT.

8 Valid only on AIX.

Keyword and parameter descriptions

Attributes specified override the current values. Attributes that you do not specify are unchanged. Some attributes depend on the type of the channel – see the CHLTYPE parameter.

Parameters are optional unless the description states that they are required.

(channel-name)
The name of the channel definition. This is required.

The name must be defined to the local queue manager. The maximum length of the string is 20 characters, and the string must contain only valid characters; see "Rules for naming MQSeries objects" on page 4.

AUTOSTART
Specifies whether an LU 6.2 responder process for the channel will be started at queue manager startup.

ENABLED, the responder is started.
DISABLED, the responder is not started (this is the default).

This parameter is valid only for channels with a channel type (CHLTYPE) of RCVR, RQSTR, SVR, and SVRCONN. It is supported only on Tandem NSK.

BATCHINT(*integer***)**
The minimum amount of time, in milliseconds, that a channel will keep a batch open.

The batch is terminated by whichever of the following occurs first:
- BATCHSZ messages have been sent, or
- The transmission queue is empty and BATCHINT is exceeded

The default value is zero, which means that the batch is terminated as soon as the transmission queue becomes empty (or the BATCHSZ limit is reached).

The value must be greater than or equal to zero, and less than or equal to 999 999 999.

This parameter is valid only for channels with a channel type (CHLTYPE)
| of SDR, SVR, CLUSSDR, or CLUSRCVR. It is valid only on AIX, HP-UX,
| OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

BATCHSZ(*integer***)**
The maximum number of messages that can be sent through a channel before taking a checkpoint.

The maximum batch size actually used is the lowest of the following:

- The BATCHSZ of the sending channel
- The BATCHSZ of the receiving channel
- The maximum number of uncommitted messages allowed at the sending queue manager
- The maximum number of uncommitted messages allowed at the receiving queue manager

The maximum number of uncommitted messages is specified by the MAXUMSGS parameter of the ALTER QMGR command, or the DEFINE MAXSMSGS command on OS/390.

This parameter is valid only for channels with a channel type (CHLTYPE) of SDR, SVR, RCVR, RQSTR, CLUSSDR, or CLUSRCVR.

The value must be greater than zero, and less than or equal to 9999.

CHLTYPE
Channel type. This is required, and must be of the same type as the existing channel. It must follow immediately after the *(channel-name)* parameter on all platforms except OS/390.

SDR	Sender channel
SVR	Server channel
RCVR	Receiver channel
RQSTR	Requester channel
CLNTCONN	Client-connection channel
SVRCONN	Server-connection channel
CLUSSDR	Cluster-sender channel (valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT)
CLUSRCVR	Cluster-receiver channel (valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT)

CLUSTER(*clustername*)
The name of the cluster to which the channel belongs. The maximum length is 48 characters conforming to the rules for naming MQSeries objects.

This parameter is valid only for CLUSSDR and CLUSRCVR channels. Only one of the resultant values of CLUSTER or CLUSNL can be nonblank, the other must be blank.

This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

CLUSNL(*nlname*)
The name of the namelist that specifies a list of clusters to which the channel belongs.

This parameter is valid only for CLUSSDR and CLUSRCVR channels. Only one of the resultant values of CLUSTER or CLUSNL can be nonblank, the other must be blank.

This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

CONNAME(*string*)
Connection name.

For cluster-receiver channels it relates to the local queue manager, and for other channels it relates to the target queue manager. (The maximum length is 48 characters on OS/390, and 264 characters on other platforms.)

The value you specify depends on the transport type (TRPTYPE) to be used:

DECnet
The DECnet node name and the DECnet object name, in the form:

```
CONNAME('node_name(object_name)')
```

This is valid only on Digital OpenVMS.

LU 6.2

- On Digital OpenVMS this is the SNA gateway node name, access name, and the`tpname`that is used by SNA to invoke the remote program. The format of this information is as follows:

  ```
  CONNAME('gateway_node.access_name(tpname)')
  ```

- On OS/390 there are two forms in which to specify the value:

  Logical unit name
  The logical unit information for the queue manager, comprising the logical unit name, TP name, and optional mode name. This can be specified in one of 3 forms:

Form	Example
luname	`IGY12355`
luname/TPname	`IGY12345/APING`
luname/TPname/modename	`IGY12345/APINGD/#INTER`

  For the first form, the TP name and mode name must be specified for the TPNAME and MODENAME attributes; otherwise these attributes must be blank.

  Note: For client-connection channels, only the first form is allowed.

  Symbolic name
  The symbolic destination name for the logical unit information for the queue manager, as defined in the side information data set. The TPNAME and MODENAME attributes must be blank.

  Note: For cluster-receiver channels, the side information is on the other queue managers in the cluster. Alternatively, in this case it can be a name that a channel auto-definition exit can resolve into the appropriate logical unit information for the local queue manager.

- On OS/2 Warp it is the fully-qualified name of the partner LU, or an LU alias.
- On OS/400, Windows NT, and UNIX systems, this is the name of the CPI-C communications side object or, if the TPNAME is not blank, this is the fully-qualified name of the partner logical unit.

See the information about configuration parameters for an LU 6.2 connection for your platform in the *MQSeries Intercommunication* manual for more information.

- On Tandem NSK, the value of this depends on whether SNAX or ICE is used as the communications protocol:
  - If SNAX is used:
    - For sender, requester, and fully qualified server channels, this is the process name of the SNAX/APC process, the name of the local LU, and the name of the partner LU on the remote machine, for example:

      ```
      CONNAME('$PPPP.LOCALLU.REMOTELU')
      ```
    - For receiver and non fully qualified server channels, this is the process name of the SNAX/APC process and the name of the local LU, for example:

      ```
      CONNAME('$PPPP.LOCALLU')
      ```

      The name of the local LU can be an asterisk (*), indicating any name.
  - If ICE is used:
    - For sender, requester, and fully qualified server channels, this is the process name of the ICE process, the ICE open name, the name of the local LU, and the name of the partner LU on the remote machine, for example:

      ```
        CONNAME('$PPPP.#OPEN.LOCALLU.REMOTELU')
      ```

      For receiver and non fully qualified server channels, this is the process name of the SNAX/APC process, the ICE open name, and the name of the local LU, for example:

      ```
         CONNAME('$PPPP.#OPEN.LOCALLU')
      ```

      The name of the local LU can be an asterisk (*), indicating any name.

NetBIOS
A unique NetBIOS name (limited to 16 characters).

SPX The 4-byte network address, the 6-byte node address, and the 2-byte socket number. These values must be entered in hexadecimal, with a period separating the network and node addresses. The socket number must be enclosed in brackets, for example:

```
CONNAME('0a0b0c0d.804abcde23a1(5e86)')
```

If the socket number is omitted, the MQSeries default value (X'5e86') is assumed.

TCP Either the host name, or the network address of the remote machine (or the local machine for cluster-receiver channels). This can be followed by an optional port number, enclosed in parentheses.

| **UDP** Either the host name, or the network address of the remote
| MQSeries for Windows V2.0 machine. This can be followed by an
| optional port number, enclosed in parentheses.

This parameter is required for channels with a channel type (CHLTYPE) of SDR, RQSTR, CLNTCONN, CLUSSDR, and CLUSRCVR. It is optional for SVR channels, and is not valid for RCVR or SVRCONN channels.

Note: If you are using any of the special characters in your connection name (for example, parentheses) you must enclose the string in single quotes.

CONVERT

Specifies whether the sending message channel agent should attempt conversion of the application message data, if the receiving message channel agent is unable to perform this conversion.

NO	No conversion by sender
YES	Conversion by sender

This parameter is valid only for channels with a channel type (CHLTYPE) of SDR, SVR, CLUSSDR, or CLUSRCVR.

DESCR(*string*)

Plain-text comment. It provides descriptive information about the channel when an operator issues the DISPLAY CHANNEL command.

It should contain only displayable characters. The maximum length is 64 characters. In a DBCS installation, it can contain DBCS characters (subject to a maximum length of 64 bytes).

Note: If characters are used that are not in the coded character set identifier (CCSID) for this queue manager, they might be translated incorrectly if the information is sent to another queue manager.

DISCINT(*integer*)

The minimum time in seconds for which the channel waits for a message to arrive on the transmission queue, after a batch ends, before terminating the channel. A value of zero causes the message channel agent to wait indefinitely.

The value must be greater than or equal to zero, and less than or equal to 999 999.

This parameter is valid only for channels with a channel type (CHLTYPE) of SDR, SVR, CLUSSDR, or CLUSRCVR.

HBINT(*integer*)

This parameter has a different interpretation depending upon the channel type, as follows:

- For a channel type of SDR, SVR, RCVR, RQSTR, CLUSSDR, or CLUSRCVR, this is the time, in seconds, between heartbeat flows passed from the sending MCA when there are no messages on the transmission queue. The heartbeat exchange gives the receiving MCA the opportunity to quiesce the channel.

  This type of heartbeat is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

  Note: You should set this value to be significantly less than the value of DISCINT. MQSeries checks only that it is within the permitted range however.
- For a channel type of SVRCONN or CLNTCONN, this is the time, in seconds, between heartbeat flows passed from the server MCA when that MCA has issued an MQGET with WAIT on behalf of a client

application. This allows the server to handle situations where the client connection fails during an MQGET with WAIT. This type of heartbeat is valid only for AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

The value must be in the range zero through 999 999. A value of zero means that no heartbeat exchange takes place. The value that is used is the larger of the values specified at the sending side and the receiving side.

LONGRTY(*integer*)
When a sender, server, or cluster-sender channel is attempting to connect to the remote queue manager, and the count specified by SHORTRTY has been exhausted, this specifies the maximum number of further attempts that are made to connect to the remote queue manager, at intervals specified by LONGTMR.

If this count is also exhausted without success, an error is logged to the operator, and the channel is stopped. The channel must subsequently be restarted with a command (it is not started automatically by the channel initiator).

The value must be greater than or equal to zero, and less than or equal to 999 999 999.

This parameter is valid only for channels with a channel type (CHLTYPE) of SDR, SVR, CLUSSDR, or CLUSRCVR.

LONGTMR(*integer*)
For long retry attempts, this is the maximum number of seconds to wait before re-attempting connection to the remote queue manager.

The time is approximate; zero means that another connection attempt is made as soon as possible.

The interval between retries might be extended if the channel has to wait to become active.

The value must be greater than or equal to zero, and less than or equal to 999 999 999.

Note: For implementation reasons, the maximum retry interval that can be used is 999 999; values exceeding this will be treated as 999 999.

This parameter is valid only for channels with a channel type (CHLTYPE) of SDR, SVR, CLUSSDR, or CLUSRCVR.

MAXMSGL(*integer*)
Specifies the maximum message length that can be transmitted on the channel. This is compared with the value for the partner and the actual maximum used is the lower of the two values.

The value zero means the maximum message length for the queue manager.

On AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT, specify a value greater than or equal to zero, and less than or equal to the maximum message length for the queue manager as defined by the MAXMSGL parameter of the ALTER QMGR command. See “ALTER QMGR” on page 62 for more information.

On other platforms, specify a value greater than or equal to zero, and less than or equal to 4 MB, or 4 194 304 bytes.

MCANAME(*string*)
Message channel agent name.

This is reserved, and if specified must only be set to blanks (maximum length 20 characters).

MCATYPE
Specifies whether the message-channel-agent program should run as a thread or a process.

PROCESS	The message channel agent runs as a separate process
THREAD	The message channel agent runs as a separate thread

In situations where a threaded listener is required to service a large number of incoming requests, resources can become strained. In this case, it is recommended that multiple listener processes are used and that incoming requests are targeted at specific listeners via the port number specified on the listener.

This parameter is valid only for channels with a channel type (CHLTYPE) of SDR, SVR, RQSTR, CLUSSDR, or CLUSRCVR. It is supported only on AIX, HP/UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

On OS/390 it is supported only for channels with a channel type of CLUSRCVR. When specified in a CLUSRCVR definition, MCATYPE is used by a remote machine to determine the corresponding CLUSSDR definition.

MCAUSER(*string*)
Message channel agent user identifier.

If *string* is nonblank, it is the user identifier which is to be used by the message channel agent for authorization to access MQSeries resources, including (if PUTAUT is DEF) authorization to put the message to the destination queue for receiver or requester channels.

If it is blank, the message channel agent uses its default user identifier.

This user identifier can be overridden by one supplied by a channel security exit.

The maximum length of *string* is 64 characters on Windows NT and 12 characters on other platforms. On Windows NT, you can optionally qualify a user identifier with the domain name in the format `user@domain`.

This parameter is not valid for channels with a channel type (CHLTYPE) of CLNTCONN.

MODENAME(*string*)
LU 6.2 mode name (maximum length 8 characters).

This parameter is valid only for channels with a transport type (TRPTYPE) of LU 6.2. If TRPTYPE is not LU 6.2, the data is ignored and no error message is issued.

If specified, this should be set to the SNA mode name unless the CONNAME contains a side-object name, in which case it should be set to blanks. The actual name is then taken from the CPI-C Communications Side Object, or APPC side information data set.

See the information about configuration parameters for an LU 6.2 connection for your platform in the *MQSeries Intercommunication* manual for more information.

This parameter is not valid for channels with a channel type (CHLTYPE) of RCVR or SVRCONN.

MRDATA(*string*)
Channel message-retry exit user data (maximum length 32 characters).

This is passed to the channel message-retry exit when it is called.

This parameter is valid only for channels with a channel type (CHLTYPE) of RCVR, RQSTR, or CLUSRCVR. It is not supported on OS/390.

MREXIT(*string*)
Channel message-retry exit name.

The format and maximum length of the name is the same as for MSGEXIT.

This parameter is valid only for channels with a channel type (CHLTYPE) of RCVR, RQSTR, or CLUSRCVR. It is not supported on OS/390.

MRRTY(*integer*)
The number of times the channel will retry before it decides it cannot deliver the message.

This attribute controls the action of the MCA only if the message-retry exit name is blank. If the exit name is not blank, the value of MRRTY is passed to the exit for the exit's use, but the number of retries performed (if any) is controlled by the exit, and not by this attribute.

The value must be greater than or equal to zero, and less than or equal to 999 999 999. A value of zero means that no retries will be performed.

This parameter is valid only for channels with a channel type (CHLTYPE) of RCVR, RQSTR, or CLUSRCVR. It is not supported on OS/390.

MRTMR(*integer*)
The minimum interval of time that must pass before the channel can retry the **MQPUT** operation. This time interval is in milliseconds.

This attribute controls the action of the MCA only if the message-retry exit name is blank. If the exit name is not blank, the value of MRTMR is passed to the exit for the exit's use, but the retry interval is controlled by the exit, and not by this attribute.

The value must be greater than or equal to zero, and less than or equal to 999 999 999. A value of zero means that the retry will be performed as soon as possible (provided that the value of MRRTY is greater than zero).

This parameter is valid only for channels with a channel type (CHLTYPE) of RCVR, RQSTR, or CLUSRCVR. It is not supported on OS/390.

MSGDATA(*string*)
User data for the channel message exit (maximum length 32 characters).

This data is passed to the channel message exit when it is called.

On AIX, HP-UX, OS/2 Warp, Sun Solaris, and Windows NT, you can specify data for more than one exit program by specifying multiple strings separated by commas. The total length of the field must not exceed 999 characters.

On OS/400, you can specify up to 10 strings, each of length 32 characters. The first string of data is passed to the first message exit specified, the second string to the second exit, and so on.

On other platforms you can specify only one string of message exit data for each channel.

MSGEXIT(*string*)
Channel message exit name.

On Tandem NSK, there is only one channel user exit program. If the MSGEXIT, MREXIT, SCYEXIT, SENDEXIT, and RCVEXIT parameters are all left blank, the channel user exit is not invoked. If any of these parameters is nonblank, the channel exit program is called. You can enter text string for these attributes. The maximum length of the string is 128 characters. This string is passed to the exit program, but it is not used to determine the program name.

See the *MQSeries for Tandem NonStop Kernel System Management Guide* for more information about using channel exit programs on Tandem NSK.

On other platforms, if this name is nonblank, the exit is called at the following times:

- Immediately after a message has been retrieved from the transmission queue (sender or server), or immediately before a message is put to a destination queue (receiver or requester).

  The exit is given the entire application message and transmission queue header for modification.
- At initialization and termination of the channel.

On AIX, HP-UX, OS/2 Warp, Sun Solaris, and Windows NT, you can specify the name of more than one exit program by specifying multiple strings separated by commas. However, the total number of characters specified must not exceed 999.

On OS/400, you can specify the names of up to 10 exit programs by specifying multiple strings separated by commas.

On other platforms you can specify only one message exit name for each channel.

For channels with a channel type (CHLTYPE) of CLNTCONN or SVRCONN, this parameter is not relevant, because message exits are not invoked for such channels.

The format and maximum length of the name depends on the environment:

- On Digital OpenVMS and UNIX systems, it is of the form:
  ```
  libraryname(functionname)
  ```
  The maximum length of the string is 128 characters.
- On OS/2 Warp, Windows, and Windows NT, it is of the form:
  ```
  dllname(functionname)
  ```
  where *dllname* is specified without the suffix (".DLL"). The maximum length of the string is 128 characters.
- On OS/400, it is of the form:

```
progname libname
```

where *program name* occupies the first 10 characters and *libname* the second 10 characters (both blank-padded to the right if necessary). The maximum length of the string is 20 characters.

- On OS/390, it is a load module name, maximum length 8 characters (128 characters are allowed for exit names for client-connection channels).

NETPRTY(*integer*)
The priority for the network connection. Distributed queuing chooses the path with the highest priority if there are multiple paths available. The value must be in the range 0 through 9; 0 is the lowest priority.

This parameter is valid only for CLUSRCVR channels.

This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

NPMSPEED
The class of service for nonpersistent messages on this channel:

FAST	Fast delivery for nonpersistent messages; messages might be lost if the channel is lost. This is the default. Messages are retrieved using MQGMO_SYNCPOINT_IF_PERSISTENT and so are not included in the batch unit of work.
NORMAL	Normal delivery for nonpersistent messages.

If the sending side and the receiving side do not agree about this attribute, or one does not support it, NORMAL is used.

This parameter is valid only for channels with a CHLTYPE of SDR, SVR, RCVR, RQSTR, CLUSSDR, or CLUSRCVR. It is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

PASSWORD(*string*)
Password (maximum length 12 characters).

This is used by the message channel agent when attempting to initiate a secure LU 6.2 session with a remote message channel agent.

This parameter is valid only for channels with a channel type (CHLTYPE) of SDR, SVR, RQSTR, CLNTCONN, or CLUSSDR. It is supported on OS/390 only for client-connection channels.

Although the maximum length of the attribute is 12 characters, only the first 10 characters are used.

PUTAUT
Specifies which user identifiers should be used to establish authority to put messages to the destination queue (for message channels) or to execute an MQI call (for MQI channels).

DEF	The default user ID is used. On OS/390 this might involve using both the user ID received from the network and that derived from MCAUSER.
CTX	The user ID from the `UserIdentifier` field of the message descriptor is used. On OS/390 this might involve also using the user ID received from the network or that derived from MCAUSER, or both.
ONLYMCA	The default user ID is used. Any user ID received from the network is not used. This value is supported only on OS/390.

ALTMCA	The user ID from the *UserIdentifier* field of the message descriptor is used. Any user ID received from the network is not used. This value is supported only on OS/390.

This parameter is valid only for channels with a channel type (CHLTYPE) of RCVR, RQSTR, CLUSRCVR, or SVRCONN. CTX and ALTMCA are not valid for SVRCONN channels.

QMNAME(*string*)
Queue manager name.

For channels with a channel type (CHLTYPE) of CLNTCONN, this is the name of the queue manager to which an application running in the MQI client environment can request connection.

For channels of other types this parameter is not valid.

RCVDATA(*string*)
Channel receive exit user data (maximum length 32 characters).

This is passed to the channel receive exit when it is called.

On AIX, HP-UX, OS/2 Warp, Sun Solaris, and Windows NT, you can specify data for more than one exit program by specifying multiple strings separated by commas. The total length of the field must not exceed 999 characters.

| On OS/400, you can specify up to 10 strings, each of length 32 characters.
| The first string of data is passed to the first receive exit specified, the
| second string to the second exit, and so on.

On other platforms you can specify only one string of receive exit data for each channel.

RCVEXIT(*string*)
Channel receive exit name.

On platforms other than Tandem NSK, if this name is nonblank, the exit is called at the following times:

- Immediately before the received network data is processed.

  The exit is given the complete transmission buffer as received. The contents of the buffer can be modified as required.
- At initialization and termination of the channel.

On AIX, HP-UX, OS/2 Warp, Sun Solaris, and Windows NT, you can specify the name of more than one exit program by specifying multiple strings separated by commas. However, the total number of characters specified must not exceed 999.

| On OS/400, you can specify the names of up to 10 exit programs by
| specifying multiple strings separated by commas.

On other platforms you can specify only one receive exit name for each channel.

The format and maximum length of the name is the same as for MSGEXIT.

SCYDATA(*string*)
Channel security exit user data (maximum length 32 characters).

This is passed to the channel security exit when it is called.

SCYEXIT(*string*)
Channel security exit name.

On platforms other than Tandem NSK, if this name is nonblank, the exit is called at the following times:

- Immediately after establishing a channel.

  Before any messages are transferred, the exit is given the opportunity to instigate security flows to validate connection authorization.
- Upon receipt of a response to a security message flow.

  Any security message flows received from the remote processor on the remote queue manager are given to the exit.
- At initialization and termination of the channel.

The format and maximum length of the name is the same as for MSGEXIT.

SENDDATA(*string*)
Channel send exit user data (maximum length 32 characters).

This is passed to the channel send exit when it is called.

On AIX, HP-UX, OS/2 Warp, Sun Solaris, and Windows NT, you can specify data for more than one exit program by specifying multiple strings separated by commas. The total length of the field must not exceed 999 characters.

| On OS/400, you can specify up to 10 strings, each of length 32 characters.
| The first string of data is passed to the first send exit specified, the second
| string to the second exit, and so on.

On other platforms you can specify only one string of send exit data for each channel.

SENDEXIT(*string*)
Channel send exit name.

On platforms other than Tandem NSK, if this name is nonblank, the exit is called at the following times:

- Immediately before data is sent out on the network.

  The exit is given the complete transmission buffer before it is transmitted. The contents of the buffer can be modified as required.
- At initialization and termination of the channel.

On AIX, HP-UX, OS/2 Warp, Sun Solaris, and Windows NT, you can specify the name of more than one exit program by specifying multiple strings separated by commas. However, the total number of characters specified must not exceed 999.

| On OS/400, you can specify the names of up to 10 exit programs by
| specifying multiple strings separated by commas.

On other platforms you can specify only one send exit name for each channel.

The format and maximum length of the name is the same as for MSGEXIT.

SEQWRAP(*integer*)
When this value is reached, sequence numbers wrap to start again at 1.

This value is non-negotiable and must match in both the local and remote channel definitions.

The value must be greater than or equal to 100, and less than or equal to 999 999 999.

This parameter is valid only for channels with a channel type (CHLTYPE) of SDR, SVR, RCVR, RQSTR, CLUSSDR, or CLUSRCVR.

SHORTRTY(*integer***)**
The maximum number of attempts that are made by a sender, server, or cluster-sender channel to connect to the remote queue manager, at intervals specified by SHORTTMR, before the (normally longer) LONGRTY and LONGTMR are used.

Retry attempts are made if the channel fails to connect initially (whether it is started automatically by the channel initiator or by an explicit command), and also if the connection fails after the channel has successfully connected. However, if the cause of the failure is such that retry is unlikely to be successful, retries are not attempted.

The value must be greater than or equal to zero, and less than or equal to 999 999 999.

This parameter is valid only for channels with a channel type (CHLTYPE) of SDR, SVR, CLUSSDR, or CLUSRCVR.

SHORTTMR(*integer***)**
For short retry attempts, this is the maximum number of seconds to wait before re-attempting connection to the remote queue manager.

The time is approximate; zero means that another connection attempt is made as soon as possible.

The interval between retries might be extended if the channel has to wait to become active.

The value must be greater than or equal to zero, and less than or equal to 999 999 999.

Note: For implementation reasons, the maximum retry interval that can be used is 999 999; values exceeding this will be treated as 999 999.

This parameter is valid only for channels with a channel type (CHLTYPE) of SDR, SVR, CLUSSDR, or CLUSRCVR.

TPNAME(*string***)**
LU 6.2 transaction program name (maximum length 64 characters).

This parameter is valid only for channels with a transport type (TRPTYPE) of LU 6.2.

On Tandem NSK, this should be set to the local TP name. This can be followed by the name of the TP on the remote machine, for example:

```
TPNAME('localtp[.remotetp]')
```

Both names can be up to 16 characters in length.

The name can also be nonblank for client connection channels to be used with OS/2 Warp.

On other platforms, this should be set to the SNA transaction program name, unless the CONNAME contains a side-object name in which case it should be set to blanks. The actual name is taken instead from the CPI-C Communications Side Object, or the APPC side information data set.

See the information about configuration parameters for an LU 6.2 connection for your platform in the *MQSeries Intercommunication* manual for more information.

On Windows NT SNA Server, and in the side object on OS/390, the TPNAME is wrapped to upper case.

This parameter is not valid for channels with a channel type (CHLTYPE) of RCVR.

TRPTYPE

Transport type to be used.

| This is not required on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, or Windows NT. If you do not specify this parameter, the value specified in the SYSTEM.DEF.*channel-type* definition is used. However, no check is made that the correct transport type has been specified if the channel is initiated from the other end. On OS/390, if the SYSTEM.DEF.*channel-type* definition does not exist, the default is LU62.

This is required on all other platforms.

| **DECNET**	DECnet (supported only on Digital OpenVMS)
LU62	SNA LU 6.2
NETBIOS	NetBIOS (supported only on OS/2 Warp, Windows, Windows NT, and DOS; it also applies to OS/390 for defining client-connection channels that will connect to servers on the platforms supporting NetBIOS)
SPX	Sequenced packet exchange (supported only on OS/2 Warp, Windows, Windows NT, and DOS; it also applies to OS/390 for defining client-connection channels that will connect to servers on the platforms supporting SPX)
TCP	Transmission Control Protocol - part of the TCP/IP protocol suite
UDP	User Datagram Protocol - part of the TCP/IP protocol suite (supported only on AIX); this option is available for connection to MQSeries for Windows V2.0, with CSD02, only

USERID(*string*)

Task user identifier (maximum length 12 characters).

This is used by the message channel agent when attempting to initiate a secure LU 6.2 session with a remote message channel agent.

This parameter is valid only for channels with a channel type (CHLTYPE) of SDR, SVR, RQSTR, CLNTCONN, or CLUSSDR. On OS/390, it is supported only for CLNTCONN channels.

Although the maximum length of the attribute is 12 characters, only the first 10 characters are used.

XMITQ(*string*)

Transmission queue name.

The name of the queue from which messages are retrieved. See "Rules for naming MQSeries objects" on page 4.

This parameter is valid only for channels with a channel type (CHLTYPE) of SDR or SVR. For these channel types this parameter is required.

ALTER NAMELIST

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓	✓	✓		✓	✓

Use ALTER NAMELIST to alter a list of names. This is most commonly a list of cluster names or queue names.

Notes:

1. On UNIX systems, the command is valid only on AIX, HP-UX, and Sun Solaris.

Synonym: ALT NL

ALTER NAMELIST

```
►►──ALTER NAMELIST(name)──┬────────────────┬──┬──────────────────────────┬──────────────────────────►◄
                          └─DESCR(string)──┘  │       ┌─,──────┐         │
                                              └─NAMES(─▼─┬──────┬─┴─)────┘
                                                         └─name─┘
```

Keyword and parameter descriptions

The attributes you specify override the current values. Attributes that you do not specify are unchanged.

(name) Name of the list. This is required. The list must already be defined.

DESCR(*string*)
Plain-text comment. This is optional. It provides descriptive information about the namelist when an operator issues the DISPLAY NAMELIST command.

It should contain only displayable characters. The maximum length is 64 characters. In a DBCS installation, it can contain DBCS characters (subject to a maximum length of 64 bytes).

Note: If characters are used that are not in the coded character set identifier (CCSID) for this queue manager, they might be translated incorrectly if the information is sent to another queue manager.

NAMES(*name, ...*)
List of names. This is optional.

The names can be of any type but must conform to the rules for naming MQSeries objects, with a maximum length of 48 characters.

The maximum number of names in the list is 256. An empty list is valid: specify NAMES().

ALTER PROCESS

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

Use ALTER PROCESS to alter the attributes of an existing MQSeries process definition.

Synonym: ALT PRO

ALTER PROCESS

```
►►──ALTER PROCESS(process-name)──┬──────────────────┬──┬─────────────────────────────┬──┬───────────────┬──►
                                 └─APPLICID(string)─┘  └─APPLTYPE(─┬─CICS───────┬─)─┘  └─DESCR(string)─┘
                                                                   ├─DEF────────┤
                                                                   ├─DOS────────┤
                                                                   ├─IMS────────┤
                                                                   ├─MVS────────┤
                                                                   ├─NSK────────┤
                                                                   ├─OS2────────┤
                                                                   ├─OS400──────┤
                                                                   ├─UNIX───────┤
                                                                   ├─VMS────────┤
                                                                   ├─WINDOWS────┤
                                                                   ├─WINDOWSNT──┤
                                                                   └─integer────┘

►──┬──────────────────┬──┬──────────────────┬──────────────────────────────────────────────────────────►◄
   └─ENVRDATA(string)─┘  └─USERDATA(string)─┘
```

Keyword and parameter descriptions

The attributes you specify override the current values. Attributes that you do not specify are unchanged.

(process-name)
: The name of the MQSeries process definition to be altered (see "Rules for naming MQSeries objects" on page 4). This is required. The name must be defined to the local queue manager. The maximum length is 48 bytes.

APPLICID(*string*)
: The name of the application to be started. This might typically be a fully-qualified file name of an executable object. The maximum length is 256 characters.

For a CICS application this is a CICS transaction ID, and for an IMS application it is an IMS transaction ID.

On OS/390, for distributed queuing using CICS it must be "CKSG", and for distributed queuing without CICS, it must be "CSQX START".

APPLTYPE(*string*)
: The type of application to be started. Valid application types are:

CICS	Represents a CICS transaction.
DOS	Represents a DOS application.
IMS	Represents an IMS transaction.
MVS	Represents an OS/390 application (batch or TSO).
NSK	Represents a Tandem NSK application.
OS2	Represents an OS/2 Warp application.

OS400	Represents an OS/400 application.
UNIX	Represents a UNIX application.
VMS	Represents a Digital OpenVMS application.
WINDOWS	Represents a Windows application.
WINDOWSNT	Represents a Windows NT application.
integer	User-defined application type in the range 65 536 through 999 999 999.
DEF	This causes the default application type for the platform at which the command is interpreted to be stored in the process definition. This default cannot be changed by the installation. If the platform supports clients, this is interpreted as the default application type of the server.

Only application types (other than user-defined types) that are supported on the platform at which the command is executed should be used:

- On Digital OpenVMS, VMS is supported
- On OS/390, CICS (default), DOS, IMS, MVS, OS2, UNIX, WINDOWS, WINDOWSNT, and DEF are supported
- On OS/400, OS400 (default), CICS, and DEF are supported
- On OS/2 Warp, OS2 (default), DOS, WINDOWS, UNIX, CICS, and DEF are supported
- On Tandem NSK, NSK is supported
- On UNIX systems, UNIX (default), OS2, DOS, WINDOWS, CICS, and DEF are supported
- On Windows NT, WINDOWSNT (default), DOS, WINDOWS, OS2, UNIX, CICS, and DEF are supported

DESCR(*string*)

Plain-text comment. It provides descriptive information about the object when an operator issues the DISPLAY PROCESS command.

It should contain only displayable characters. The maximum length is 64 characters. In a DBCS installation, it can contain DBCS characters (subject to a maximum length of 64 bytes).

Note: If characters are used that are not in the coded character set identifier (CCSID) for this queue manager, they might be translated incorrectly if the information is sent to another queue manager.

ENVRDATA(*string*)

A character string that contains environment information pertaining to the application to be started. The maximum length is 128 characters.

| The meaning of ENVRDATA is determined by the trigger-monitor application. The trigger monitor provided by MQSeries appends ENVRDATA to the parameter list passed to the started application. The parameter list consists of the MQTMC2 structure, followed by one blank, followed by ENVRDATA with trailing blanks removed.

| **Notes:**

1. | On OS/390, ENVRDATA is not used by the trigger-monitor applications provided by MQSeries.
2. | On UNIX systems, ENVRDATA can be set to the ampersand character to cause the started application to run in the background.

USERDATA(*string*)
A character string that contains user information pertaining to the application defined in the APPLICID that is to be started. The maximum length is 128 characters.

The meaning of USERDATA is determined by the trigger-monitor application. The trigger monitor provided by MQSeries simply passes USERDATA to the started application as part of the parameter list. The parameter list consists of the MQTMC2 structure (containing USERDATA), followed by one blank, followed by ENVRDATA with trailing blanks removed.

For MQSeries message channel agents, the format of this field is a channel name of up to 20 characters. See the *MQSeries Intercommunication* manual for information about what these need as APPLICID.

On Tandem NSK, a character string containing spaces must be enclosed in double quotation marks.

ALTER QALIAS

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

Use ALTER QALIAS to alter the attributes of an alias queue.

Synonym: ALT QA

ALTER QALIAS

```
►►──ALTER QALIAS(q-name)──┬───────┬──┬─────────────────┬──┬────────────────┬──────────────────────►◄
                          └─FORCE─┘  └─┤ common q attrs ├─┘  └─┤ alias q attrs ├─┘
```

Common q attrs:

```
├──┬────────────────────┬──┬──────────────────────┬──┬───────────────┬──┬──────────────────────┬──────────┤
   └─DEFPRTY(integer)───┘  └─DEFPSIST(──┬─NO──┬─)─┘  └─DESCR(string)─┘  └─PUT(──┬─ENABLED──┬─)─┘
                                        └─YES─┘                                └─DISABLED─┘
```

Alias q attrs:

```
├──┬──────────────────────────────┬──┬────────────────────┬──┬─────────────────────────────────┬──┬──────────────────────┬──►
   │                         (1)  │  │               (1)  │  │                            (1)  │  └─GET(──┬─ENABLED──┬─)─┘
   └─CLUSTER(clustername)─────────┘  └─CLUSNL(nlname)─────┘  └─DEFBIND(──┬─OPEN──────┬─)──────┘          └─DISABLED─┘
                                                                         └─NOTFIXED──┘

►──┬───────────────────────────┬──┬───────────────┬──────────────────────────────────────────────────────┤
   │                      (2)  │  └─TARGQ(string)─┘
   └─SCOPE(──┬─QMGR─┬─)────────┘
             └─CELL─┘
```

Notes:

1 Valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

2 Valid only on Digital OpenVMS, OS/2 Warp, UNIX systems, and Windows NT.

Keyword and parameter descriptions

The attributes you specify override the current values. Attributes that you do not specify are unchanged.

(q-name)
The name of the alias queue to be altered (see “Rules for naming MQSeries objects” on page 4). The name must be defined to the local queue manager.

FORCE
Specify this to force completion of the command if both of the following are true:
- The TARGQ keyword is specified
- An application has this alias queue open

If the FORCE option is not specified in these circumstances, the command is unsuccessful, and no changes are made.

Common queue attributes

DEFPRTY(*integer*)
The default priority of messages put on the queue. The value must be greater than or equal to zero, (the lowest priority) and less than or equal to the MAXPRTY queue manager attribute. (MAXPRTY is 9.)

DEFPSIST
Specifies the message persistence to be used when applications specify the MQPER_PERSISTENCE_AS_Q_DEF option.

NO	Messages on this queue are lost across a restart of the queue manager. This is the default supplied with MQSeries, but your installation might have changed it.
YES	Messages on this queue survive a restart of the queue manager.

DESCR(*string*)
Plain-text comment. It provides descriptive information about the object when an operator issues the DISPLAY QUEUE command.

It should contain only displayable characters. The maximum length is 64 characters. In a DBCS installation, it can contain DBCS characters (subject to a maximum length of 64 bytes).

Note: If characters are used that are not in the coded character set identifier (CCSID) for this queue manager, they might be translated incorrectly if the information is sent to another queue manager.

PUT Whether messages can be put on the queue.

ENABLED	Messages can be added to the queue (by suitably authorized applications). This is the default supplied with MQSeries, but your installation might have changed it.
DISABLED	Messages cannot be added to the queue.

This attribute can also be changed using the **MQSET** API call.

Alias queue attributes

CLUSTER(*clustername*)
The name of the cluster to which the queue belongs. The maximum length is 48 characters conforming to the rules for naming MQSeries objects. Changes to this parameter do not affect instances of the queue that are already open.

Only one of the resultant values of CLUSTER or CLUSNL can be nonblank; you cannot specify a value for both.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400,
| Sun Solaris, and Windows NT.

CLUSNL(*nlname*)
The name of the namelist that specifies a list of clusters to which the queue belongs. Changes to this parameter do not affect instances of the queue that are already open.

Only one of the resultant values of CLUSTER or CLUSNL can be nonblank; you cannot specify a value for both.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400,
| Sun Solaris, and Windows NT.

DEFBIND
Specifies the binding to be used when the application specifies MQOO_BIND_AS_Q_DEF on the **MQOPEN** call, and the queue is a cluster queue.

OPEN	The queue handle is bound to a specific instance of the cluster queue when the queue is opened.
NOTFIXED	The queue handle is not bound to any particular instance of the cluster queue. This allows the queue manager to select a specific queue instance when the message is put using **MQPUT**, and to change that selection subsequently should the need arise.

The **MQPUT1** call always behaves as if NOTFIXED had been specified.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400,
| Sun Solaris, and Windows NT.

GET Whether applications are permitted to get messages from this queue.

ENABLED	Messages can be retrieved from the queue (by suitably authorized applications). This is the default supplied with MQSeries, but your installation might have changed it.
DISABLED	Applications cannot retrieve messages from the queue.

This attribute can also be changed using the **MQSET** API call.

SCOPE
Specifies the scope of the queue definition.

QMGR	The queue definition has queue-manager scope. This means that the definition of the queue does not extend beyond the queue manager that owns it. To open the queue for output from some other queue manager, either the name of the owning queue manager must be specified, or the other queue manager must have a local definition of the queue.
CELL	The queue definition has cell scope. This means that the queue is known to all of the queue managers in the cell, and can be opened for output merely by specifying the name of the queue; the name of the queue manager that owns the queue need not be specified. If there is already a queue with the same name in the cell directory, the command fails. This value is valid only if a name service supporting a cell directory (for example, the supplied DCE name service) has been configured.

| This attribute is supported only on Digital OpenVMS, OS/2 Warp,
| Windows NT, and UNIX systems.

TARGQ(*string*)
The local name of the base queue being aliased. (See “Rules for naming MQSeries objects” on page 4.) The maximum length is 48 characters.

This must be one of the following (although this is not checked until the alias queue is opened by an application):
- A local queue (not a model queue)
- A local definition of a remote queue

- A cluster queue

This queue need not be defined until an application process attempts to open the alias queue.

Usage notes

1. `DEFINE QALIAS(`*otherqname*`) TARGQ(`*aliasqueue*`) CLUSTER(`*c*`)` has the effect of advertising queue *aliasqueue* by the name *otherqname*.
2. `DEFINE QALIAS(`*otherqname*`) TARGQ(`*aliasqueue*`)` has the effect of allowing a queue advertised by the name *otherqname* to be used on this queue manager by the name *aliasqueue*, provided that *aliasqueue* is also defined.

ALTER QLOCAL

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

Use ALTER QLOCAL to alter the attributes of a local queue.

Synonym: ALT QL

ALTER QLOCAL

```
►►──ALTER QLOCAL(q-name)──┬───────┬──┬─────────────────┬──┬────────────────┬──────────────────────►◄
                          └─FORCE─┘  └┤ common q attrs ├┘  └┤ local q attrs ├┘
```

Common q attrs:

```
├──┬────────────────────┬──┬───────────────────────┬──┬────────────────┬──┬─────────────────────┬──────────┤
   └─DEFPRTY(integer)───┘  └─DEFPSIST(──┬─NO──┬──)─┘  └─DESCR(string)──┘  └─PUT(──┬─ENABLED──┬──)─┘
                                        └─YES─┘                                  └─DISABLED─┘
```

Local q attrs:

```
├──┬────────────────────┬──┬─────────────────────┬──┬──────────────────────────┬──┬────────────────────┬────►
   └─BOQNAME(string)────┘  └─BOTHRESH(integer)───┘  │                     (1)  │  │               (1)  │
                                                    └─CLUSTER(clustername)─────┘  └─CLUSNL(nlname)─────┘

►──┬──────────────────────────────┬──┬──────────────────────────┬──┬──────────────────────┬──┬────────────────────────┬──►
   │                         (1)  │  └─DEFSOPT(──┬─EXCL───┬──)──┘  │                 (2)  │  └─GET(──┬─ENABLED──┬──)─┘
   └─DEFBIND(──┬─OPEN─────┬──)────┘              └─SHARED─┘        └─DISTL(──┬─NO──┬──)───┘          └─DISABLED─┘
               └─NOTFIXED─┘                                                  └─YES─┘

►──┬────────────────────────────────┬──┬────────────────┬──┬───────────────────┬──┬──────────────────┬──►
   │                          (3)   │  └─INITQ(string)──┘  └─MAXDEPTH(integer)─┘  └─MAXMSGL(integer)─┘
   └─INDXTYPE(──┬─CORRELID─┬──)─────┘
                ├─MSGID────┤
                ├─MSGTOKEN─┤
                └─NONE─────┘

►──┬────────────────────────────┬──┬──────────────┬──┬──────────┬──┬────────────┬──┬─────────────────┬──►
   └─MSGDLVSQ(──┬─PRIORITY─┬──)─┘  ├─NOHARDENBO───┤  ├─NOSHARE──┤  ├─NOTRIGGER──┤  └─PROCESS(string)─┘
                └─FIFO─────┘       └─HARDENBO─────┘  └─SHARE────┘  └─TRIGGER────┘

►──┬────────────────────┬────────────────────────────────────────────────────────────────────────────►
   └─QDEPTHHI(integer)──┘

►──┬────────────────────┬──┬─────────────────────────┬──┬─────────────────────────┬──┬──────────────────────────┬──►
   └─QDEPTHLO(integer)──┘  └─QDPHIEV(──┬─ENABLED──┬──)┘  └─QDPLOEV(──┬─ENABLED──┬──)┘  └─QDPMAXEV(──┬─ENABLED──┬──)┘
                                       └─DISABLED─┘                  └─DISABLED─┘                   └─DISABLED─┘

►──┬─────────────────────────┬──┬───────────────────┬──┬────────────────────┬──┬──────────────────────────┬──►
   └─QSVCIEV(──┬─NONE─┬──)───┘  └─QSVCINT(integer)──┘  └─RETINTVL(integer)──┘  │                     (4)  │
               ├─HIGH─┤                                                         └─SCOPE(──┬─QMGR─┬──)──────┘
               └─OK───┘                                                                   └─CELL─┘
```

```
►─┬──────────────────────┬─┬───────────────────┬─┬────────────────────┬─┬────────────────────┬──────────────►
  │                  (3) │ └─TRIGDATA(string)──┘ └─TRIGDPTH(integer)──┘ └─TRIGMPRI(integer)──┘
  └─STGCLASS(string)─────┘

►─┬──────────────────────────┬─┬────────────────────────┬──────────────────────────────────────────────────────┤
  └─TRIGTYPE(─┬─FIRST──┬─)───┘ └─USAGE(─┬─NORMAL─┬─)────┘
              ├─EVERY──┤                └─XMITQ──┘
              ├─DEPTH──┤
              └─NONE───┘
```

Notes:

1 Valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

2 Valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

3 Valid only on OS/390.

4 Valid only on Digital OpenVMS, OS/2 Warp, UNIX systems, and Windows NT.

Keyword and parameter descriptions

Attributes specified override the current values. Attributes that you do not specify are unchanged.

(q-name)
: The local name of the local queue to be altered (see "Rules for naming MQSeries objects" on page 4). The name must be defined to the local queue manager.

FORCE
: Specify this to force completion of the command if both of the following are true:
- The NOSHARE keyword is specified
- One or more applications have the queue open for input

If FORCE is not specified in these circumstances, the command is unsuccessful.

FORCE is also needed if both of the following are true:
- The USAGE attribute is changed
- Either one or more messages are on the queue, or one or more applications have the queue open

Again, the command is unsuccessful if FORCE is not specified in these circumstances.

Do not change the USAGE attribute while there are messages on the queue; the format of messages changes when they are put on a transmission queue.

Common queue attributes

DEFPRTY(*integer***)**
: The default priority of messages put on the queue. The value must be greater than or equal to zero, (the lowest priority) and less than or equal to the MAXPRTY queue manager attribute. MAXPRTY can be displayed using the DISPLAY QMGR command. (MAXPRTY is 9.)

DEFPSIST
Specifies the message persistence to be used when applications specify the MQPER_PERSISTENCE_AS_Q_DEF option.

NO	Messages on this queue are lost across a restart of the queue manager. This is the default supplied with MQSeries, but your installation might have changed it.
YES	Messages on this queue survive a restart of the queue manager.

DESCR(*string*)
Plain-text comment. It provides descriptive information about the object when an operator issues the DISPLAY QUEUE command.

It should contain only displayable characters. The maximum length is 64 characters. In a DBCS installation, it can contain DBCS characters (subject to a maximum length of 64 bytes).

Note: If characters are used that are not in the coded character set identifier (CCSID) for this queue manager, they might be translated incorrectly if the information is sent to another queue manager.

PUT Whether messages can be put on the queue.

ENABLED	Messages can be added to the queue (by suitably authorized applications). This is the default supplied with MQSeries, but your installation might have changed it.
DISABLED	Messages cannot be added to the queue.

This attribute can also be changed using the **MQSET** API call.

Local queue attributes

BOQNAME(*string*)
| The excessive backout requeue name. Apart from maintaining a value for
| this attribute, the queue manager takes no action based on its value.

BOTHRESH(*integer*)
| The backout threshold. Apart from maintaining a value for this attribute,
| the queue manager takes no action based on its value.

Specify a value greater than or equal to zero, and less than or equal to 999 999 999.

CLUSTER(*clustername*)
The name of the cluster to which the queue belongs. The maximum length is 48 characters conforming to the rules for naming MQSeries objects. Changes to this parameter do not affect instances of the queue that are already open.

Only one of the resultant values of CLUSTER or CLUSNL can be nonblank; you cannot specify a value for both.

This parameter cannot be set for dynamic, transmission, SYSTEM.CHANNEL.xx, SYSTEM.CLUSTER.xx, or SYSTEM.COMMAND.xx queues.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400,
| Sun Solaris, and Windows NT.

CLUSNL(*nlname*)
The name of the namelist that specifies a list of clusters to which the queue belongs. Changes to this parameter do not affect instances of the queue that are already open.

Only one of the resultant values of CLUSTER or CLUSNL can be nonblank; you cannot specify a value for both.

This parameter cannot be set for dynamic, transmission, SYSTEM.CHANNEL.xx, SYSTEM.CLUSTER.xx, or SYSTEM.COMMAND.xx queues.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400,
| Sun Solaris, and Windows NT.

DEFBIND
Specifies the binding to be used when the application specifies MQOO_BIND_AS_Q_DEF on the **MQOPEN** call, and the queue is a cluster queue.

OPEN	The queue handle is bound to a specific instance of the cluster queue when the queue is opened.
NOTFIXED	The queue handle is not bound to any particular instance of the cluster queue. This allows the queue manager to select a specific queue instance when the message is put using **MQPUT**, and to change that selection subsequently should the need arise.

The **MQPUT1** call always behaves as if NOTFIXED had been specified.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400,
| Sun Solaris, and Windows NT.

DEFSOPT
The default share option for applications opening this queue for input:

EXCL	The open request is for exclusive input from the queue
SHARED	The open request is for shared input from the queue

DISTL
Whether distribution lists are supported by the partner queue manager.

YES	Distribution lists are supported by the partner queue manager.
NO	Distribution lists are not supported by the partner queue manager.

Note: You should not normally change this attribute, because it is set by the MCA. However you can set this attribute when defining a transmission queue if the distribution list capability of the destination queue manager is known.

This keyword is valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

GET Whether applications are to be permitted to get messages from this queue:

ENABLED	Messages can be retrieved from the queue (by suitably authorized applications). This is the default supplied with MQSeries, but your installation might have changed it.
DISABLED	Applications cannot retrieve messages from the queue.

This attribute can also be changed using the **MQSET** API call.

INDXTYPE
The type of index maintained by the queue manager to expedite **MQGET** operations on the queue:

NONE	No index is maintained. Use this when messages are usually retrieved sequentially or use both the message identifier and the correlation identifier as a selection criterion on the **MQGET** call.
MSGID	An index of message identifiers is maintained. Use this when messages are usually retrieved using the message identifier as a selection criterion on the **MQGET** call with the correlation identifier set to NULL.
CORRELID	An index of correlation identifiers is maintained. Use this when messages are usually retrieved using the correlation identifier as a selection criterion on the **MQGET** call with the message identifier set to NULL.
MSGTOKEN	An index of message tokens is maintained. Use this when the queue is a WLM managed queue that you are using with the Workload Manager functions of OS/390. **Note:** If the queue is a transmission queue or a temporary-dynamic queue, you cannot set INDXTYPE to MSGTOKEN.

The INDXTYPE attribute can be changed to NONE, MSGID, or CORRELID at any time, and the change takes effect immediately if all the following conditions are satisfied:
- No applications have the queue open
- The queue is empty
- There are no uncommitted **MQPUT** or **MQGET** operations outstanding against the queue

If these conditions are not satisfied, the attribute is changed immediately, but the index is not rebuilt until the next time the queue manager is restarted. The reply sent by the queue manager indicates if this is the case.

This attribute can be changed to MSGTOKEN only when there are no messages on the queue. If you attempt to change this attribute to MSGTOKEN while there are messages on the queue, the command fails.

This attribute is supported only on OS/390. On other platforms, retrieval optimization might be provided, but it is not controlled by a queue attribute.

INITQ(*string*)
The local name of a local queue (known as the *initiation queue*) on this queue manager, to which trigger messages relating to this queue are written. See “Rules for naming MQSeries objects” on page 4.

MAXDEPTH(*integer*)
The maximum number of messages allowed on the queue. Specify a value greater than or equal to zero, and less than or equal to:
- 999 999 999 if the queue is on OS/390
- 640 000 if the queue is on any other MQSeries platform

Other factors might still cause the queue to be treated as full, for example, if there is no further DASD space available.

If this value is reduced, any messages that are already on the queue that cause the new maximum to be exceeded remain intact.

MAXMSGL(*integer*)

The maximum length of messages on this queue.

On AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT, specify a value greater than or equal to zero, and less than or equal to the maximum message length for the queue manager as defined by the MAXMSGL parameter of the ALTER QMGR command. See “ALTER QMGR” on page 62 for more information.

On other platforms, specify a value greater than or equal to zero, and less than or equal to 4 MB, or 4 194 304 bytes.

For a transmission queue, this value includes the space required for headers. It is recommended that the value should be at least 4000 bytes larger than the maximum expected length of user data in any message that could be put on a transmission queue.

If this value is reduced, any messages that are already on the queue, whose length exceeds the new maximum, are not affected.

Applications can use this attribute to determine the size of buffer they need to retrieve messages from the queue. Therefore, the value should only be reduced if it is known that this will not cause an application to operate incorrectly.

MSGDLVSQ

Message delivery sequence:

PRIORITY	Messages are delivered (in response to **MQGET** API calls) in first-in-first-out (FIFO) order within priority. This is the default supplied with MQSeries, but your installation might have changed it.
FIFO	Messages are delivered (in response to **MQGET** API calls) in FIFO order. Priority is ignored for messages on this queue.

If the message delivery sequence is changed from PRIORITY to FIFO while there are messages on the queue, the order of the messages already enqueued is not changed. Messages added to the queue subsequently take the default priority of the queue, and so might be processed before some of the existing messages.

If the message delivery sequence is changed from FIFO to PRIORITY, the messages enqueued while the queue was set to FIFO take the default priority.

NOHARDENBO and **HARDENBO**

Whether hardening should be used to ensure that the count of the number of times that a message has been backed out is accurate.

NOHARDENBO	The count is not hardened. This is the default supplied with MQSeries, but your installation might have changed it.
HARDENBO	The count is hardened.

NOSHARE and **SHARE**

Whether multiple applications can get messages from this queue:

NOSHARE	A single application instance only can get messages from the queue
SHARE	More than one application instance can get messages from the queue

NOTRIGGER and **TRIGGER**

Whether trigger messages are written to the initiation queue (named by the INITQ attribute) to trigger the application (named by the PROCESS attribute):

NOTRIGGER	Triggering is not active, and trigger messages are not written to the initiation queue. This is the default supplied with MQSeries, but your installation might have changed it.
TRIGGER	Triggering is active, and trigger messages are written to the initiation queue.

This attribute can also be changed using the **MQSET** API call.

PROCESS(*string*)

The local name of the MQSeries process. This is the name of a process instance that identifies the application started by the queue manager when a trigger event occurs. See "Rules for naming MQSeries objects" on page 4.

The process does not have to be defined when the local queue is defined, but it *must* be available for a trigger event to occur.

If the queue is a transmission queue, the process gives the name of the channel to be started. This parameter is optional for transmission queues on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT; if you do not specify it, the channel name is taken from the value specified for the TRIGDATA parameter.

QDEPTHHI(*integer*)

The threshold against which the queue depth is compared to generate a Queue Depth High event.

This event indicates that an application has put a message on a queue, and this has caused the number of messages on the queue to become greater than or equal to the queue depth high threshold. See the QDPHIEV attribute.

The value is expressed as a percentage of the maximum queue depth (MAXDEPTH attribute), and must be greater than or equal to zero, and less than or equal to 100.

QDEPTHLO(*integer*)

The threshold against which the queue depth is compared to generate a Queue Depth Low event.

This event indicates that an application has retrieved a message from a queue, and this has caused the number of messages on the queue to become less than or equal to the queue depth low threshold. See the QDPLOEV attribute.

The value is expressed as a percentage of the maximum queue depth (MAXDEPTH attribute), and must be greater than or equal to zero, and less than or equal to 100.

QDPHIEV

Controls whether Queue Depth High events are generated.

A Queue Depth High event indicates that an application has put a message on a queue, and this has caused the number of messages on the queue to become greater than or equal to the queue depth high threshold (see the QDEPTHHI attribute).

Note: The value of this attribute can change implicitly. See the description of the Queue Depth High event in the *MQSeries Programmable System Management* manual for more details.

ENABLED	Queue Depth High events are generated
DISABLED	Queue Depth High events are not generated

QDPLOEV

Controls whether Queue Depth Low events are generated.

A Queue Depth Low event indicates that an application has retrieved a message from a queue, and this has caused the number of messages on the queue to become less than or equal to the queue depth low threshold (see the QDEPTHLO attribute).

Note: The value of this attribute can change implicitly. See the description of the Queue Depth Low event in the *MQSeries Programmable System Management* manual for more details.

ENABLED	Queue Depth Low events are generated
DISABLED	Queue Depth Low events are not generated

QDPMAXEV

Controls whether Queue Full events are generated.

A Queue Full event indicates that a put to a queue has been rejected because the queue is full, that is, the queue depth has already reached its maximum value.

Note: The value of this attribute can change implicitly. See the description of the Queue Full event in the *MQSeries Programmable System Management* manual for more details.

ENABLED	Queue Full events are generated
DISABLED	Queue Full events are not generated

QSVCIEV

Controls whether Service Interval High or Service Interval OK events are generated.

A Service Interval High event is generated when a check indicates that no messages have been retrieved from the queue for at least the time indicated by the QSVCINT attribute.

A Service Interval OK event is generated when a check indicates that messages have been retrieved from the queue within the time indicated by the QSVCINT attribute.

Note: The value of this attribute can change implicitly. See the description of the Service Interval High and Service Interval OK events in the *MQSeries Programmable System Management* manual for more details.

HIGH	Service Interval High events are generated
OK	Service Interval OK events are generated
NONE	No service interval events are generated

QSVCINT(*integer*)
The service interval used for comparison to generate Service Interval High and Service Interval OK events. See the QSVCIEV attribute.

The value is in units of milliseconds, and must be greater than or equal to zero, and less than or equal to 999 999 999.

RETINTVL(*integer*)
The number of hours (greater than or equal to zero, and less than or equal to 999 999 999) from the queue creation date and time (the date and time at which the queue was defined), after which the queue is no longer needed. The CRDATE and CRTIME can be displayed using the DISPLAY QUEUE command.

This information is available for use by an operator or a housekeeping application to delete queues that are no longer required.

Note: The queue manager does not delete queues based on this value, nor does it prevent queues from being deleted if their retention interval has not expired. It is the user's responsibility to take any required action.

SCOPE
Specifies the scope of the queue definition.

QMGR
The queue definition has queue-manager scope. This means that the definition of the queue does not extend beyond the queue manager that owns it. To open the queue for output from some other queue manager, either the name of the owning queue manager must be specified, or the other queue manager must have a local definition of the queue.

If the SCOPE attribute of a queue is changed from CELL to QMGR, the entry for the queue is deleted from the cell directory.

CELL The queue definition has cell scope. This means that the queue is known to all of the queue managers in the cell, and can be opened for output merely by specifying the name of the queue; the name of the queue manager that owns the queue need not be specified.

If the SCOPE attribute of a queue is changed from QMGR to CELL, an entry for the queue is created in the cell directory. If there is already a queue with the same name in the cell directory, the command fails.

The SCOPE attribute of a dynamic queue cannot be changed to CELL.

This value is valid only if a name service supporting a cell directory (for example, the supplied DCE name service) has been configured.

| This attribute is valid only on Digital OpenVMS, OS/2 Warp, UNIX
| systems, and Windows NT.

STGCLASS(*string*)
The name of the storage class. This is an installation-defined name.

This attribute is valid only on OS/390. See the *MQSeries for OS/390 System Management Guide* for more details. The first character of the name must be uppercase A–Z, and subsequent characters either uppercase A–Z or numeric 0–9.

Note: This attribute can be changed only if the queue is empty and closed.

TRIGDATA(*string*)
The data that is inserted in the trigger message. The maximum length of the string is 64 bytes.

For a transmission queue on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, or Windows NT, you can use this parameter to specify the name of the channel to be started.

This attribute can also be changed using the **MQSET** API call.

TRIGDPTH(*integer*)
The number of messages that have to be on the queue before a trigger message is written, if TRIGTYPE is DEPTH. The value must be greater than zero, and less than or equal to 999 999 999.

This attribute can also be changed using the **MQSET** API call.

TRIGMPRI(*integer*)
The message priority number that will trigger this queue. The value must be greater than or equal to zero, and less than or equal to the MAXPRTY queue manager attribute (see "DISPLAY QMGR" on page 206 for details).

This attribute can also be changed using the **MQSET** API call.

TRIGTYPE
Whether and under what conditions a trigger message is written to the initiation queue (named by the INITQ attribute):

FIRST	Whenever the first message of priority equal to or greater than that specified by the TRIGMPRI attribute of the queue arrives on the queue.
EVERY	Every time a message arrives on the queue with priority equal to or greater than that specified by the TRIGMPRI attribute of the queue.
DEPTH	When the number of messages with priority equal to or greater than that specified by TRIGMPRI is equal to the number indicated by the TRIGDPTH attribute.
NONE	No trigger messages are written.

This attribute can also be changed using the **MQSET** API call.

USAGE
Queue usage:

NORMAL	The queue is not a transmission queue.
XMITQ	The queue is a transmission queue, which is used to hold messages that are destined for a remote queue manager. When an application puts a message to a remote queue, the message is stored on the appropriate transmission queue until it has been successfully transmitted and stored at the remote queue manager. If you specify this option, do not specify values for CLUSTER and CLUSNL, and do not specify INDXTYPE(MSGTOKEN).

Do not change the USAGE attribute while there are messages on that queue.

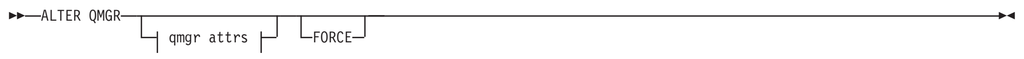
ALTER QMGR

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

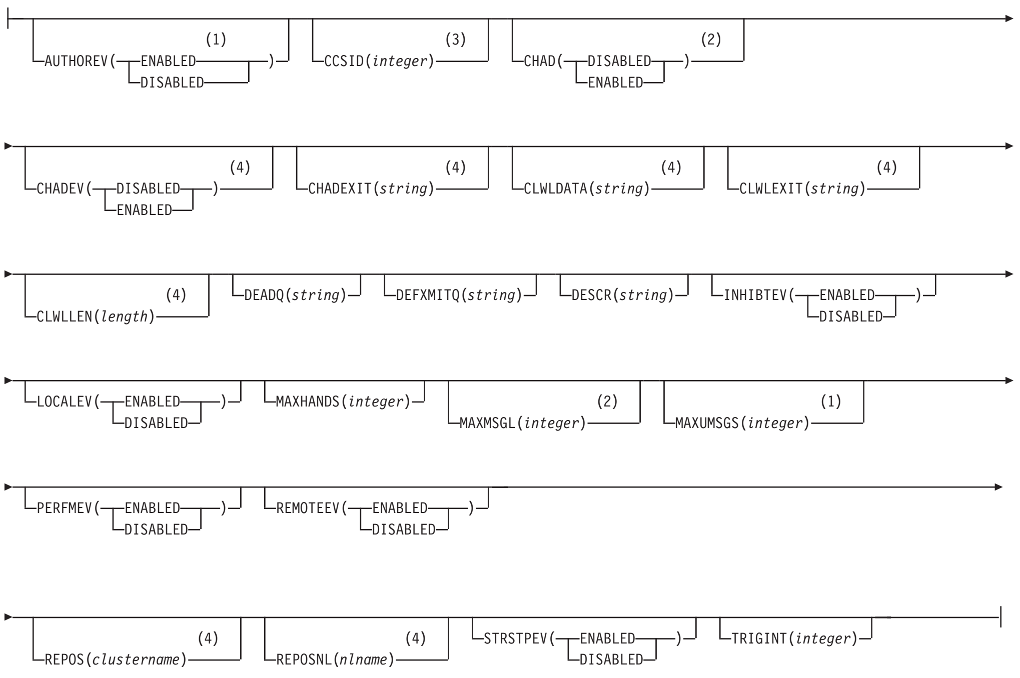
Use ALTER QMGR to alter the queue manager attributes for the local queue manager.

Synonym: ALT QMGR

ALTER QMGR



Qmgr attrs:



Notes:

1 Not valid on OS/390.

2 Valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

3 Valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, Tandem NSK, and Windows NT.

4 Valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

Keyword and parameter descriptions

The attributes you specify override the current values. Attributes that you do not specify are unchanged.

Notes:

1. If you do not specify any attributes, the command completes successfully, but no queue manager options are changed.
2. Changes made using this command persist when the queue manager is stopped and restarted.

FORCE
Specify this to force completion of the command if both of the following are true:

- The DEFXMITQ keyword is specified
- An application has a remote queue open, the resolution for which would be affected by this change

If FORCE is not specified in these circumstances, the command is unsuccessful.

Queue manager attributes

AUTHOREV
Whether authorization (Not Authorized) events are generated:

ENABLED	Authorization events are generated. This value is not supported on OS/390.
DISABLED	Authorization events are not generated. This is the queue manager's initial default value.

CCSID(*integer*)
The coded character set identifier for the queue manager. The CCSID is the identifier used with all character string fields defined by the API. It does not apply to application data carried in the text of messages unless the CCSID in the message descriptor is set to the value MQCCSI_Q_MGR when the message is put to a queue.

Specify a value in the range 1 through 65 535. The CCSID must specify a value that is defined for use on your platform, and use a character set that is appropriate to the platform.

| If you use this keyword to change the CCSID, applications that are running when the change is applied continue to use the original CCSID. Because of this, you must stop and restart all running applications before you continue. This includes the command server and channel programs. To do this, stop and restart the queue manager after making the change.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, Tandem NSK, and Windows NT. See the *MQSeries Application Programming Guide* for details of the supported CCSIDs for each platform.

CHAD
Whether receiver and server-connection channels can be defined automatically:

DISABLED	Auto-definition is not used. This is the queue manager's initial default value.
ENABLED	Auto-definition is used.

Cluster-sender channels can always be defined automatically, regardless of the setting of this parameter.

This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

CHADEV
Whether channel auto-definition events are generated.

DISABLED	Auto-definition events are not generated. This is the queue manager's initial default value.
ENABLED	Auto-definition events are generated.

This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

CHADEXIT(*string*)
Auto-definition exit name.

If this name is nonblank, the exit is called when an inbound request for an undefined receiver, server-connection, or cluster-sender channel is received. It is also called when starting a cluster-receiver channel.

The format and maximum length of the name depends on the environment:

- On OS/2 Warp, Windows, and Windows NT, it is of the form *dllname(functionname)* where *dllname* is specified without the suffix (".DLL"). The maximum length of the string is 128 characters.
- On OS/400, it is of the form:
  ```
  progname libname
  ```
  where *program name* occupies the first 10 characters and *libname* the second 10 characters (both blank-padded to the right if necessary). The maximum length of the string is 20 characters.
- On AIX, HP-UX, and Sun Solaris, it is of the form *libraryname(functionname)*. The maximum length of the string is 128 characters.
- On OS/390, it is a load module name, maximum length 8 characters.

This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT. On OS/390, it applies only to cluster-sender and cluster-receiver channels.

CLWLDATA(*string*)
Cluster workload exit data (maximum length 32 characters).

This is passed to the cluster workload exit when it is called.

This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

CLWLEXIT(*string*)
Cluster workload exit name.

If this name is nonblank, the exit is called when a message is put to a cluster queue. The format and maximum length of the name depends on the environment:

- On UNIX systems, it is of the form *libraryname(functionname)*. The maximum length is 128 characters.
- On OS/2 Warp and Windows NT, it is of the form *dllname(functionname)*, where *dllname* is specified without the suffix (".DLL"). The maximum length is 128 characters.
- On OS/390, it is a load module name, maximum length 8 characters.
- On OS/400, it is of the form:

  ```
  progname libname
  ```

  where *program name* occupies the first 10 characters and *libname* the second 10 characters (both blank-padded to the right if necessary). The maximum length of the string is 20 characters.

This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

CLWLLEN(*length*)
The maximum number of bytes of message data that is passed to the cluster workload exit.

Specify a value between zero and 4 MB for OS/390, or between zero and 999 999 999 on other platforms. The initial default value is 100.

This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

DEADQ(*string*)
The local name of a dead-letter queue (or undelivered-message queue) on which messages that cannot be routed to their correct destination are put.

The queue named must be a local queue. See "Rules for naming MQSeries objects" on page 4.

DEFXMITQ(*string*)
Local name of the default transmission queue on which messages destined for a remote queue manager are put, if there is no other suitable transmission queue defined.

The queue named must be a local transmission queue. See "Rules for naming MQSeries objects" on page 4.

DESCR(*string*)
Plain-text comment. It provides descriptive information about the queue manager.

It should contain only displayable characters. The maximum length is 64 characters. In a DBCS installation, it can contain DBCS characters (subject to a maximum length of 64 bytes).

Note: If characters are used that are not in the coded character set identifier (CCSID) for this queue manager, they might be translated incorrectly if the information is sent to another queue manager.

INHIBTEV
Whether inhibit (Inhibit Get and Inhibit Put) events are generated:

ENABLED	Inhibit events are generated.
DISABLED	Inhibit events are not generated. This is the queue manager's initial default value.

LOCALEV
Whether local error events are generated:

ENABLED	Local error events are generated.
DISABLED	Local error events are not generated. This is the queue manager's initial default value.

MAXHANDS(*integer*)
The maximum number of open handles that any one task can have at the same time.

Do not specify a value less than zero or greater than 999 999 999.

MAXMSGL(*integer*)
The maximum length of messages allowed on queues for this queue manager.

| This is in the range 32 KB through 100 MB. The default is 4 MB (4 194 403
| bytes).

If you reduce the maximum message length for the queue manager, you should also reduce the maximum message length of the SYSTEM.DEFAULT.LOCAL.QUEUE definition, and all other queues connected to the queue manager. This ensures that the queue manager's limit is not less than that of any of the queues associated with it. If you do not do this, and applications inquire only the value of the queue's MAXMSGL, they might not work correctly.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun
| Solaris, and Windows NT.

MAXUMSGS(*integer*)
The maximum number of uncommitted messages within a syncpoint.

This is a limit on
- the number of messages that can be retrieved, plus
- the number of messages that can be put

within any one syncpoint. It does not apply to messages that are put or retrieved outside syncpoint.

The number includes any trigger messages and report messages generated within the same unit of recovery.

Specify a value in the range 1 through 999 999 999.

This attribute is not supported on OS/390. See the DEFINE MAXSMSGS command instead.

PERFMEV
Whether performance-related events are generated:

ENABLED	Performance-related events are generated.
DISABLED	Performance-related events are not generated. This is the queue manager's initial default value.

REMOTEEV
Whether remote error events are generated:

ENABLED	Remote error events are generated.

DISABLED	Remote error events are not generated. This is the queue manager's initial default value.

REPOS(*clustername*)
The name of a cluster for which this queue manager is to provide a repository manager service. The maximum length is 48 characters conforming to the rules for naming MQSeries objects.

| No more than one of the resultant values of REPOS can be nonblank.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400,
| Sun Solaris, and Windows NT.

REPOSNL(*nlname*)
The name of a namelist of clusters for which this queue manager is to provide a repository manager service.

| No more than one of the resultant values of REPOSNL can be nonblank.

| If both REPOS and REPOSNL are blank, or REPOS is blank and the
| namelist specified by REPOSNL is empty, this queue manager does not
| have a full repository, but might be a client of other repository services that
| are defined in the cluster.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400,
| Sun Solaris, and Windows NT.

STRSTPEV
Whether start and stop events are generated:

ENABLED	Start and stop events are generated. This is the queue manager's initial default value.
DISABLED	Start and stop events are not generated.

TRIGINT(*integer*)
A time interval expressed in milliseconds.

The TRIGINT attribute is relevant only if the trigger type (TRIGTYPE) is set to FIRST (see "DEFINE QLOCAL" on page 134 for details). In this case trigger messages are normally generated only when a suitable message arrives on the queue, and the queue was previously empty. Under certain circumstances, however an additional trigger message can be generated with FIRST triggering even if the queue was not empty. These additional trigger messages are not generated more often than every TRIGINT milliseconds. See the *MQSeries Application Programming Guide* for more information.

Do not specify a value less than zero or greater than 999 999 999.

ALTER QMODEL

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

Use ALTER QMODEL to alter the attributes of a model queue.

Synonym: ALT QM

ALTER QMODEL

```
►►──ALTER QMODEL(q-name)──┬────────────────────┬─┬───────────────────┬─┬──────────────────┬──────────►◄
                          └─┤ common q attrs ├─┘ └─┤ local q attrs ├─┘ └─┤ model q attr ├─┘
```

Common q attrs:

```
├──┬──────────────────┬─┬─────────────────────────┬─┬───────────────┬─┬─────────────────────────┬──────────┤
   └─DEFPRTY(integer)─┘ └─DEFPSIST(──┬─NO──┬──)──┘ └─DESCR(string)─┘ └─PUT(──┬─ENABLED──┬──)─┘
                                     └─YES─┘                                 └─DISABLED─┘
```

Local q attrs:

```
├──┬─────────────────┬─┬───────────────────┬─┬─────────────────────────┬─┬─────────────────────────┬──────►
   └─BOQNAME(string)─┘ └─BOTHRESH(integer)─┘ └─DEFSOPT(──┬─EXCL───┬──)─┘ │                    (1)  │
                                                         └─SHARED─┘      └─DISTL(──┬─NO──┬──)──────┘
                                                                                   └─YES─┘

►──┬─────────────────────────┬─┬─────────────────────────────────┬─┬───────────────┬─┬───────────────────┬──►
   └─GET(──┬─ENABLED──┬──)──┘ │                            (2)  │ └─INITQ(string)─┘ └─MAXDEPTH(integer)─┘
           └─DISABLED─┘        └─INDXTYPE(──┬─CORRELID──┬──)────┘
                                            ├─MSGID─────┤
                                            ├─MSGTOKEN──┤
                                            └─NONE──────┘

►──┬──────────────────┬─┬─────────────────────────────┬─┬──────────────┬─┬───────────┬─┬─────────────┬───►
   └─MAXMSGL(integer)─┘ └─MSGDLVSQ(──┬─PRIORITY─┬──)─┘ └─┬─NOHARDENBO─┬─┘ └─┬─NOSHARE─┬─┘ └─┬─NOTRIGGER─┬─┘
                                     └─FIFO─────┘         └─HARDENBO───┘     └─SHARE───┘     └─TRIGGER───┘

►──┬─────────────────┬─┬───────────────────┬─┬───────────────────┬─┬─────────────────────────────┬──────────►
   └─PROCESS(string)─┘ └─QDEPTHHI(integer)─┘ └─QDEPTHLO(integer)─┘ └─QDPHIEV(──┬─ENABLED──┬──)─┘
                                                                               └─DISABLED─┘

►──┬─────────────────────────────┬──────────────────────────────────────────────────────────────────────────►
   └─QDPLOEV(──┬─ENABLED──┬──)──┘
               └─DISABLED─┘

►──┬──────────────────────────────┬─┬────────────────────────┬─┬──────────────────┬─┬───────────────────┬──►
   └─QDPMAXEV(──┬─ENABLED──┬──)──┘ └─QSVCIEV(──┬─NONE─┬──)──┘ └─QSVCINT(integer)─┘ └─RETINTVL(integer)─┘
                └─DISABLED─┘                   ├─HIGH─┤
                                               └─OK───┘

►──┬──────────────────────────┬─┬──────────────────┬─┬───────────────────┬─┬───────────────────┬──────────►
   │                     (2)  │ └─TRIGDATA(string)─┘ └─TRIGDPTH(integer)─┘ └─TRIGMPRI(integer)─┘
   └─STGCLASS(string)─────────┘
```

```
►─┬──────────────────────────────┬─┬──────────────────────────┬──────────────────────────────────────┤
  └─TRIGTYPE(─┬─FIRST──┬─)─┘ └─USAGE(─┬─NORMAL─┬─)─┘
              ├─EVERY──┤                  └─XMITQ──┘
              ├─DEPTH──┤
              └─NONE───┘
```

Model q attr:

```
├─┬─────────────────────────────┬──────────────────────────────────────────────────────────────────┤
  └─DEFTYPE(─┬─TEMPDYN─┬─)─┘
             └─PERMDYN─┘
```

Notes:

1 Valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

2 Valid only on OS/390.

Keyword and parameter descriptions

You must specify which model queue you want to alter.

The attributes that you specify override the current values. Attributes that you do not specify are unchanged.

(q-name)
The local name of the model queue to be altered (see "Rules for naming MQSeries objects" on page 4). The name must be defined to the local queue manager.

Common queue attributes

DEFPRTY(*integer***)**
The default priority of messages put on the queue. The value must be greater than or equal to zero, (the lowest priority) and less than or equal to the MAXPRTY queue manager attribute. MAXPRTY can be displayed using the DISPLAY QMGR command. (MAXPRTY is 9.)

DEFPSIST
Specifies the message persistence to be used when applications specify the MQPER_PERSISTENCE_AS_Q_DEF option.

NO	Messages on this queue are lost across a restart of the queue manager. This is the default supplied with MQSeries, but your installation might have changed it.
YES	Messages on this queue survive a restart of the queue manager. Persistent messages are not allowed on a temporary dynamic queue. In order to avoid an error if a message is put to such a queue with default persistence, do not set the DEFPSIST attribute to YES for model queue definitions that have a DEFTYPE of TEMPDYN.

DESCR(*string***)**
Plain-text comment. It provides descriptive information about the object when an operator issues the DISPLAY QUEUE command.

It should contain only displayable characters. The maximum length is 64 characters. In a DBCS installation, it can contain DBCS characters (subject to a maximum length of 64 bytes).

Note: If characters are used that are not in the coded character set identifier (CCSID) for this queue manager, they might be translated incorrectly if the information is sent to another queue manager.

PUT Whether messages can be put on the queue.

ENABLED	Messages can be added to the queue (by suitably authorized applications). This is the default supplied with MQSeries, but your installation might have changed it.
DISABLED	Messages cannot be added to the queue.

This attribute can also be changed using the **MQSET** API call.

Local queue attributes

BOQNAME(*string***)**
| The excessive backout requeue name. Apart from maintaining a value for
| this attribute, the queue manager takes no action based on its value.

BOTHRESH(*integer***)**
| The backout threshold. Apart from maintaining a value for this attribute,
| the queue manager takes no action based on its value.

Specify a value greater than or equal to zero, and less than or equal to 999 999 999.

DEFSOPT
The default share option for applications opening this queue for input:

EXCL	The open request is for exclusive input from the queue
SHARED	The open request is for shared input from the queue

DISTL
Whether distribution lists are supported by the partner queue manager.

YES	Distribution lists are supported by the partner queue manager.
NO	Distribution lists are not supported by the partner queue manager.

Note: You should not normally change this attribute, because it is set by the MCA. However you can set this attribute when defining a transmission queue if the distribution list capability of the destination queue manager is known.

This keyword is valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

GET Whether applications are to be permitted to get messages from this queue:

ENABLED	Messages can be retrieved from the queue (by suitably authorized applications). This is the default supplied with MQSeries, but your installation might have changed it.
DISABLED	Applications cannot retrieve messages from the queue.

This attribute can also be changed using the **MQSET** API call.

INDXTYPE
The type of index maintained by the queue manager to expedite **MQGET** operations on the queue:

NONE	No index is maintained. Use this when messages are usually retrieved sequentially or use both the message identifier and the correlation identifier as a selection criterion on the **MQGET** call.
MSGID	An index of message identifiers is maintained. Use this when messages are usually retrieved using the message identifier as a selection criterion on the **MQGET** call with the correlation identifier set to NULL.
CORRELID	An index of correlation identifiers is maintained. Use this when messages are usually retrieved using the correlation identifier as a selection criterion on the **MQGET** call with the message identifier set to NULL.
MSGTOKEN	An index of message tokens is maintained. Use this when the queue is a WLM managed queue that you are using with the Workload Manager functions of OS/390. **Note:** If the queue is a transmission queue or a temporary-dynamic queue, you cannot set INDXTYPE to MSGTOKEN.

The INDXTYPE attribute can be changed to NONE, MSGID, or CORRELID at any time, and the change takes effect immediately if all the following conditions are satisfied:
- No applications have the queue open
- The queue is empty
- There are no uncommitted **MQPUT** or **MQGET** operations outstanding against the queue

If these conditions are not satisfied, the attribute is changed immediately, but the index is not rebuilt until the next time the queue manager is restarted. The reply sent by the queue manager indicates if this is the case.

This attribute can be changed to MSGTOKEN only when there are no messages on the queue. If you attempt to change this attribute to MSGTOKEN while there are messages on the queue, the command fails.

This attribute is supported only on OS/390. On other platforms, retrieval optimization might be provided, but it is not controlled by a queue attribute.

INITQ(*string*)
The local name of a local queue (known as the *initiation queue*) on this queue manager, to which trigger messages relating to this queue are written. See “Rules for naming MQSeries objects” on page 4.

MAXDEPTH(*integer*)
The maximum number of messages allowed on the queue. Specify a value greater than or equal to zero, and less than or equal to:
- 999 999 999 if the queue is on OS/390
- 640 000 if the queue is on any other MQSeries platform

Other factors might still cause the queue to be treated as full, for example, if there is no further DASD space available.

If this value is reduced, any messages that are already on the queue that cause the new maximum to be exceeded remain intact.

MAXMSGL(*integer*)
The maximum length of messages on this queue.

On AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT, specify a value greater than or equal to zero, and less than or equal to the maximum message length for the queue manager as defined by the MAXMSGL parameter of the ALTER QMGR command. See “ALTER QMGR” on page 62 for more information.

On other platforms, specify a value greater than or equal to zero, and less than or equal to 4 MB, or 4 194 304 bytes.

For a transmission queue, this value includes the space required for headers. It is recommended that the value should be at least 4000 bytes larger than the maximum expected length of user data in any message that could be put on a transmission queue.

If this value is reduced, any messages that are already on the queue, whose length exceeds the new maximum, are not affected.

Applications can use this attribute to determine the size of buffer they need to retrieve messages from the queue. Therefore, the value should only be reduced if it is known that this will not cause an application to operate incorrectly.

MSGDLVSQ
Message delivery sequence:

PRIORITY	Messages are delivered (in response to **MQGET** API calls) in first-in-first-out (FIFO) order within priority. This is the default supplied with MQSeries, but your installation might have changed it.
FIFO	Messages are delivered (in response to **MQGET** API calls) in FIFO order. Priority is ignored for messages on this queue.

If the message delivery sequence is changed from PRIORITY to FIFO while there are messages on the queue, the order of the messages already enqueued is not changed. Messages added to the queue subsequently take the default priority of the queue, and so might be processed before some of the existing messages.

If the message delivery sequence is changed from FIFO to PRIORITY, the messages enqueued while the queue was set to FIFO take the default priority.

NOHARDENBO and **HARDENBO**
Whether hardening should be used to ensure that the count of the number of times that a message has been backed out is accurate.

NOHARDENBO	The count is not hardened. This is the default supplied with MQSeries, but your installation might have changed it.
HARDENBO	The count is hardened.

NOSHARE and **SHARE**
Whether multiple applications can get messages from this queue:

NOSHARE	A single application instance only can get messages from the queue
SHARE	More than one application instance can get messages from the queue

NOTRIGGER and **TRIGGER**
Whether trigger messages are written to the initiation queue (named by the INITQ attribute) to trigger the application (named by the PROCESS attribute):

NOTRIGGER	Triggering is not active, and trigger messages are not written to the initiation queue. This is the default supplied with MQSeries, but your installation might have changed it.
TRIGGER	Triggering is active, and trigger messages are written to the initiation queue.

This attribute can also be changed using the **MQSET** API call.

PROCESS(*string*)
The local name of the MQSeries process. This is the name of a process instance that identifies the application started by the queue manager when a trigger event occurs. See “Rules for naming MQSeries objects” on page 4.

The process does not have to be defined when the local queue is defined, but it *must* be available for a trigger event to occur.

If the queue is a transmission queue, the process gives the name of the channel to be started. This parameter is optional for transmission queues on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT; if you do not specify it, the channel name is taken from the value specified for the TRIGDATA parameter.

QDEPTHHI(*integer*)
The threshold against which the queue depth is compared to generate a Queue Depth High event.

This event indicates that an application has put a message on a queue, and this has caused the number of messages on the queue to become greater than or equal to the queue depth high threshold. See the QDPHIEV attribute.

The value is expressed as a percentage of the maximum queue depth (MAXDEPTH attribute), and must be greater than or equal to zero, and less than or equal to 100.

QDEPTHLO(*integer*)
The threshold against which the queue depth is compared to generate a Queue Depth Low event.

This event indicates that an application has retrieved a message from a queue, and this has caused the number of messages on the queue to become less than or equal to the queue depth low threshold. See the QDPLOEV attribute.

The value is expressed as a percentage of the maximum queue depth (MAXDEPTH attribute), and must be greater than or equal to zero, and less than or equal to 100.

QDPHIEV
Controls whether Queue Depth High events are generated.

A Queue Depth High event indicates that an application has put a message on a queue, and this has caused the number of messages on the queue to become greater than or equal to the queue depth high threshold (see the QDEPTHHI attribute).

Note: The value of this attribute can change implicitly. See the description of the Queue Depth High event in the *MQSeries Programmable System Management* manual for more details.

ENABLED	Queue Depth High events are generated

DISABLED	Queue Depth High events are not generated

QDPLOEV

Controls whether Queue Depth Low events are generated.

A Queue Depth Low event indicates that an application has retrieved a message from a queue, and this has caused the number of messages on the queue to become less than or equal to the queue depth low threshold (see the QDEPTHLO attribute).

Note: The value of this attribute can change implicitly. See the description of the Queue Depth Low event in the *MQSeries Programmable System Management* manual for more details.

ENABLED	Queue Depth Low events are generated
DISABLED	Queue Depth Low events are not generated

QDPMAXEV

Controls whether Queue Full events are generated.

A Queue Full event indicates that a put to a queue has been rejected because the queue is full, that is, the queue depth has already reached its maximum value.

Note: The value of this attribute can change implicitly. See the description of the Queue Full event in the *MQSeries Programmable System Management* manual for more details.

ENABLED	Queue Full events are generated
DISABLED	Queue Full events are not generated

QSVCIEV

Controls whether Service Interval High or Service Interval OK events are generated.

A Service Interval High event is generated when a check indicates that no messages have been retrieved from the queue for at least the time indicated by the QSVCINT attribute.

A Service Interval OK event is generated when a check indicates that messages have been retrieved from the queue within the time indicated by the QSVCINT attribute.

Note: The value of this attribute can change implicitly. See the description of the Service Interval High and Service Interval OK events in the *MQSeries Programmable System Management* manual for more details.

HIGH	Service Interval High events are generated
OK	Service Interval OK events are generated
NONE	No service interval events are generated

QSVCINT(*integer*)

The service interval used for comparison to generate Service Interval High and Service Interval OK events. See the QSVCIEV attribute.

The value is in units of milliseconds, and must be greater than or equal to zero, and less than or equal to 999 999 999.

RETINTVL(*integer*)
The number of hours (greater than or equal to zero, and less than or equal to 999 999 999) from the queue creation date and time (the date and time at which the queue was defined), after which the queue is no longer needed. The CRDATE and CRTIME can be displayed using the DISPLAY QUEUE command.

This information is available for use by an operator or a housekeeping application to delete queues that are no longer required.

Note: The queue manager does not delete queues based on this value, nor does it prevent queues from being deleted if their retention interval has not expired. It is the user's responsibility to take any required action.

STGCLASS(*string*)
The name of the storage class. This is an installation-defined name.

This attribute is valid only on OS/390. See the *MQSeries for OS/390 System Management Guide* for more details. The first character of the name must be uppercase A–Z, and subsequent characters either uppercase A–Z or numeric 0–9.

Note: This attribute can be changed only if the queue is empty and closed.

TRIGDATA(*string*)
The data that is inserted in the trigger message. The maximum length of the string is 64 bytes.

For a transmission queue on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, or Windows NT, you can use this parameter to specify the name of the channel to be started.

This attribute can also be changed using the **MQSET** API call.

TRIGDPTH(*integer*)
The number of messages that have to be on the queue before a trigger message is written, if TRIGTYPE is DEPTH. The value must be greater than zero, and less than or equal to 999 999 999.

This attribute can also be changed using the **MQSET** API call.

TRIGMPRI(*integer*)
The message priority number that will trigger this queue. The value must be greater than or equal to zero, and less than or equal to the MAXPRTY queue manager attribute (see "DISPLAY QMGR" on page 206 for details).

This attribute can also be changed using the **MQSET** API call.

TRIGTYPE
Whether and under what conditions a trigger message is written to the initiation queue (named by the INITQ attribute):

FIRST	Whenever the first message of priority equal to or greater than that specified by the TRIGMPRI attribute of the queue arrives on the queue.
EVERY	Every time a message arrives on the queue with priority equal to or greater than that specified by the TRIGMPRI attribute of the queue.
DEPTH	When the number of messages with priority equal to or greater than that specified by TRIGMPRI is equal to the number indicated by the TRIGDPTH attribute.
NONE	No trigger messages are written.

This attribute can also be changed using the **MQSET** API call.

USAGE
Queue usage:

NORMAL	The queue is not a transmission queue.
XMITQ	The queue is a transmission queue, which is used to hold messages that are destined for a remote queue manager. When an application puts a message to a remote queue, the message is stored on the appropriate transmission queue until it has been successfully transmitted and stored at the remote queue manager. If you specify this option, do not specify INDXTYPE(MSGTOKEN).

Model queue attribute

DEFTYPE
Queue definition type:

TEMPDYN	A temporary dynamic queue is created when an application issues an **MQOPEN** API call with the name of this model queue specified in the object descriptor (MQOD). Do not specify this value for a model queue definition with a DEFPSIST attribute of YES. If you specify this option, do not specify INDXTYPE(MSGTOKEN).
PERMDYN	A permanent dynamic queue is created when an application issues an **MQOPEN** API call with the name of this model queue specified in the object descriptor (MQOD).

ALTER QREMOTE

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

Use ALTER QREMOTE to alter the attributes of a local definition of a remote queue, a queue-manager alias, or a reply-to queue alias.

Synonym: ALT QR

ALTER QREMOTE

```
►►──ALTER QREMOTE(q-name)──┬───────┬──┬─────────────────┬──┬─────────────────┬──────────────►◄
                           └─FORCE─┘  └┤ common q attrs ├┘  └┤ remote q attrs ├┘
```

Common q attrs:

```
├──┬───────────────────┬──┬────────────────────┬──┬──────────────┬──┬──────────────────┬──────────┤
   └─DEFPRTY(integer)─┘  └─DEFPSIST(─┬─NO──┬─)─┘  └─DESCR(string)─┘  └─PUT(─┬─ENABLED──┬─)─┘
                                     └─YES─┘                             └─DISABLED─┘
```

Remote q attrs:

```
├──┬─────────────────────────────┬──┬──────────────────────────┬──┬─────────────────────────────────┬──┬───────────────┬──►
   │                         (1) │  │                      (1) │  │                             (1) │  └─RNAME(string)─┘
   └─CLUSTER(clustername)────────┘  └─CLUSNL(nlname)───────────┘  └─DEFBIND(─┬─OPEN─────┬─)────────┘
                                                                             └─NOTFIXED─┘

►──┬────────────────┬──┬──────────────────────────┬──┬───────────────┬──────────────────────┤
   └─RQMNAME(string)┘  │                      (2) │  └─XMITQ(string)─┘
                       └─SCOPE(─┬─QMGR─┬─)────────┘
                                └─CELL─┘
```

Notes:

1 Valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

2 Valid only on Digital OpenVMS, OS/2 Warp, UNIX systems, and Windows NT

Keyword and parameter descriptions

You must specify which remote queue you want to alter.

The attributes you specify override the current values. Attributes that you do not specify are unchanged.

(q-name)
The name of the local definition of the remote queue to be altered (see "Rules for naming MQSeries objects" on page 4). The name must be defined to the local queue manager.

FORCE
Specify this to force completion of the command if both of the following are true:

- The XMITQ attribute is changed
- One or more applications has this queue open as a remote queue

If FORCE is not specified in these circumstances, the command is unsuccessful.

FORCE is also needed if both of the following are true:

- Any of the RNAME, RQMNAME, or XMITQ keywords is changed
- One or more applications has a queue open which resolved through this definition as a queue-manager alias

Again, if FORCE is not specified in these circumstances, the command is unsuccessful.

Note: FORCE is not required if this definition is in use as a reply-to queue alias only.

Common queue attributes

DEFPRTY(*integer*)
The default priority of messages put on the queue. The value must be greater than or equal to zero, (the lowest priority) and less than or equal to the MAXPRTY queue manager attribute. MAXPRTY can be displayed using the DISPLAY QMGR command. (MAXPRTY is 9.)

DEFPSIST
Specifies the message persistence to be used when applications specify the MQPER_PERSISTENCE_AS_Q_DEF option.

NO	Messages on this queue are lost across a restart of the queue manager. This is the default supplied with MQSeries, but your installation might have changed it.
YES	Messages on this queue survive a restart of the queue manager.

DESCR(*string*)
Plain-text comment. It provides descriptive information about the object when an operator issues the DISPLAY QUEUE command.

It should contain only displayable characters. The maximum length is 64 characters. In a DBCS installation, it can contain DBCS characters (subject to a maximum length of 64 bytes).

Note: If characters are used that are not in the coded character set identifier (CCSID) for this queue manager, they might be translated incorrectly if the information is sent to another queue manager.

PUT Whether messages can be put on the queue.

ENABLED	Messages can be added to the queue (by suitably authorized applications). This is the default supplied with MQSeries, but your installation might have changed it.
DISABLED	Messages cannot be added to the queue.

This attribute can also be changed using the **MQSET** API call.

Remote queue attributes

CLUSTER(*clustername*)
The name of the cluster to which the queue belongs. The maximum length is 48 characters conforming to the rules for naming MQSeries objects. Changes to this parameter do not affect instances of the queue that are already open. Only one of the resultant values of CLUSTER or CLUSNL can be nonblank; you cannot specify a value for both.

This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

CLUSNL(*nlname*)
The name of the namelist that specifies a list of clusters to which the queue belongs. Changes to this parameter do not affect instances of the queue that are already open. Only one of the resultant values of CLUSTER or CLUSNL can be nonblank; you cannot specify a value for both.

This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

DEFBIND
Specifies the binding to be used when the application specifies MQOO_BIND_AS_Q_DEF on the **MQOPEN** call, and the queue is a cluster queue.

OPEN	The queue handle is bound to a specific instance of the cluster queue when the queue is opened.
NOTFIXED	The queue handle is not bound to any particular instance of the cluster queue. This allows the queue manager to select a specific queue instance when the message is put using **MQPUT**, and to change that selection subsequently should the need arise.

The **MQPUT1** call always behaves as if NOTFIXED had been specified.

This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

RNAME(*string*)
Name of remote queue. This is the local name of the queue as defined on the queue manager specified by RQMNAME.

- If this definition is used for a local definition of a remote queue, RNAME must not be blank when the open occurs.
- If this definition is used for a queue-manager alias definition, RNAME must be blank when the open occurs.
- If this definition is used for a reply-to alias, this name is the name of the queue that is to be the reply-to queue.

The name is *not* checked to ensure that it contains only those characters normally allowed for queue names (see "Rules for naming MQSeries objects" on page 4).

RQMNAME(*string*)
The name of the remote queue manager on which the queue RNAME is defined.

- If an application opens the local definition of a remote queue, RQMNAME must not be blank or the name of the local queue manager. When the open occurs, if XMITQ is blank there must be a local queue of this name, which is to be used as the transmission queue.

- If this definition is used for a queue-manager alias, RQMNAME is the name of the queue manager that is being aliased. It can be the name of the local queue manager. Otherwise, then if XMITQ is blank, when the open occurs there must be a local queue of this name, which is to be used as the transmission queue.
- If this definition is used for a reply-to alias, this name is the name of the queue manager that is to be the reply-to queue manager.

The name is *not* checked to ensure that it contains only those characters normally allowed for MQSeries object names (see “Rules for naming MQSeries objects” on page 4).

SCOPE
Specifies the scope of the queue definition.

QMGR The queue definition has queue-manager scope. This means that the definition of the queue does not extend beyond the queue manager which owns it. To open the queue for output from some other queue manager, either the name of the owning queue manager must be specified, or the other queue manager must have a local definition of the queue.

CELL The queue definition has cell scope. This means that the queue is known to all of the queue managers in the cell, and can be opened for output merely by specifying the name of the queue; the name of the queue manager that owns the queue need not be specified.

If there is already a queue with the same name in the cell directory, the command fails.

This value is valid only if a name service supporting a cell directory (for example, the supplied DCE name service) has been configured.

| This attribute is only supported on Digital OpenVMS, OS/2 Warp, UNIX
| systems, and Windows NT.

XMITQ(*string*)
The name of the transmission queue to be used for forwarding messages to the remote queue, for either a remote queue or for a queue-manager alias definition.

If XMITQ is blank, a queue with the same name as RQMNAME is used instead as the transmission queue.

This attribute is ignored if the definition is being used as a queue-manager alias and RQMNAME is the name of the local queue manager.

It is also ignored if the definition is used as a reply-to queue alias definition.

ALTER SECURITY

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

Use ALTER SECURITY to define system-wide security options.

Synonym: ALT SEC

ALTER SECURITY

```
►►──ALTER SECURITY──┬─────────────────────┬──────────────────────────────────►◄
                    └─┤ security attrs ├──┘
```

Security attrs:

```
├──┬───────────────────┬──┬──────────────────┬──────────────────────────────────┤
   └─INTERVAL(integer)─┘  └─TIMEOUT(integer)─┘
```

Keyword and parameter descriptions

The attributes you specify override the current attribute values. Attributes that you do not specify are unchanged.

Note: If you do not specify any attributes, the command completes successfully, but no security options are changed.

INTERVAL(*integer*)
The interval between checks for user IDs for which the TIMEOUT has expired. The value is in minutes, in the range 0–10080 (one week). If INTERVAL is specified as 0, no user time-outs occur.

TIMEOUT(*integer*)
How long an unused, user ID can remain in the MQSeries subsystem. The value specifies a number of minutes in the range 0–10080 (one week). If TIMEOUT is specified as 0, and INTERVAL is nonzero, then all users are signed off within the queue manager every INTERVAL number of minutes.

The length of time that an unused user ID can remain depends on the value of INTERVAL. The user ID times out at a time between TIMEOUT and TIMEOUT plus INTERVAL.

When the TIMEOUT and INTERVAL attributes are changed, the previous timer request is canceled and a new timer request is scheduled immediately, using the new TIMEOUT value. When the timer request is actioned, a new value for INTERVAL is set.

ALTER STGCLASS

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

Use ALTER STGCLASS to alter the characteristics of a storage class.

Synonym: ALT STC

ALTER STGCLASS

```
►►──ALTER STGCLASS──(storage class)──┬──────────────┬──┬────────────────────┬──┬────────────────┬──┬────────────────┬──►◄
                                     └─PSID(integer)─┘  └─DESCR(description)─┘  └─XCFGNAME(gname)─┘  └─XCFMNAME(mname)─┘
```

Keyword and parameter descriptions

You can issue the ALTER STGCLASS command for a given storage class as long as that storage class already exists and is not active. This command will succeed only if all the MQSeries queues that reference the storage class are empty and closed. All parameters can be changed as part of the command.

(storage-class)
: Name of the storage class. This is required.

  This is 1 through 8 characters. The first character is in the range A through Z; subsequent characters are A through Z or 0 through 9.

PSID(*integer***)**
: The page set identifier that this storage class is to be associated with.

  Note: No check is made that the page set has been defined; an error will be raised only when you try to put a message to a queue that specifies this storage class (MQRC_PAGESET_ERROR).

  This is a number in the range 00 through 99.

DESCR(*description***)**
: Plain-text comment. It provides descriptive information about the object when an operator issues the DISPLAY STGCLASS command.

  It should contain only displayable characters. The maximum length is 64 characters. In a DBCS installation, it can contain DBCS characters (subject to a maximum length of 64 bytes).

  Note: If characters are used that are not in the coded character set identifier (CCSID) for this queue manager, they might be translated incorrectly if the information is sent to another queue manager.

XCFGNAME(*group name***)**
: If you are using the IMS bridge, this is the name of the XCF group to which the IMS system belongs. (This is the group name specified in the IMS parameter list.)

  This is 1 through 8 characters. The first character is in the range A through Z; subsequent characters are A through Z or 0 through 9.

If you want to alter this value to blank, you must also alter the value of XCFMNAME to blank, and enclose the blank characters in single quotation marks, as shown below:

```
ALT STGCLASS(X) XCFMNAME(' ') XCFGNAME(' ')
```

XCFMNAME(*member name***)**
If you are using the IMS bridge, this is the XCF member name of the IMS system within the XCF group specified in XCFGNAME. (This is the member name specified in the IMS parameter list.)

This is 1 through 16 characters. The first character is in the range A through Z; subsequent characters are A through Z or 0 through 9.

If you want to alter this value to blank, you must also alter the value of XCFGNAME to blank, and enclose the blank characters in single quotation marks, as shown above.

Usage notes

1. The resultant values of XCFGNAME and XCFMNAME must either both be blank or both be nonblank.

ALTER TRACE

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

Use ALTER TRACE to change the trace events (IFCIDs) being traced for a particular active trace. ALTER TRACE stops the specified trace, and restarts it with the altered attributes.

Note: ALTER TRACE does not affect any RMID(231) settings (although a subsequent DISPLAY TRACE command will show them altered).

Synonym: ALT TRACE

ALTER TRACE

```
►►──ALTER TRACE──(──┬─GLOBAL─┬──)──TNO(integer)──┬──────────────────┬──────────────────────────►◄
                    ├─STAT───┤                    └─┤ trace attrs ├─┘
                    └─ACCTG──┘
```

Trace attrs:

```
├──┬─────────────────────────┬──┬──────────────────┬──┬─────────────────────────┬──────────────────┤
   └─CLASS(──┬─*─────────┬──)─┘  └─COMMENT(string)─┘  └─IFCID(──┬─*────────┬──)─┘
             │ ┌─,─────┐ │                                        │ ┌─,────┐ │
             └─▼integer┴─┘                                        └─▼ifcid─┴─┘
```

Keyword and parameter descriptions

The trace type you specify determines which IFCIDs are activated. For further descriptions of each trace type, see “START TRACE” on page 241.

Specify one of the following:

GLOBAL
Service data from the entire MQSeries subsystem (the synonym is G)

STAT Statistical data (the synonym is S)

ACCTG
Accounting data (the synonym is A)

And:

TNO(*integer*)
The number of the trace to be altered. This limits the list to a particular trace, identified by its trace number (1 through 32). You can specify only one trace number.

Trace attributes

CLASS(*integer*)
The trace class to be altered. This limits the list to IFCIDs activated for particular classes. See “START TRACE” on page 241 for a list of allowed classes. A range of classes can be specified as m:n (for example, CLASS(01:03)). CLASS(*) activates all default IFCID classes.

COMMENT(*string***)**
A comment that is reproduced in the trace output record (except in the resident trace tables).

string is any character string. If it includes blanks, commas, or special characters, it must be enclosed between single quotation marks (').

IFCID(*ifcid***)**
The events to be traced. This specifies the optional IFCIDs to activate. All IFCIDs and classes specified are activated for the trace type specified.

ARCHIVE LOG

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

Use ARCHIVE LOG as part of your backup procedure. It takes a copy of the current *active* log *following* the latest syncpoint.

Synonym: ARC LOG

ARCHIVE LOG

```
►►──ARCHIVE LOG──┬─────────────────────────────────────────────┬──────────────────────────────────►◄
                 │                                 ┌─WAIT(NO)──┐ │
                 └─MODE(QUIESCE)──┬─────────────┬──┼───────────┼─┘
                                  └─TIME(nnn)───┘  └─WAIT(YES)─┘
```

Keyword and parameter descriptions

The ARCHIVE LOG command takes a copy of the active log, or both logs if you are using dual logging. All the parameters are optional.

MODE(QUIESCE)
: Stops any new update activity on the MQSeries subsystem for a specified period of time, and brings all existing users to a point of consistency after a commit. When the specified period of time expires, archiving of the current active log takes place.

  The period of time specified is the maximum time that MQSeries has to attempt a full subsystem quiesce.

  If MODE(QUIESCE) is issued without the TIME parameter, the value in the QUIESCE parameter of the CSQ6ARVP macro is used as the quiesce time period.

TIME(*nnn*)
: Overrides the quiesce time period specified by the QUIESCE parameter of the CSQ6ARVP macro.

  nnn is the time, in seconds, in the range 001 through 999.

  To specify the TIME parameter, you must also specify MODE(QUIESCE).

  If you specify the TIME parameter, you must specify an appropriate period of time for the quiesce period. If you make the period too short or too long, one of the following problems might occur:
  - The quiesce might not be complete
  - MQSeries lock contention might develop
  - A time-out might interrupt the quiesce

WAIT
: Specifies whether MQSeries is to wait until the quiesce process has finished before returning to the issuer of the ARCHIVE LOG command, or not.

To specify the WAIT parameter, you must also specify MODE(QUIESCE).

NO	Specifies that control is returned to the issuer when the quiesce process starts. This makes the quiesce process asynchronous to the issuer; you can issue further MQSeries commands when the ARCHIVE LOG command returns control to you. This is the default.
YES	Specifies that control is returned to the issuer when the quiesce process finishes. This makes the quiesce process synchronous to the issuer; further MQSeries commands are not processed until the ARCHIVE LOG command finishes.

Usage notes

1. You cannot issue an ARCHIVE LOG command while a previous ARCHIVE LOG command is in progress.
2. You cannot issue an ARCHIVE LOG command when the active log data set is the last available active log data set, because it would use all the available active log data set space, and MQSeries would halt all processing until an off-load had been completed.
3. You can issue an ARCHIVE LOG without the MODE(QUIESCE) option when a STOP QMGR MODE(QUIESCE) is in progress, but not when a STOP QMGR MODE (FORCE) is in progress.
4. You can issue a DISPLAY THREAD command to discover whether an ARCHIVE LOG command is active. The DISPLAY command returns message CSQV400I if an ARCHIVE LOG command is active.

CLEAR QLOCAL

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓		✓	✓	✓	✓	✓

Use CLEAR QLOCAL to clear the messages from a local queue.

Synonym: CLEAR QL

CLEAR QLOCAL

```
►►──CLEAR QLOCAL(q-name)──────────────────────────────────────────────────►◄
```

Keyword and parameter descriptions

You must specify which local queue you want to clear.

The command fails if either:

- The queue has uncommitted messages that have been put on the queue under syncpoint.
- The queue is currently open by an application (with any open options)

If an application has this queue open (with any open options), or has a queue open that eventually resolves to this queue, the command fails. The command also fails if this queue is a transmission queue, and any queue that is, or resolves to, a remote queue that references this transmission queue, is open.

(q-name)
: The name of the local queue to be cleared. The name must be defined to the local queue manager.

Note: On Tandem NSK, the command is unable to detect when uncommitted messages are being backed out from a queue, and so you are recommended to verify that the queue files are not open before running the command. See the *MQSeries for Tandem NonStop Kernel System Management Guide* for more information about clearing local queues on Tandem NSK.

DEFINE BUFFPOOL

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

Use DEFINE BUFFPOOL to define a buffer pool that is used for holding messages in main storage.

Note: DEFINE BUFFPOOL can be issued only from the CSQINP1 initialization data set.

Synonym: DEF BP

DEFINE BUFFPOOL

```
                                 ┌─BUFFERS(1000)──────┐
►►──DEFINE BUFFPOOL(buf-pool-id)─┴─BUFFERS(integer)───┴──────────────────────────────►◄
```

Keyword and parameter descriptions

If this command is not issued, the default number of buffers is assumed. If more than one DEFINE BUFFPOOL command is issued for the same buffer pool, only the *last* one is actioned.

(buf-pool-id)
: Buffer pool identifier. This is required.

  This is an integer in the range 0 through 3.

BUFFERS(*integer***)**
: The number of 4096-byte buffers to be used in this buffer pool. This is optional. The default number of buffers is 1000, and the minimum is 100. The maximum number of buffers for all the buffer pools is determined by the amount of storage available in the MQSeries address space.

DEFINE CHANNEL

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

Use DEFINE CHANNEL to define a new channel, and set its attributes.

Notes:

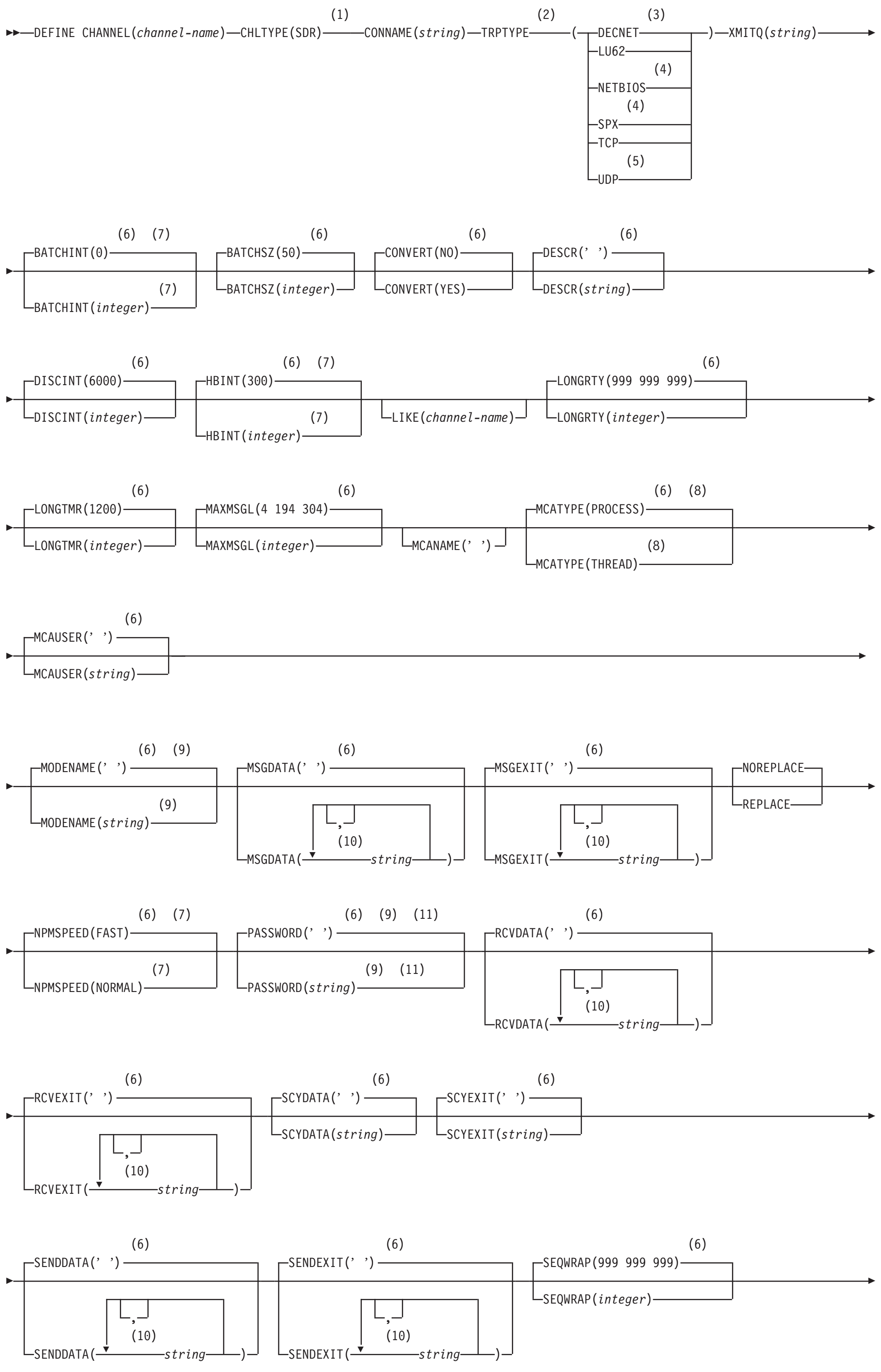
1. On OS/390, this is valid only for channels used for distributed queuing without CICS. If you are using CICS for distributed queuing, see Note 2 on page 13.
2. For cluster-sender channels, you can only specify the REPLACE option for channels that have been created manually.

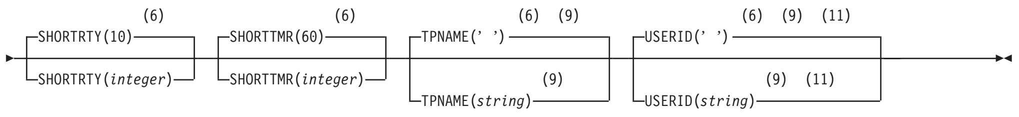
Synonym: DEF CHL

There is a separate syntax diagram for each type of channel:
- "Sender channel" on page 91
- "Server channel" on page 93
- "Receiver channel" on page 95
- "Requester channel" on page 97
- "Client-connection channel" on page 99
- "Server-connection channel" on page 101
- "Cluster-sender channel" on page 102
- "Cluster-receiver channel" on page 104

Sender channel

DEFINE CHANNEL





Notes:

1 This parameter must follow immediately after the channel name except on OS/390.

2 This is not mandatory on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

3 Valid only on Digital OpenVMS.

4 Valid only on OS/2 Warp and Windows NT.

5 Valid only on AIX.

6 This is the default supplied with MQSeries, but your installation might have changed it.

7 Valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

8 Valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

9 Valid only if TRPTYPE is LU62.

10 You can specify more than one value only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

11 Not valid on OS/390.

Server channel

DEFINE CHANNEL

```
                                             (1)          (2)           (3)
►►──DEFINE CHANNEL(channel-name)──CHLTYPE(SVR)──────TRPTYPE──────(──┬─DECNET──────┬──)──XMITQ(string)──────────────────────►
                                                                    ├─LU62────────┤
                                                                    │        (4)  │
                                                                    ├─NETBIOS─────┤
                                                                    │    (4)      │
                                                                    ├─SPX─────────┤
                                                                    ├─TCP─────────┤
                                                                    │    (5)      │
                                                                    └─UDP─────────┘

                      (6)                        (7)  (8)              (7)                         (7)
   ┌─AUTOSTART(DISABLED)──────┐  ┌─BATCHINT(0)────────────┐  ┌─BATCHSZ(50)──────┐  ┌─CONNAME(' ')────────┐
►──┴──────────────────────────┴──┴────────────────────────┴──┴──────────────────┴──┴─────────────────────┴──────────────────►
   │                   (6)    │  │                   (8)  │  └─BATCHSZ(integer)─┘  └─CONNAME(string)─────┘
   └─AUTOSTART(ENABLED)───────┘  └─BATCHINT(integer)──────┘

              (7)               (7)                      (7)                    (7)  (8)
   ┌─CONVERT(NO)───┐  ┌─DESCR(' ')──────┐  ┌─DISCINT(6000)─────┐  ┌─HBINT(300)──────────┐
►──┴───────────────┴──┴─────────────────┴──┴───────────────────┴──┴─────────────────────┴────────────────────────────────────►
   └─CONVERT(YES)──┘  └─DESCR(string)───┘  └─DISCINT(integer)──┘  │               (8)   │
                                                                  └─HBINT(integer)──────┘

                                          (7)                (7)                      (7)
                       ┌─LONGRTY(999 999 999)──┐  ┌─LONGTMR(1200)─────┐  ┌─MAXMSGL(4 194 304)────┐
►──┬────────────────┬──┴───────────────────────┴──┴───────────────────┴──┴───────────────────────┴──────────────────────────►
   └─LIKE(channel-name)┘└─LONGRTY(integer)─────┘  └─LONGTMR(integer)──┘  └─MAXMSGL(integer)──────┘

                                  (7)  (9)
                     ┌─MCATYPE(PROCESS)────┐
►──┬─────────────┬───┴─────────────────────┴────────────────────────────────────────────────────────────────────────────────►
   └─MCANAME(' ')┘   │                (9)  │
                     └─MCATYPE(THREAD)─────┘

             (7)                     (7)  (10)                       (7)
    ┌─MCAUSER(' ')──────┐  ┌─MODENAME(' ')─────────┐  ┌─MSGDATA(' ')──────────────────────┐
►───┴───────────────────┴──┴───────────────────────┴──┴───────────────────────────────────┴─────────────────────────────────►
    └─MCAUSER(string)───┘  │                 (10)  │  │         ┌─,─┐                     │
                           └─MODENAME(string)──────┘  │         ▼   │ (11)                │
                                                      └─MSGDATA(──────string──────┴──)────┘

             (7)                                             (7)  (8)                             (7)  (10)  (12)
   ┌─MSGEXIT(' ')──────────────────────┐  ┌─NOREPLACE─┐  ┌─NPMSPEED(FAST)────────┐  ┌─PASSWORD(' ')─────────────────┐
►──┴───────────────────────────────────┴──┴───────────┴──┴───────────────────────┴──┴───────────────────────────────┴──────►
   │         ┌─,─┐                     │  └─REPLACE───┘  │                  (8)  │  │                   (10)  (12)  │
   │         ▼   │ (11)                │                 └─NPMSPEED(NORMAL)──────┘  └─PASSWORD(string)──────────────┘
   └─MSGEXIT(──────string──────┴──)────┘

             (7)                                   (7)                      (7)                    (7)
   ┌─RCVDATA(' ')──────────────────────┐  ┌─RCVEXIT(' ')──────────────────────┐  ┌─SCYDATA(' ')──────┐  ┌─SCYEXIT(' ')──────┐
►──┴───────────────────────────────────┴──┴───────────────────────────────────┴──┴───────────────────┴──┴───────────────────┴──►
   │         ┌─,─┐                     │  │         ┌─,─┐                     │  └─SCYDATA(string)───┘  └─SCYEXIT(string)───┘
   │         ▼   │ (11)                │  │         ▼   │ (11)                │
   └─RCVDATA(──────string──────┴──)────┘  └─RCVEXIT(──────string──────┴──)────┘

              (7)                                    (7)                                     (7)
   ┌─SENDDATA(' ')──────────────────────┐  ┌─SENDEXIT(' ')──────────────────────┐  ┌─SEQWRAP(999 999 999)──┐
►──┴────────────────────────────────────┴──┴────────────────────────────────────┴──┴───────────────────────┴────────────────►
   │          ┌─,─┐                     │  │          ┌─,─┐                     │  └─SEQWRAP(integer)──────┘
   │          ▼   │ (11)                │  │          ▼   │ (11)                │
   └─SENDDATA(──────string──────┴──)────┘  └─SENDEXIT(──────string──────┴──)────┘
```

```
                (7)                (7)                 (7)  (10)                  (7)  (10)  (12)
 ┌─SHORTRTY(10)──────┐  ┌─SHORTTMR(60)──────┐  ┌─TPNAME(' ')───────────┐  ┌─USERID(' ')───────────────┐
►─┼───────────────────┼──┼───────────────────┼──┼───────────────────────┼──┼───────────────────────────┼──────────►◄
 └─SHORTRTY(integer)─┘  └─SHORTTMR(integer)─┘  │                 (10)  │  │              (10)  (12)   │
                                               └─TPNAME(string)────────┘  └─USERID(string)────────────┘
```

Notes:

1 This parameter must follow immediately after the channel name except on OS/390.

2 This is not mandatory on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

3 Valid only on Digital OpenVMS.

4 Valid only on OS/2 Warp and Windows NT.

5 Valid only on AIX.

6 Valid only on Tandem NSK.

7 This is the default supplied with MQSeries, but your installation might have changed it.

8 Valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

9 Valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

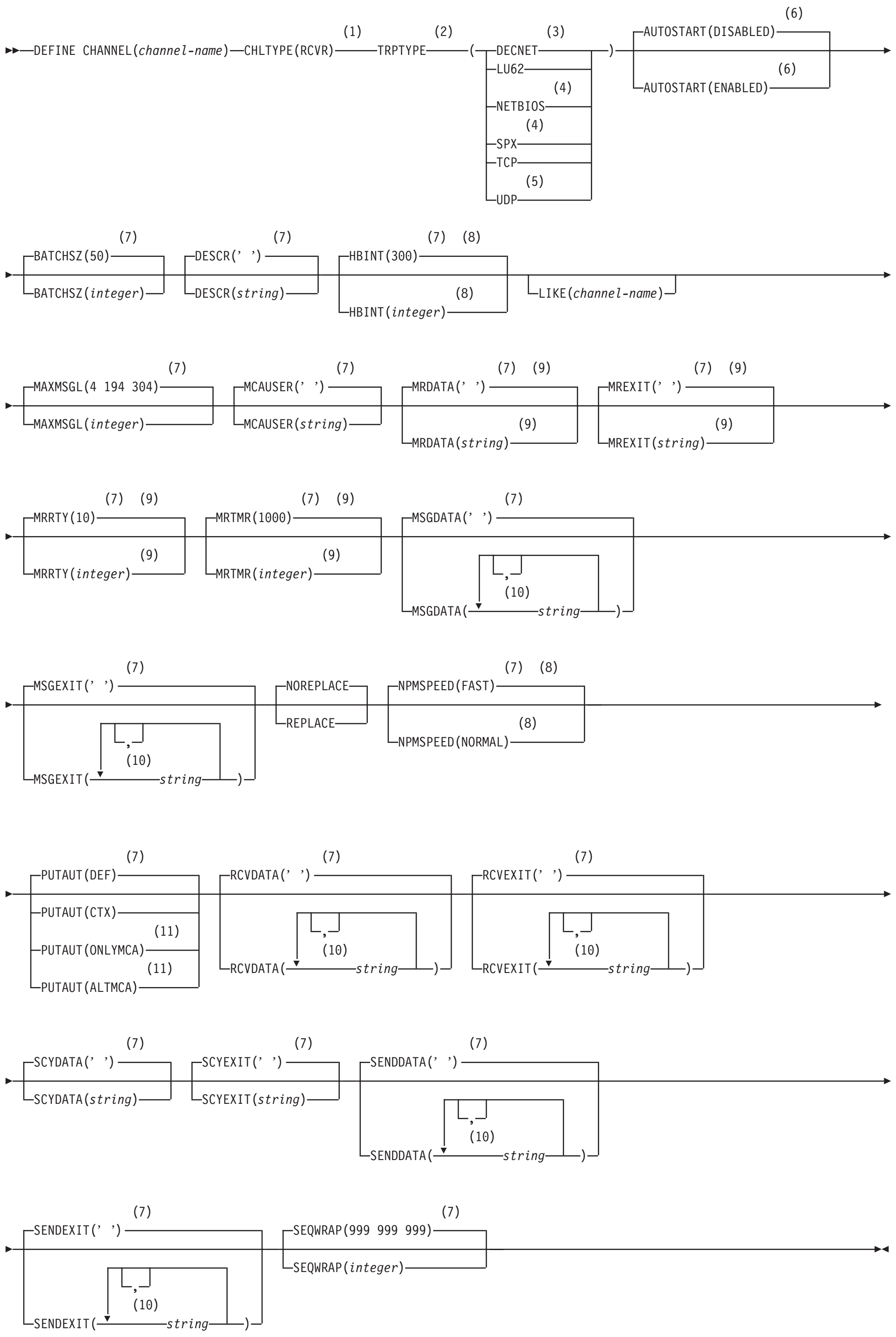
10 Valid only if TRPTYPE is LU62.

11 You can specify more than one value only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

12 Not valid on OS/390.

Receiver channel

DEFINE CHANNEL



Notes:

1 This parameter must follow immediately after the channel name except on OS/390.

2 This is not mandatory on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

3 Valid only on Digital OpenVMS.

4 Valid only on OS/2 Warp or Windows NT.

5 Valid only on AIX.

6 Valid only on Tandem NSK.

7 This is the default supplied with MQSeries, but your installation might have changed it.

8 Valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

9 Not valid on OS/390.

10 You can specify more than one value only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

11 Valid only on OS/390.

Requester channel

DEFINE CHANNEL

```
                                                (1)                    (2)        (3)
►►──DEFINE CHANNEL(channel-name)──CHLTYPE(RQSTR)──────CONNAME(string)──TRPTYPE──────(─┬─DECNET────────┬──)──────────────────►
                                                                                     ├─LU62──────────┤
                                                                                     │        (4)    │
                                                                                     ├─NETBIOS───────┤
                                                                                     │   (4)         │
                                                                                     ├─SPX───────────┤
                                                                                     ├─TCP───────────┤
                                                                                     │   (5)         │
                                                                                     └─UDP───────────┘

                       (6)               (7)                (7)                  (7)  (8)
   ┌─AUTOSTART(DISABLED)──────┐  ┌─BATCHSZ(50)──────┐ ┌─DESCR(' ')───────┐ ┌─HBINT(300)────────────┐
►──┼──────────────────────────┼──┼──────────────────┼─┼──────────────────┼─┼───────────────────────┼──────────────────────►
   │                   (6)    │  │                  │ │                  │ │                 (8)   │
   └─AUTOSTART(ENABLED)───────┘  └─BATCHSZ(integer)─┘ └─DESCR(string)────┘ └─HBINT(integer)────────┘

                                        (7)                                   (7)  (9)
                         ┌─MAXMSGL(4 194 304)─┐                ┌─MCATYPE(PROCESS)────────┐
►──┬─────────────────────┬─┼────────────────────┼─┬──────────────┬─┼─────────────────────────┼─────────────────────────►
   └─LIKE(channel-name)──┘ └─MAXMSGL(integer)───┘ └─MCANAME(' ')─┘ │                  (9)    │
                                                                   └─MCATYPE(THREAD)─────────┘

                (7)                 (7)  (10)                  (7)  (11)                 (7)  (11)
   ┌─MCAUSER(' ')──────┐ ┌─MODENAME(' ')──────────┐ ┌─MRDATA(' ')──────────┐ ┌─MREXIT(' ')──────────┐
►──┼───────────────────┼─┼────────────────────────┼─┼──────────────────────┼─┼──────────────────────┼──────────────────►
   └─MCAUSER(string)───┘ │                (10)    │ │               (11)   │ │               (11)   │
                         └─MODENAME(string)───────┘ └─MRDATA(string)───────┘ └─MREXIT(string)───────┘

             (7)  (11)              (7)  (11)
   ┌─MRRTY(10)─────────────┐ ┌─MRTMR(1000)───────────┐
►──┼───────────────────────┼─┼───────────────────────┼─────────────────────────────────────────────────────────────────►
   │                 (11)  │ │                 (11)  │
   └─MRRTY(integer)────────┘ └─MRTMR(integer)────────┘

                 (7)                            (7)                                                 (7)  (8)
   ┌─MSGDATA(' ')────────────────┐ ┌─MSGEXIT(' ')────────────────┐ ┌─NOREPLACE─┐ ┌─NPMSPEED(FAST)─────────────┐
►──┼─────────────────────────────┼─┼─────────────────────────────┼─┼───────────┼─┼────────────────────────────┼──────────►
   │        ┌─────,─────┐        │ │        ┌─────,─────┐        │ └─REPLACE───┘ │                      (8)   │
   │        │     (12)  │        │ │        │     (12)  │        │               └─NPMSPEED(NORMAL)───────────┘
   └─MSGDATA(▼────string─┴─)─────┘ └─MSGEXIT(▼────string─┴─)─────┘

                 (7)  (10)  (11)              (7)                    (7)
   ┌─PASSWORD(' ')────────────────┐ ┌─PUTAUT(DEF)───────┐ ┌─RCVDATA(' ')─────────────────┐
►──┼──────────────────────────────┼─┼───────────────────┼─┼──────────────────────────────┼───────────────────────────────►
   │                  (10)  (11)  │ ├─PUTAUT(CTX)───────┤ │        ┌─────,─────┐         │
   └─PASSWORD(string)─────────────┘ │              (13) │ │        │     (12)  │         │
                                    ├─PUTAUT(ONLYMCA)───┤ └─RCVDATA(▼────string─┴─)──────┘
                                    │             (13)  │
                                    └─PUTAUT(ALTMCA)────┘

                (7)                          (7)                 (7)
   ┌─RCVEXIT(' ')─────────────────┐ ┌─SCYDATA(' ')─────┐ ┌─SCYEXIT(' ')─────┐
►──┼──────────────────────────────┼─┼──────────────────┼─┼──────────────────┼─────────────────────────────────────────────►
   │        ┌─────,─────┐         │ └─SCYDATA(string)──┘ └─SCYEXIT(string)──┘
   │        │     (12)  │         │
   └─RCVEXIT(▼────string─┴─)──────┘
```

```
                (7)                         (7)                              (7)
   ┌─SENDDATA(' ')──────────────┐ ┌─SENDEXIT(' ')──────────────┐ ┌─SEQWRAP(999 999 999)─┐
►──┼────────────────────────────┼─┼────────────────────────────┼─┼──────────────────────┼───────►
   │              ┌─,─┐         │ │              ┌─,─┐         │ └─SEQWRAP(integer)─────┘
   │              ▼ (12)        │ │              ▼ (12)        │
   └─SENDDATA(────string────)───┘ └─SENDEXIT(────string────)───┘

             (7)  (10)               (7)  (10)  (11)
   ┌─TPNAME(' ')────────┐ ┌─USERID(' ')─────────────┐
►──┼────────────────────┼─┼─────────────────────────┼──────────────────────────────────────►◄
   │              (10)  │ │              (10)  (11) │
   └─TPNAME(string)─────┘ └─USERID(string)──────────┘
```

Notes:

1 This parameter must follow immediately after the channel name except on OS/390.

2 This is not mandatory on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

3 Valid only on Digital OpenVMS.

4 Valid only on OS/2 Warp and Windows NT.

5 Valid only on AIX.

6 Valid only on Tandem NSK.

7 This is the default supplied with MQSeries, but your installation might have changed it.

8 Valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

9 Valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

10 Valid only if TRPTYPE is LU62.

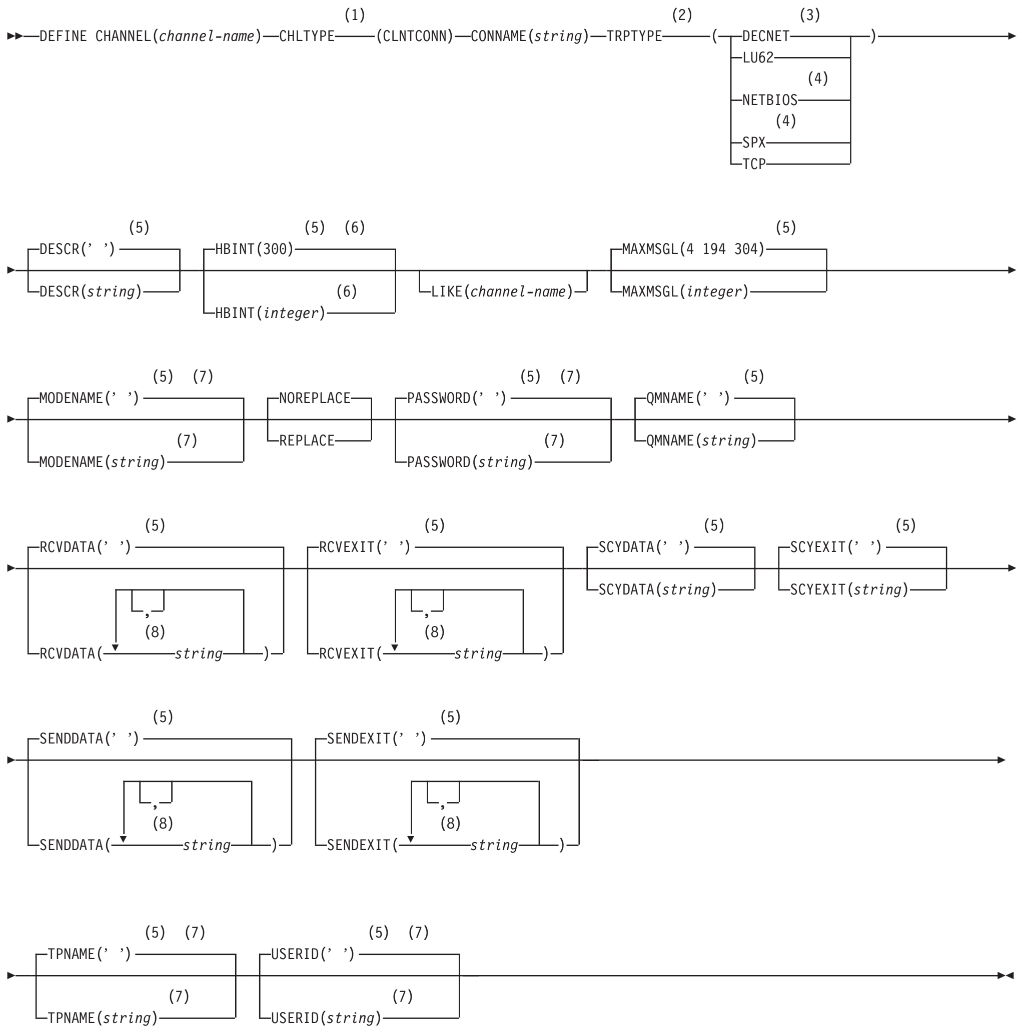
11 Not valid on OS/390.

12 You can specify more than one value only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

13 Valid only on OS/390.

Client-connection channel

DEFINE CHANNEL



Notes:

1 This parameter must follow immediately after the channel name except on OS/390.

2 This is not mandatory on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

3 Valid only on Digital OpenVMS.

4 Valid only for clients to be run on DOS, OS/2 Warp, Windows, or Windows NT.

5 This is the default supplied with MQSeries, but your installation might have changed it.

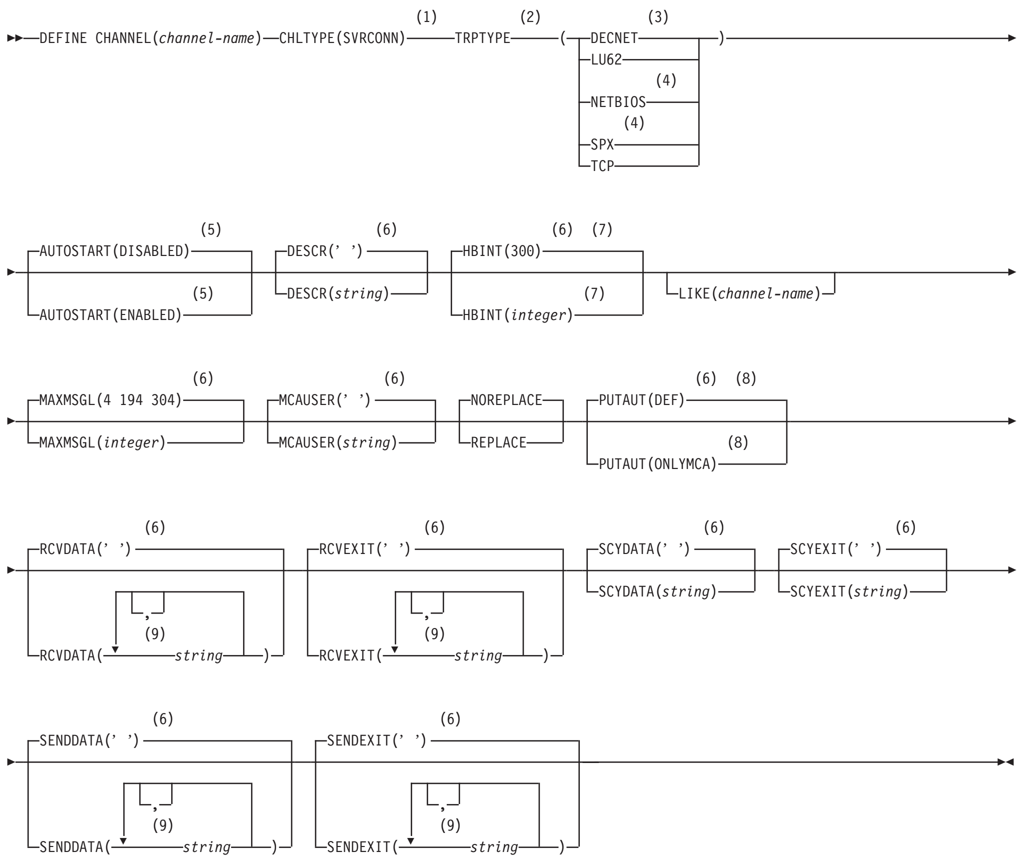
6 Valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

7 Valid only if TRPTYPE is LU62.

8 You can specify more than one value only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

Server-connection channel

DEFINE CHANNEL



Notes:

1 This parameter must follow immediately after the channel name except on OS/390.

2 This is not mandatory on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

3 Valid only on Digital OpenVMS.

4 Valid only for clients to be run on DOS, OS/2 Warp, Windows, or Windows NT.

5 Valid only on Tandem NSK.

6 This is the default supplied with MQSeries, but your installation might have changed it.

7 Valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

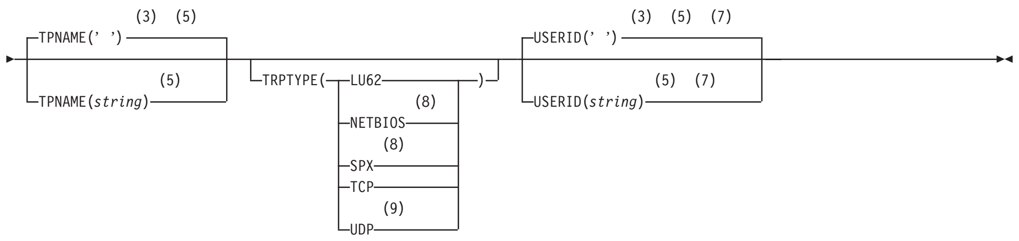
8 Valid only on OS/390.

9 You can specify more than one value only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

Cluster-sender channel

DEFINE CHANNEL

```
                                                                                 (3)
                                                         (1)  (2)         ┌BATCHINT(0)──────┐
►►──DEFINE CHANNEL(channel-name)──CHLTYPE─(CLUSSDR)──────────CONNAME(string)─┼─────────────────┼──────────────►
                                                                          └BATCHINT(integer)─┘

           (3)              (3)                 (3)                (3)               (3)
 ┌BATCHSZ(50)──────┐ ┌CLUSTER(' ')─────────┐ ┌CLUSNL(' ')─────┐ ┌CONVERT(NO)──┐ ┌DESCR(' ')──────┐
►┼─────────────────┼─┼─────────────────────┼─┼────────────────┼─┼─────────────┼─┼────────────────┼──►
 └BATCHSZ(integer)─┘ └CLUSTER(clustername)─┘ └CLUSNL(nlname)──┘ └CONVERT(YES)─┘ └DESCR(string)───┘

            (3)               (3)                                             (3)
 ┌DISCINT(6000)─────┐ ┌HBINT(300)──────┐                     ┌LONGRTY(999 999 999)─┐
►┼──────────────────┼─┼────────────────┼─┬──────────────────┬─┼─────────────────────┼──────────►
 └DISCINT(integer)──┘ └HBINT(integer)──┘ └LIKE(channel-name)┘ └LONGRTY(integer)─────┘

            (3)                     (3)                                       (3)  (4)
 ┌LONGTMR(1200)─────┐ ┌MAXMSGL(4 194 304)──────┐               ┌MCATYPE(THREAD)──────┐
►┼──────────────────┼─┼────────────────────────┼─┬────────────┬─┼─────────────────────┼──────────►
 └LONGTMR(integer)──┘ └MAXMSGL(integer)────────┘ └MCANAME(' ')┘ │                (4)  │
                                                                └MCATYPE(PROCESS)─────┘

           (3)
 ┌MCAUSER(' ')─────┐
►┼─────────────────┼──────────────────────────────────────────────────────────────────►
 └MCAUSER(string)──┘

              (3)  (5)                (3)                       (3)
  ┌MODENAME(' ')──────────┐ ┌MSGDATA(' ')──────────────┐ ┌MSGEXIT(' ')──────────────┐ ┌NOREPLACE─┐
►─┼───────────────────────┼─┼──────────────────────────┼─┼──────────────────────────┼─┼──────────┼──►
  │                  (5)  │ │          ┌──────────┐    │ │          ┌──────────┐    │ └REPLACE───┘
  └MODENAME(string)───────┘ │          │  ┌,┘     │    │ │          │  ┌,┘     │    │
                            │          ▼  (6)     │    │ │          ▼  (6)     │    │
                            └MSGDATA(──────string─┴──)─┘ └MSGEXIT(──────string─┴──)─┘

             (3)                   (3)  (5)  (7)                (3)
 ┌NPMSPEED(FAST)────┐ ┌PASSWORD(' ')───────────────┐ ┌RCVDATA(' ')──────────────┐
►┼──────────────────┼─┼────────────────────────────┼─┼──────────────────────────┼──────────────►
 └NPMSPEED(NORMAL)──┘ │                  (5)  (7)  │ │          ┌──────────┐    │
                      └PASSWORD(string)────────────┘ │          │  ┌,┘     │    │
                                                     │          ▼  (6)     │    │
                                                     └RCVDATA(──────string─┴──)─┘

           (3)                       (3)               (3)                 (3)
 ┌RCVEXIT(' ')──────────────┐ ┌SCYDATA(' ')─────┐ ┌SCYEXIT(' ')─────┐ ┌SENDDATA(' ')─────────────┐
►┼──────────────────────────┼─┼─────────────────┼─┼─────────────────┼─┼──────────────────────────┼──►
 │          ┌──────────┐    │ └SCYDATA(string)──┘ └SCYEXIT(string)──┘ │          ┌──────────┐    │
 │          │  ┌,┘     │    │                                         │          │  ┌,┘     │    │
 │          ▼  (6)     │    │                                         │          ▼  (6)     │    │
 └RCVEXIT(──────string─┴──)─┘                                         └SENDDATA(─────string─┴──)─┘

            (3)                              (3)                  (3)                (3)
 ┌SENDEXIT(' ')──────────────┐ ┌SEQWRAP(999 999 999)──┐ ┌SHORTRTY(10)──────┐ ┌SHORTTMR(60)──────┐
►┼───────────────────────────┼─┼──────────────────────┼─┼──────────────────┼─┼──────────────────┼──►
 │           ┌──────────┐    │ └SEQWRAP(integer)──────┘ └SHORTRTY(integer)─┘ └SHORTTMR(integer)─┘
 │           │  ┌,┘     │    │
 │           ▼  (6)     │    │
 └SENDEXIT(──────string─┴──)─┘
```



Notes:

1 Valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

2 This parameter must follow immediately after the channel name except on OS/390.

3 This is the default supplied with MQSeries, but your installation might have changed it.

4 Valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

5 Valid only if TRPTYPE is LU62.

6 You can specify one value only on OS/390.

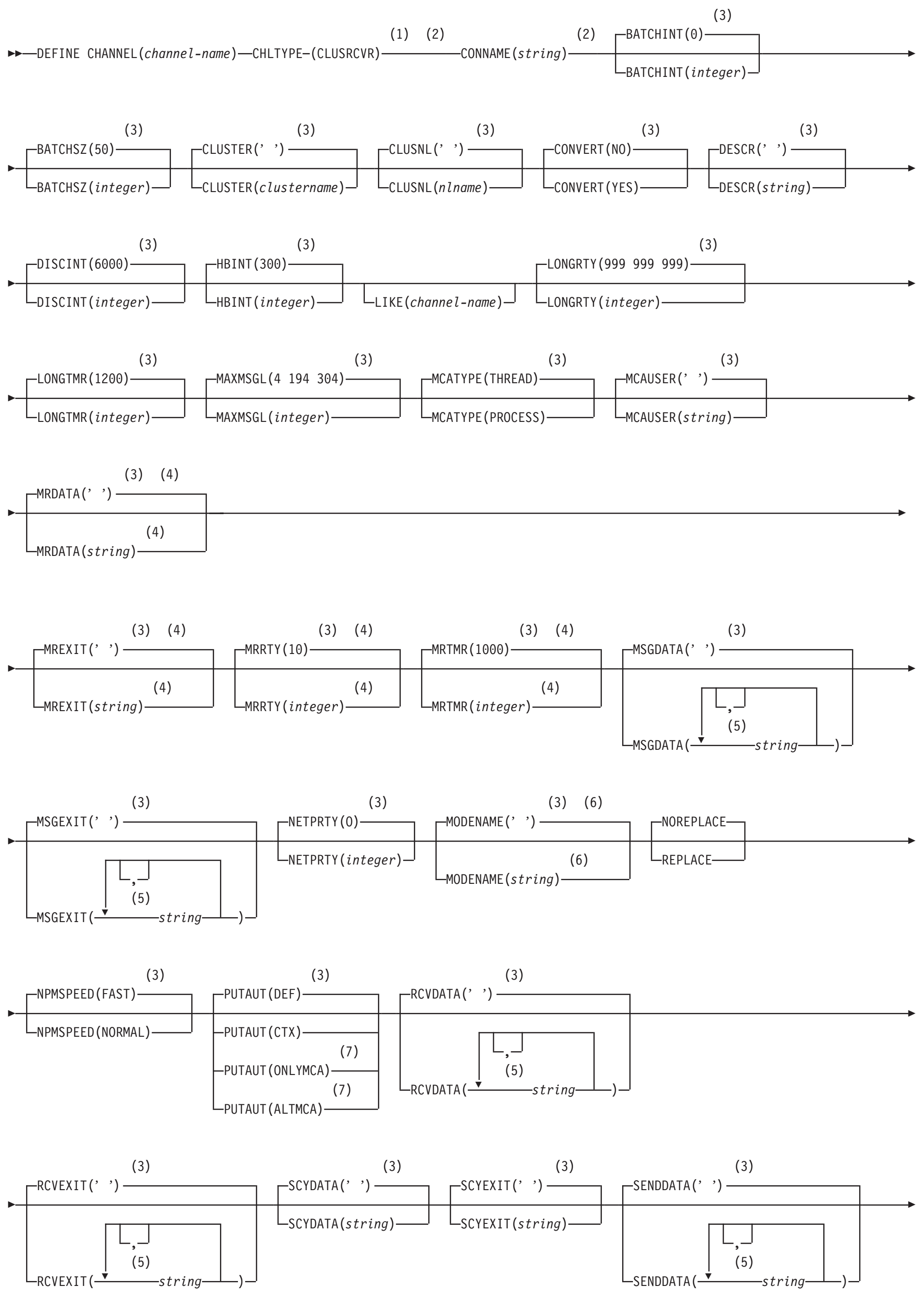
7 Not valid on OS/390.

8 Valid only on OS/2 Warp and Windows NT.

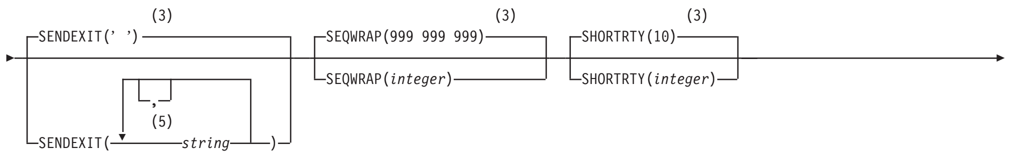
9 Valid only on AIX.

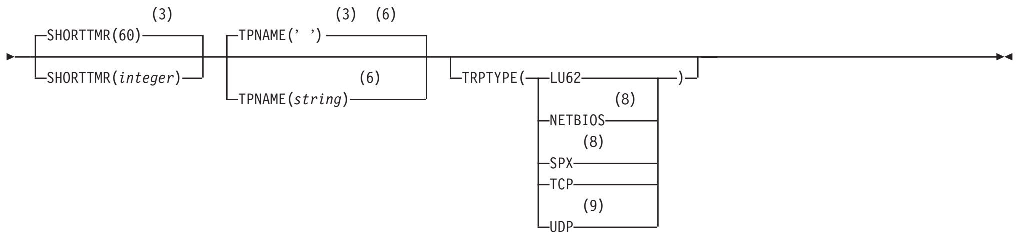
Cluster-receiver channel

DEFINE CHANNEL



```
                                              (1)  (2)                  (2)              (3)
►►──DEFINE CHANNEL(channel-name)──CHLTYPE─(CLUSRCVR)──────────CONNAME(string)──┬─BATCHINT(0)──────┬──────────►
                                                                                └─BATCHINT(integer)─┘

            (3)              (3)                (3)                 (3)                (3)
►──┬─BATCHSZ(50)──────┬──┬─CLUSTER(' ')─────────┬──┬─CLUSNL(' ')──────┬──┬─CONVERT(NO)──┬──┬─DESCR(' ')──────┬──►
   └─BATCHSZ(integer)─┘  └─CLUSTER(clustername)─┘  └─CLUSNL(nlname)───┘  └─CONVERT(YES)─┘  └─DESCR(string)───┘

              (3)              (3)                                             (3)
►──┬─DISCINT(6000)─────┬──┬─HBINT(300)──────┬──┬─────────────────────┬──┬─LONGRTY(999 999 999)─┬──────────►
   └─DISCINT(integer)──┘  └─HBINT(integer)──┘  └─LIKE(channel-name)──┘  └─LONGRTY(integer)─────┘

              (3)                        (3)                  (3)                 (3)
►──┬─LONGTMR(1200)─────┬──┬─MAXMSGL(4 194 304)─┬──┬─MCATYPE(THREAD)───┬──┬─MCAUSER(' ')──────┬──────────►
   └─LONGTMR(integer)──┘  └─MAXMSGL(integer)───┘  └─MCATYPE(PROCESS)──┘  └─MCAUSER(string)───┘

            (3)  (4)
►──┬─MRDATA(' ')──────┬─────────────────────────────────────────────────────────────────────────────►
   │             (4)  │
   └─MRDATA(string)───┘

             (3)  (4)                (3)  (4)                (3)  (4)                (3)
►──┬─MREXIT(' ')──────┬──┬─MRRTY(10)────────┬──┬─MRTMR(1000)──────┬──┬─MSGDATA(' ')──────────────┬──►
   │             (4)  │  │             (4)  │  │             (4)  │  │         ┌─,──┐            │
   └─MREXIT(string)───┘  └─MRRTY(integer)───┘  └─MRTMR(integer)───┘  │         │(5) │            │
                                                                     └─MSGDATA(─▼──string───┴─)──┘

            (3)                          (3)                  (3)  (6)
►──┬─MSGEXIT(' ')────────────────┬──┬─NETPRTY(0)────────┬──┬─MODENAME(' ')──────┬──┬─NOREPLACE─┬──────►
   │          ┌─,──┐             │  └─NETPRTY(integer)──┘  │               (6)  │  └─REPLACE───┘
   │          │(5) │             │                         └─MODENAME(string)───┘
   └─MSGEXIT(─▼──string───┴─)────┘

               (3)                 (3)                  (3)
►──┬─NPMSPEED(FAST)────┬──┬─PUTAUT(DEF)──────┬──┬─RCVDATA(' ')────────────────┬───────────────────────►
   └─NPMSPEED(NORMAL)──┘  ├─PUTAUT(CTX)──────┤  │          ┌─,──┐             │
                          │             (7)  │  │          │(5) │             │
                          ├─PUTAUT(ONLYMCA)──┤  └─RCVDATA(─▼──string───┴─)────┘
                          │             (7)  │
                          └─PUTAUT(ALTMCA)───┘

            (3)                         (3)                 (3)                  (3)
►──┬─RCVEXIT(' ')────────────────┬──┬─SCYDATA(' ')──────┬──┬─SCYEXIT(' ')──────┬──┬─SENDDATA(' ')────────────────┬──►
   │          ┌─,──┐             │  └─SCYDATA(string)───┘  └─SCYEXIT(string)───┘  │           ┌─,──┐             │
   │          │(5) │             │                                                │           │(5) │             │
   └─RCVEXIT(─▼──string───┴─)────┘                                                └─SENDDATA(─▼──string───┴─)────┘
```





Notes:

1 Valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

2 This parameter must follow immediately after the channel name except on OS/390.

3 This is the default supplied with MQSeries, but your installation might have changed it.

4 Not valid on OS/390.

5 You can specify one value only on OS/390.

6 Valid only if TRPTYPE is LU62.

7 Valid only on OS/390.

8 Valid only on OS/2 Warp and Windows NT.

9 Valid only on AIX.

Keyword and parameter descriptions

Parameters are optional unless the description states that they are required.

(channel-name)

The name of the new channel definition. This is required.

The name must not be the same as any existing channel defined on this queue manager (unless REPLACE is specified). On OS/390, client-connection channel names can duplicate others.

The maximum length of the string is 20 characters, and the string must contain only valid characters; see "Rules for naming MQSeries objects" on page 4.

AUTOSTART

Specifies whether an LU 6.2 responder process for the channel will be started at queue manager startup.

ENABLED	The responder is started.
DISABLED	The responder is not started (this is the default).

This parameter is valid only for channels with a channel type (CHLTYPE) of RCVR, RQSTR, SVR, and SVRCONN. It is supported only on Tandem NSK.

BATCHINT(*integer*)
The minimum amount of time, in milliseconds, that a channel will keep a batch open.

The batch is terminated by whichever of the following occurs first:
- BATCHSZ messages have been sent, or
- The transmission queue is empty and BATCHINT is exceeded

The default value is zero, which means that the batch is terminated as soon as the transmission queue becomes empty (or the BATCHSZ limit is reached).

The value must be greater than or equal to zero, and less than or equal to 999 999 999.

This parameter is valid only for channels with a channel type (CHLTYPE) of SDR, SVR, CLUSSDR, or CLUSRCVR. It is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

BATCHSZ(*integer*)
The maximum number of messages that can be sent through a channel before taking a checkpoint.

The maximum batch size actually used is the lowest of the following:
- The BATCHSZ of the sending channel
- The BATCHSZ of the receiving channel
- The maximum number of uncommitted messages allowed at the sending queue manager
- The maximum number of uncommitted messages allowed at the receiving queue manager

The maximum number of uncommitted messages is specified by the MAXUMSGS parameter of the ALTER QMGR command, or the DEFINE MAXSMSGS command on OS/390.

This parameter is valid only for channels with a channel type (CHLTYPE) of SDR, SVR, RCVR, RQSTR, CLUSSDR, or CLUSRCVR.

The value must be greater than zero, and less than or equal to 9999.

CHLTYPE
Channel type. This is required. It must follow immediately after the *(channel-name)* parameter on all platforms except OS/390.

SDR	Sender channel
SVR	Server channel
RCVR	Receiver channel
RQSTR	Requester channel
CLNTCONN	Client-connection channel
SVRCONN	Server-connection channel
CLUSSDR	Cluster-sender channel (valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT)
CLUSRCVR	Cluster-receiver channel (valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT)

Note: If you are using the REPLACE option, you cannot change the channel type.

CLUSTER(*clustername*)
The name of the cluster to which the channel belongs. The maximum length is 48 characters conforming to the rules for naming MQSeries objects.

This parameter is valid only for CLUSSDR and CLUSRCVR channels. Only one of the resultant values of CLUSTER or CLUSNL can be nonblank, the other must be blank.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400,
| Sun Solaris, and Windows NT.

CLUSNL(*nlname*)
The name of the namelist that specifies a list of clusters to which the channel belongs.

This parameter is valid only for CLUSSDR and CLUSRCVR channels. Only one of the resultant values of CLUSTER or CLUSNL can be nonblank, the other must be blank.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400,
| Sun Solaris, and Windows NT.

CONNAME(*string*)
Connection name.

For cluster-receiver channels it relates to the local queue manager, and for other channels it relates to the target queue manager. (The maximum length is 48 characters on OS/390, and 264 characters on other platforms.)

The value you specify depends on the transport type (TRPTYPE) to be used:

| **DECnet**
| The DECnet node name and the DECnet object name, in the form:
| `CONNAME('node_name(object_name)')`

| This is valid only on Digital OpenVMS.

LU 6.2

| • On Digital OpenVMS this is the SNA gateway node name,
| access name, and the`tpname`that is used by SNA to invoke the
| remote program. The format of this information is as follows:

`CONNAME('gateway_node.access_name(tpname)')`

• On OS/390 there are two forms in which to specify the value:

Logical unit name
The logical unit information for the queue manager, comprising the logical unit name, TP name, and optional mode name. This can be specified in one of 3 forms:

Form	**Example**
luname	`IGY12355`
luname/TPname	`IGY12345/APING`
luname/TPname/modename	`IGY12345/APINGD/#INTER`

For the first form, the TP name and mode name must be specified for the TPNAME and MODENAME attributes; otherwise these attributes must be blank.

Note: For client-connection channels, only the first form is allowed.

Symbolic name
The symbolic destination name for the logical unit information for the queue manager, as defined in the side information data set. The TPNAME and MODENAME attributes must be blank.

Note: For cluster-receiver channels, the side information is on the other queue managers in the cluster. Alternatively, in this case it can be a name that a channel auto-definition exit can resolve into the appropriate logical unit information for the local queue manager.

- On OS/2 Warp it is the fully-qualified name of the partner LU, or an LU alias.
- On OS/400, Windows NT, and UNIX systems, this is the name of the CPI-C communications side object or, if the TPNAME is not blank, this is the fully-qualified name of the partner logical unit.

  See the information about configuration parameters for an LU 6.2 connection for your platform in the *MQSeries Intercommunication* manual for more information.
- On Tandem NSK, the value of this depends on whether SNAX or ICE is used as the communications protocol:
  - If SNAX is used:
    - For sender, requester, and fully qualified server channels, this is the process name of the SNAX/APC process, the name of the local LU, and the name of the partner LU on the remote machine, for example:
      ```
      CONNAME('$PPPP.LOCALLU.REMOTELU')
      ```
    - For receiver and non fully qualified server channels, this is the process name of the SNAX/APC process and the name of the local LU, for example:
      ```
      CONNAME('$PPPP.LOCALLU')
      ```
      The name of the local LU can be an asterisk (*), indicating any name.
  - If ICE is used:
    - For sender, requester, and fully qualified server channels, this is the process name of the ICE process, the ICE open name, the name of the local LU, and the name of the partner LU on the remote machine, for example:
      ```
        CONNAME('$PPPP.#OPEN.LOCALLU.REMOTELU')
      ```
      For receiver and non fully qualified server channels, this is the process name of the SNAX/APC process, the ICE open name, and the name of the local LU, for example:
      ```
        CONNAME('$PPPP.#OPEN.LOCALLU')
      ```
      The name of the local LU can be an asterisk (*), indicating any name.

NetBIOS
A unique NetBIOS name (limited to 16 characters).

SPX The 4-byte network address, the 6-byte node address, and the 2-byte socket number. These values must be entered in hexadecimal, with a period separating the network and node addresses. The socket number must be enclosed in brackets, for example:

```
CONNAME('0a0b0c0d.804abcde23a1(5e86)')
```

If the socket number is omitted, the MQSeries default value (X'5e86') is assumed.

TCP Either the host name, or the network address of the remote machine (or the local machine for cluster-receiver channels). This can be followed by an optional port number, enclosed in parentheses.

| **UDP** Either the host name, or the network address of the remote
| MQSeries for Windows V2.0 machine. This can be followed by an
| optional port number, enclosed in parentheses.

This parameter is required for channels with a channel type (CHLTYPE) of SDR, RQSTR, CLNTCONN, CLUSSDR, and CLUSRCVR. It is optional for SVR channels, and is not valid for RCVR or SVRCONN channels.

Note: If you are using any of the special characters in your connection name (for example, parentheses) you must enclose the string in single quotes.

CONVERT
Specifies whether the sending message channel agent should attempt conversion of the application message data, if the receiving message channel agent is unable to perform this conversion.

NO	No conversion by sender
YES	Conversion by sender

This parameter is valid only for channels with a channel type (CHLTYPE) of SDR, SVR, CLUSSDR, or CLUSRCVR.

DESCR(*string***)**
Plain-text comment. It provides descriptive information about the channel when an operator issues the DISPLAY CHANNEL command.

It should contain only displayable characters. The maximum length is 64 characters. In a DBCS installation, it can contain DBCS characters (subject to a maximum length of 64 bytes).

Note: If characters are used that are not in the coded character set identifier (CCSID) for this queue manager, they might be translated incorrectly if the information is sent to another queue manager.

DISCINT(*integer***)**
The minimum time in seconds for which the channel waits for a message to arrive on the transmission queue, after a batch ends, before terminating the channel. A value of zero causes the message channel agent to wait indefinitely.

The value must be greater than or equal to zero, and less than or equal to 999 999.

This parameter is valid only for channels with a channel type (CHLTYPE) of SDR, SVR, CLUSSDR, or CLUSRCVR.

HBINT(*integer*)
This parameter has a different interpretation depending upon the channel type, as follows:

- For a channel type of SDR, SVR, RCVR, RQSTR, CLUSSDR, or CLUSRCVR, this is the time, in seconds, between heartbeat flows passed from the sending MCA when there are no messages on the transmission queue. The heartbeat exchange gives the receiving MCA the opportunity to quiesce the channel.

  This type of heartbeat is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

  Note: You should set this value to be significantly less than the value of DISCINT. MQSeries checks only that it is within the permitted range however.
- For a channel type of SVRCONN or CLNTCONN, this is the time, in seconds, between heartbeat flows passed from the server MCA when that MCA has issued an MQGET with WAIT on behalf of a client application. This allows the server to handle situations where the client connection fails during an MQGET with WAIT. This type of heartbeat is valid only for AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

The value must be in the range zero through 999 999. A value of zero means that no heartbeat exchange takes place. The value that is used is the larger of the values specified at the sending side and the receiving side.

LIKE(*channel-name*)
The name of a channel, whose attributes will be used to model this definition.

If this field is not filled in, and you do not complete the attribute fields related to the command, the values are taken from one of the following, depending upon the channel type:

SYSTEM.DEF.SENDER	Sender channel
SYSTEM.DEF.SERVER	Server channel
SYSTEM.DEF.RECEIVER	Receiver channel
SYSTEM.DEF.REQUESTER	Requester channel
SYSTEM.DEF.SVRCONN	Server-connection channel
SYSTEM.DEF.CLNTCONN	Client-connection channel
SYSTEM.DEF.CLUSSDR	Cluster-sender channel
SYSTEM.DEF.CLUSRCVR	Cluster-receiver channel

This is equivalent to defining the following object:

```
LIKE(SYSTEM.DEF.SENDER)
```

for a sender channel, and similarly for other channel types.

These default channel definitions can be altered by the installation to the default values required.

LONGRTY(*integer*)
When a sender, server, or cluster-sender channel is attempting to connect to the remote queue manager, and the count specified by SHORTRTY has been exhausted, this specifies the maximum number of further attempts that are made to connect to the remote queue manager, at intervals specified by LONGTMR.

If this count is also exhausted without success, an error is logged to the operator, and the channel is stopped. The channel must subsequently be restarted with a command (it is not started automatically by the channel initiator).

The value must be greater than or equal to zero, and less than or equal to 999 999 999.

This parameter is valid only for channels with a channel type (CHLTYPE) of SDR, SVR, CLUSSDR, or CLUSRCVR.

LONGTMR(*integer*)
For long retry attempts, this is the maximum number of seconds to wait before re-attempting connection to the remote queue manager.

The time is approximate; zero means that another connection attempt is made as soon as possible.

The interval between retries might be extended if the channel has to wait to become active.

The value must be greater than or equal to zero, and less than or equal to 999 999 999.

Note: For implementation reasons, the maximum retry interval that can be used is 999 999; values exceeding this will be treated as 999 999.

This parameter is valid only for channels with a channel type (CHLTYPE) of SDR, SVR, CLUSSDR, or CLUSRCVR.

MAXMSGL(*integer*)
Specifies the maximum message length that can be transmitted on the channel. This is compared with the value for the partner and the actual maximum used is the lower of the two values.

The value zero means the maximum message length for the queue manager.

| On AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT, specify a value greater than or equal to zero, and less than or equal to the maximum message length for the queue manager as defined by the MAXMSGL parameter of the ALTER QMGR command. See “ALTER QMGR” on page 62 for more information.

| On other platforms, specify a value greater than or equal to zero, and less than or equal to 4 MB, or 4 194 304 bytes.

MCANAME(*string*)
Message channel agent name.

This is reserved, and if specified must only be set to blanks (maximum length 20 characters).

MCATYPE
Specifies whether the message-channel-agent program should run as a thread or a process.

PROCESS	The message channel agent runs as a separate process
THREAD	The message channel agent runs as a separate thread

In situations where a threaded listener is required to service a large number of incoming requests, resources can become strained. In this case, it is recommended that multiple listener processes are used and that incoming requests are targeted at specific listeners via the port number specified on the listener.

This parameter is valid only for channels with a channel type (CHLTYPE) of SDR, SVR, RQSTR, CLUSSDR, or CLUSRCVR. It is supported only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

On OS/390 it is supported only for channels with a channel type of CLUSRCVR. When specified in a CLUSRCVR definition, MCATYPE is used by a remote machine to determine the corresponding CLUSSDR definition.

MCAUSER(*string*)
Message channel agent user identifier.

If *string* is nonblank, it is the user identifier which is to be used by the message channel agent for authorization to access MQSeries resources, including (if PUTAUT is DEF) authorization to put the message to the destination queue for receiver or requester channels.

If it is blank, the message channel agent uses its default user identifier.

This user identifier can be overridden by one supplied by a channel security exit.

The maximum length of *string* is 64 characters on Windows NT and 12 characters on other platforms. On Windows NT, you can optionally qualify a user identifier with the domain name in the format `user@domain`.

This parameter is not valid for channels with a channel type (CHLTYPE) of CLNTCONN.

MODENAME(*string*)
LU 6.2 mode name (maximum length 8 characters).

This parameter is valid only for channels with a transport type (TRPTYPE) of LU 6.2. If TRPTYPE is not LU 6.2, the data is ignored and no error message is issued.

If specified, this should be set to the SNA mode name unless the CONNAME contains a side-object name, in which case it should be set to blanks. The actual name is then taken from the CPI-C Communications Side Object, or APPC side information data set.

See the information about configuration parameters for an LU 6.2 connection for your platform in the *MQSeries Intercommunication* manual for more information.

This parameter is not valid for channels with a channel type (CHLTYPE) of RCVR or SVRCONN.

MRDATA(*string*)
Channel message-retry exit user data (maximum length 32 characters).

This is passed to the channel message-retry exit when it is called.

This parameter is valid only for channels with a channel type (CHLTYPE) of RCVR, RQSTR, or CLUSRCVR. It is not supported on OS/390.

MREXIT(*string*)
Channel message-retry exit name.

The format and maximum length of the name is the same as for MSGEXIT.

This parameter is valid only for channels with a channel type (CHLTYPE) of RCVR, RQSTR, or CLUSRCVR. It is not supported on OS/390.

MRRTY(*integer*)
The number of times the channel will retry before it decides it cannot deliver the message.

This attribute controls the action of the MCA only if the message-retry exit name is blank. If the exit name is not blank, the value of MRRTY is passed to the exit for the exit's use, but the number of retries performed (if any) is controlled by the exit, and not by this attribute.

The value must be greater than or equal to zero, and less than or equal to 999 999 999. A value of zero means that no retries will be performed.

This parameter is valid only for channels with a channel type (CHLTYPE) of RCVR, RQSTR, or CLUSRCVR. It is not supported on OS/390.

MRTMR(*integer*)
The minimum interval of time that must pass before the channel can retry the MQPUT operation. This time interval is in milliseconds.

This attribute controls the action of the MCA only if the message-retry exit name is blank. If the exit name is not blank, the value of MRTMR is passed to the exit for the exit's use, but the retry interval is controlled by the exit, and not by this attribute.

The value must be greater than or equal to zero, and less than or equal to 999 999 999. A value of zero means that the retry will be performed as soon as possible (provided that the value of MRRTY is greater than zero).

This parameter is valid only for channels with a channel type (CHLTYPE) of RCVR, RQSTR, or CLUSRCVR. It is not supported on OS/390.

MSGDATA(*string*)
User data for the channel message exit (maximum length 32 characters).

This data is passed to the channel message exit when it is called.

On AIX, HP-UX, OS/2 Warp, Sun Solaris, and Windows NT, you can specify data for more than one exit program by specifying multiple strings separated by commas. The total length of the field must not exceed 999 characters.

| On OS/400, you can specify up to 10 strings, each of length 32 characters.
| The first string of data is passed to the first message exit specified, the
| second string to the second exit, and so on.

On other platforms you can specify only one string of message exit data for each channel.

MSGEXIT(*string*)
Channel message exit name.

On Tandem NSK, there is only one channel user exit program. If the MSGEXIT, MREXIT, SCYEXIT, SENDEXIT, and RCVEXIT parameters are all left blank, the channel user exit is not invoked. If any of these parameters is nonblank, the channel exit program is called. You can enter text string for these attributes. The maximum length of the string is 128 characters. This string is passed to the exit program, but it is not used to determine the program name.

See the *MQSeries for Tandem NonStop Kernel System Management Guide* for more information about using channel exit programs on Tandem NSK.

On other platforms, if this name is nonblank, the exit is called at the following times:

- Immediately after a message has been retrieved from the transmission queue (sender or server), or immediately before a message is put to a destination queue (receiver or requester).

  The exit is given the entire application message and transmission queue header for modification.
- At initialization and termination of the channel.

On AIX, HP-UX, OS/2 Warp, Sun Solaris, and Windows NT, you can specify the name of more than one exit program by specifying multiple strings separated by commas. However, the total number of characters specified must not exceed 999.

| On OS/400, you can specify the names of up to 10 exit programs by
| specifying multiple strings separated by commas.

On other platforms you can specify only one message exit name for each channel.

For channels with a channel type (CHLTYPE) of CLNTCONN or SVRCONN, this parameter is not relevant, because message exits are not invoked for such channels.

The format and maximum length of the name depends on the environment:

- On Digital OpenVMS and UNIX systems, it is of the form:
  ```
  libraryname(functionname)
  ```
  The maximum length of the string is 128 characters.
- On OS/2 Warp, Windows, and Windows NT, it is of the form:
  ```
  dllname(functionname)
  ```
  where *dllname* is specified without the suffix (″.DLL″). The maximum length of the string is 128 characters.
- | On OS/400, it is of the form:
  ```
  progname libname
  ```
  | where *program name* occupies the first 10 characters and *libname* the
  | second 10 characters (both blank-padded to the right if necessary). The
  | maximum length of the string is 20 characters.
- On OS/390, it is a load module name, maximum length 8 characters (128 characters are allowed for exit names for client-connection channels).

NETPRTY(*integer*)
The priority for the network connection. Distributed queuing chooses the

path with the highest priority if there are multiple paths available. The value must be in the range 0 through 9; 0 is the lowest priority.

This parameter is valid only for CLUSRCVR channels.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

NOREPLACE and **REPLACE**
Whether the existing definition is to be replaced with this one. This is optional. The default is NOREPLACE.

NOREPLACE	The definition should not replace any existing definition of the same name.
REPLACE	The definition should replace any existing definition of the same name. If a definition does not exist, one is created.

NPMSPEED
The class of service for nonpersistent messages on this channel:

FAST	Fast delivery for nonpersistent messages; messages might be lost if the channel is lost. This is the default. Messages are retrieved using MQGMO_SYNCPOINT_IF_PERSISTENT and so are not included in the batch unit of work.
NORMAL	Normal delivery for nonpersistent messages.

If the sending side and the receiving side do not agree about this attribute, or one does not support it, NORMAL is used.

This parameter is valid only for channels with a CHLTYPE of SDR, SVR, RCVR, RQSTR, CLUSSDR, or CLUSRCVR. It is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

PASSWORD(*string*)
Password (maximum length 12 characters).

This is used by the message channel agent when attempting to initiate a secure LU 6.2 session with a remote message channel agent.

| This parameter is valid only for channels with a channel type (CHLTYPE) of SDR, SVR, RQSTR, CLNTCONN, or CLUSSDR. It is supported only on OS/390 for client-connection channels.

Although the maximum length of the attribute is 12 characters, only the first 10 characters are used.

PUTAUT
Specifies which user identifiers should be used to establish authority to put messages to the destination queue (for messages channels) or to execute an MQI call (for MQI channels).

DEF	The default user ID is used. On OS/390 this might involve using both the user ID received from the network and that derived from MCAUSER.
CTX	The user ID from the *UserIdentifier* field of the message descriptor is used. On OS/390 this might involve also using the user ID received from the network or that derived from MCAUSER, or both.
ONLYMCA	The default user ID is used. Any user ID received from the network is not used. This value is supported only on OS/390.

ALTMCA	The user ID from the *UserIdentifier* field of the message descriptor is used. Any user ID received from the network is not used. This value is supported only on OS/390.

This parameter is valid only for channels with a channel type (CHLTYPE) of RCVR, RQSTR, CLUSRCVR, or SVRCONN. CTX and ALTMCA are not valid for SVRCONN channels.

QMNAME(*string*)
Queue manager name.

For channels with a channel type (CHLTYPE) of CLNTCONN, this is the name of the queue manager to which an application running in the MQI client environment can request connection.

For channels of other types this parameter is not valid.

RCVDATA(*string*)
Channel receive exit user data (maximum length 32 characters).

This is passed to the channel receive exit when it is called.

On AIX, HP-UX, OS/2 Warp, Sun Solaris, and Windows NT, you can specify data for more than one exit program by specifying multiple strings separated by commas. The total length of the field must not exceed 999 characters.

| On OS/400, you can specify up to 10 strings, each of length 32 characters. The first string of data is passed to the first receive exit specified, the second string to the second exit, and so on.

On other platforms you can specify only one string of receive exit data for each channel.

RCVEXIT(*string*)
Channel receive exit name.

On platforms other than Tandem NSK, if this name is nonblank, the exit is called at the following times:

- Immediately before the received network data is processed.

  The exit is given the complete transmission buffer as received. The contents of the buffer can be modified as required.
- At initialization and termination of the channel.

On AIX, HP-UX, OS/2 Warp, Sun Solaris, and Windows NT, you can specify the name of more than one exit program by specifying multiple strings separated by commas. However, the total number of characters specified must not exceed 999.

| On OS/400, you can specify the names of up to 10 exit programs by specifying multiple strings separated by commas.

On other platforms you can specify only one receive exit name for each channel.

The format and maximum length of the name is the same as for MSGEXIT.

SCYDATA(*string*)
Channel security exit user data (maximum length 32 characters).

This is passed to the channel security exit when it is called.

SCYEXIT(*string*)
Channel security exit name.

On platforms other than Tandem NSK, if this name is nonblank, the exit is called at the following times:

- Immediately after establishing a channel.

  Before any messages are transferred, the exit is given the opportunity to instigate security flows to validate connection authorization.
- Upon receipt of a response to a security message flow.

  Any security message flows received from the remote processor on the remote queue manager are given to the exit.
- At initialization and termination of the channel.

The format and maximum length of the name is the same as for MSGEXIT.

SENDDATA(*string*)
Channel send exit user data (maximum length 32 characters).

This is passed to the channel send exit when it is called.

On AIX, HP-UX, OS/2 Warp, Sun Solaris, and Windows NT, you can specify data for more than one exit program by specifying multiple strings separated by commas. The total length of the field must not exceed 999 characters.

| On OS/400, you can specify up to 10 strings, each of length 32 characters.
| The first string of data is passed to the first send exit specified, the second
| string to the second exit, and so on.

On other platforms you can specify only one string of send exit data for each channel.

SENDEXIT(*string*)
Channel send exit name.

On platforms other than Tandem NSK, if this name is nonblank, the exit is called at the following times:

- Immediately before data is sent out on the network.

  The exit is given the complete transmission buffer before it is transmitted. The contents of the buffer can be modified as required.
- At initialization and termination of the channel.

On AIX, HP-UX, OS/2 Warp, Sun Solaris, and Windows NT, you can specify the name of more than one exit program by specifying multiple strings separated by commas. However, the total number of characters specified must not exceed 999.

| On OS/400, you can specify the names of up to 10 exit programs by
| specifying multiple strings separated by commas.

On other platforms you can specify only one send exit name for each channel.

The format and maximum length of the name is the same as for MSGEXIT.

SEQWRAP(*integer*)
When this value is reached, sequence numbers wrap to start again at 1.

This value is non-negotiable and must match in both the local and remote channel definitions.

The value must be greater than or equal to 100, and less than or equal to 999 999 999.

This parameter is valid only for channels with a channel type (CHLTYPE) of SDR, SVR, RCVR, RQSTR, CLUSSDR, or CLUSRCVR.

SHORTRTY(*integer*)
The maximum number of attempts that are made by a sender, server, or cluster-sender channel to connect to the remote queue manager, at intervals specified by SHORTTMR, before the (normally longer) LONGRTY and LONGTMR are used.

Retry attempts are made if the channel fails to connect initially (whether it is started automatically by the channel initiator or by an explicit command), and also if the connection fails after the channel has successfully connected. However, if the cause of the failure is such that retry is unlikely to be successful, retries are not attempted.

The value must be greater than or equal to zero, and less than or equal to 999 999 999.

This parameter is valid only for channels with a channel type (CHLTYPE) of SDR, SVR, CLUSSDR, or CLUSRCVR.

SHORTTMR(*integer*)
For short retry attempts, this is the maximum number of seconds to wait before re-attempting connection to the remote queue manager.

The time is approximate; zero means that another connection attempt is made as soon as possible.

The interval between retries might be extended if the channel has to wait to become active.

The value must be greater than or equal to zero, and less than or equal to 999 999 999.

Note: For implementation reasons, the maximum retry interval that can be used is 999 999; values exceeding this will be treated as 999 999.

This parameter is valid only for channels with a channel type (CHLTYPE) of SDR, SVR, CLUSSDR, or CLUSRCVR.

TPNAME(*string*)
LU 6.2 transaction program name (maximum length 64 characters).

This parameter is valid only for channels with a transport type (TRPTYPE) of LU 6.2.

On Tandem NSK, this should be set to the local TP name. This can be followed by the name of the TP on the remote machine, for example:

```
TPNAME('localtp[.remotetp]')
```

Both names can be up to 16 characters in length.

The name can also be nonblank for client connection channels to be used with OS/2 Warp.

On other platforms, this should be set to the SNA transaction program name, unless the CONNAME contains a side-object name in which case it should be set to blanks. The actual name is taken instead from the CPI-C Communications Side Object, or the APPC side information data set.

See the information about configuration parameters for an LU 6.2 connection for your platform in the *MQSeries Intercommunication* manual for more information.

On Windows NT SNA Server, and in the side object on OS/390, the TPNAME is wrapped to upper case.

This parameter is not valid for channels with a channel type (CHLTYPE) of RCVR.

TRPTYPE

Transport type to be used.

| On AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT, this parameter is optional because, if you do not enter a value, the value specified in the SYSTEM.DEF.*channel-type* definition is used. However, no check is made that the correct transport type has been specified if the channel is initiated from the other end. On OS/390, if the SYSTEM.DEF.*channel-type* definition does not exist, the default is LU62.

This is required on all other platforms.

DECNET	DECnet (supported only on Digital OpenVMS)
LU62	SNA LU 6.2
NETBIOS	NetBIOS (supported only on OS/2 Warp, Windows, Windows NT, and DOS; it also applies to OS/390 for defining client-connection channels that will connect to servers on the platforms supporting NetBIOS)
SPX	Sequenced packet exchange (supported only on OS/2 Warp, Windows, Windows NT, and DOS; it also applies to OS/390 for defining client-connection channels that will connect to servers on the platforms supporting SPX)
TCP	Transmission Control Protocol - part of the TCP/IP protocol suite
UDP	User Datagram Protocol - part of the TCP/IP protocol suite (supported only on AIX); this option is available only for connection to MQSeries for Windows V2.0, with CSD02

USERID(*string*)

Task user identifier (maximum length 12 characters).

This is used by the message channel agent when attempting to initiate a secure LU 6.2 session with a remote message channel agent.

| This parameter is valid only for channels with a channel type (CHLTYPE) of SDR, SVR, RQSTR, CLNTCONN, or CLUSSDR. On OS/390, it is supported only for CLNTCONN channels.

Although the maximum length of the attribute is 12 characters, only the first 10 characters are used.

XMITQ(*string*)

Transmission queue name.

The name of the queue from which messages are retrieved. See “Rules for naming MQSeries objects” on page 4.

This parameter is valid only for channels with a channel type (CHLTYPE) of SDR or SVR. For these channel types this parameter is required.

DEFINE MAXSMSGS

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

Use DEFINE MAXSMSGS to define the maximum number of messages that a task can get or put within a single unit of recovery.

Notes:

1. You can issue the DEFINE MAXSMSGS command at any time to change the number of messages allowed.
2. This command is valid only on OS/390. For other platforms use the MAXUMSGS parameter of the ALTER QMGR command instead.

Synonym: DEF MAXSM

DEFINE MAXSMSGS

```
►►──DEFINE MAXSMSGS(integer)──────────────────────────────────────────────►◄
```

Keyword and parameter descriptions

(integer)
: The maximum number of messages that a task can get or put within a single unit of recovery. This value must be an integer in the range 1 through 999 999 999. The default value is 10 000.

  The number includes any trigger messages and report messages generated within the same unit of recovery.

DEFINE NAMELIST

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓	✓	✓		✓	✓

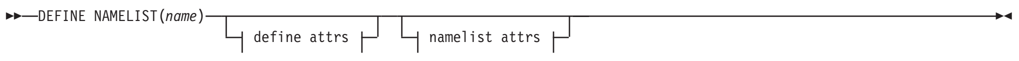
Use DEFINE NAMELIST to define a list of names. This is most commonly a list of cluster names or queue names.

Notes:

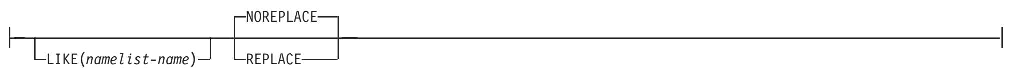
1. On UNIX systems, the command is valid only on AIX, HP-UX, and Sun Solaris.

Synonym: DEF NL

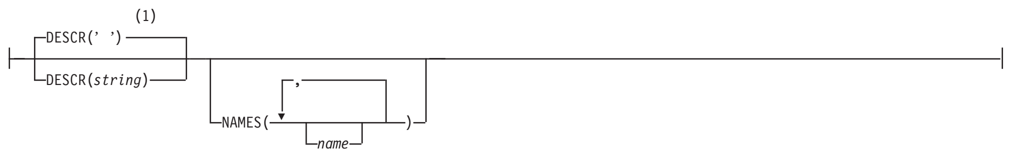
DEFINE NAMELIST



Define attrs:



Namelist attrs:



Notes:

1 This is the default supplied with MQSeries, but your installation might have changed it.

Keyword and parameter descriptions

(name) Name of the list. This is required.

The name must not be the same as any other namelist name currently defined on this queue manager (unless REPLACE is specified). See “Rules for naming MQSeries objects” on page 4.

Define attributes

LIKE(*namelist-name***)**
The name of a namelist, whose attributes will be used to model this definition.

If this field is not filled in, and you do not complete the attribute fields related to the command, the values are taken from the default definition for namelists on this queue manager.

This is equivalent to specifying:

```
LIKE(SYSTEM.DEFAULT.NAMELIST)
```

A default namelist definition is provided, but it can be altered by the installation to the default values required. See "Rules for naming MQSeries objects" on page 4.

NOREPLACE and **REPLACE**

Whether the existing definition is to be replaced with this one. This is optional. The default is NOREPLACE.

NOREPLACE	The definition should not replace any existing definition of the same name.
REPLACE	The definition should replace any existing definition of the same name. If a definition does not exist, one is created.

Namelist attributes

DESCR(*string*)

Plain-text comment. It provides descriptive information about the namelist when an operator issues the DISPLAY NAMELIST command (see "DISPLAY NAMELIST" on page 193).

It should contain only displayable characters. The maximum length is 64 characters. In a DBCS installation, it can contain DBCS characters (subject to a maximum length of 64 bytes).

Note: If characters are used that are not in the coded character set identifier (CCSID) for this queue manager, they might be translated incorrectly if the information is sent to another queue manager.

NAMES(*name, ...*)

List of names.

The names can be of any type, but must conform to the rules for naming MQSeries objects, with a maximum length of 48 characters.

An empty list is valid: specify NAMES(). The maximum number of names in the list is 256.

DEFINE PROCESS

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

Use DEFINE PROCESS to define a new MQSeries process definition, and set its attributes.

Synonym: DEF PRO

DEFINE PROCESS

```
►►──DEFINE PROCESS(process-name)──┬──────────────────┬──┬───────────────────┬──────────────────────►◄
                                  └─┤ define attrs ├─┘  └─┤ process attrs ├─┘
```

Define attrs:

```
                            ┌─NOREPLACE─┐
├──┬───────────────────────┬─┼───────────┼───────────────────────────────────────────────────────────┤
   └─LIKE(process-name)────┘ └─REPLACE───┘
```

Process attrs:

```
                 (1)                                                            (1)                   (1)
   ┌─DESCR(' ')──────┐                                          ┌─APPLICID(' ')─────┐  ┌─USERDATA(' ')─────┐
├──┼─────────────────┼──┬─────────────────────────────────────┬─┼───────────────────┼──┼───────────────────┼──────►
   └─DESCR(string)───┘  │                  (2)                 │ └─APPLICID(string)──┘  └─USERDATA(string)──┘
                        └─APPLTYPE──────(──┬─CICS──────┬──)────┘
                                           ├─DEF───────┤
                                           ├─DOS───────┤
                                           ├─IMS───────┤
                                           ├─MVS───────┤
                                           ├─NSK───────┤
                                           ├─OS2───────┤
                                           ├─OS400─────┤
                                           ├─UNIX──────┤
                                           ├─VMS───────┤
                                           ├─WINDOWS───┤
                                           ├─WINDOWSNT─┤
                                           └─integer───┘

                    (1)
   ┌─ENVRDATA(' ')──────┐
►──┼────────────────────┼──────────────────────────────────────────────────────────────────────────────┤
   └─ENVRDATA(string)───┘
```

Notes:

1 This is the default supplied with MQSeries, but your installation might have changed it.

2 The default depends on the platform, and can be changed by your installation.

Keyword and parameter descriptions

(process-name)
: Name of the MQSeries process definition (see "Rules for naming MQSeries objects" on page 4). This is required.

The name must not be the same as any other process definition currently defined on this queue manager (unless REPLACE is specified).

Define attributes

LIKE(*process-name*)
The name of an object of the same type, whose attributes will be used to model this definition.

If this field is not filled in, and you do not complete the attribute fields related to the command, the values are taken from the default definition for this object.

This is equivalent to specifying:

```
LIKE(SYSTEM.DEFAULT.PROCESS)
```

A default definition for each object type is provided, but these can be altered by the installation to the default values required. See “Rules for naming MQSeries objects” on page 4.

NOREPLACE and **REPLACE**
Whether the existing definition is to be replaced with this one. This is optional. The default is NOREPLACE.

NOREPLACE	The definition should not replace any existing definition of the same name.
REPLACE	The definition should replace any existing definition of the same name. If a definition does not exist, one is created.

Process attributes

APPLICID(*string*)
The name of the application to be started. This might typically be a fully-qualified file name of an executable object. The maximum length is 256 characters.

For a CICS application this is a CICS transaction ID, and for an IMS application it is an IMS transaction ID.

On OS/390, for distributed queuing using CICS it must be “CKSG”, and for distributed queuing without CICS, it must be “CSQX START”.

APPLTYPE(*string*)
The type of application to be started. Valid application types are:

CICS	Represents a CICS transaction.
DEF	This causes the default application type for the platform at which the command is interpreted to be stored in the process definition. This default cannot be changed by the installation. If the platform supports clients, this is interpreted as the default application type of the server.
DOS	Represents a DOS application.
IMS	Represents an IMS transaction.
MVS	Represents an OS/390 application (batch or TSO).
NSK	Represents a Tandem NSK application.
OS2	Represents an OS/2 Warp application.
OS400	Represents an OS/400 application.
UNIX	Represents a UNIX application.
VMS	Represents a Digital OpenVMS application.
WINDOWS	Represents a Windows application.
WINDOWSNT	Represents a Windows NT application.

integer	User-defined application type in the range 65 536 through 999 999 999.

Only application types (other than user-defined types) that are supported on the platform at which the command is executed should be used:

- On Digital OpenVMS, VMS is supported
- On OS/390, CICS (default), DOS, IMS, MVS, OS2, UNIX, WINDOWS, WINDOWSNT, and DEF are supported
- On OS/400, OS400 (default), CICS, and DEF are supported
- On OS/2 Warp, OS2 (default), DOS, WINDOWS, UNIX, CICS, and DEF are supported
- On Tandem NSK, NSK is supported.
- On UNIX systems, UNIX (default), OS2, DOS, WINDOWS, CICS, and DEF are supported
- On Windows NT, WINDOWSNT (default), DOS, WINDOWS, OS2, UNIX, CICS, and DEF are supported

DESCR(*string*)
Plain-text comment. It provides descriptive information about the object when an operator issues the DISPLAY PROCESS command.

It should contain only displayable characters. The maximum length is 64 characters. In a DBCS installation, it can contain DBCS characters (subject to a maximum length of 64 bytes).

Note: If characters are used that are not in the coded character set identifier (CCSID) for this queue manager, they might be translated incorrectly if the information is sent to another queue manager.

ENVRDATA(*string*)
A character string that contains environment information pertaining to the application to be started. The maximum length is 128 characters.

| The meaning of ENVRDATA is determined by the trigger-monitor application. The trigger monitor provided by MQSeries appends ENVRDATA to the parameter list passed to the started application. The parameter list consists of the MQTMC2 structure, followed by one blank, followed by ENVRDATA with trailing blanks removed.

| **Notes:**

| 1. On OS/390, ENVRDATA is not used by the trigger-monitor applications provided by MQSeries.
| 2. On UNIX systems, ENVRDATA can be set to the ampersand character to make the started application run in the background.

| **USERDATA(*string*)**
A character string that contains user information pertaining to the application defined in the APPLICID that is to be started. The maximum length is 128 characters.

| The meaning of USERDATA is determined by the trigger-monitor application. The trigger monitor provided by MQSeries simply passes USERDATA to the started application as part of the parameter list. The parameter list consists of the MQTMC2 structure (containing USERDATA), followed by one blank, followed by ENVRDATA with trailing blanks removed.

For MQSeries message channel agents, the format of this field is a channel name of up to 20 characters. See the *MQSeries Intercommunication* manual for information about what these need as APPLICID.

| On Tandem NSK, a character string containing spaces must be enclosed in
| double quotation marks.

DEFINE PSID

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

Use DEFINE PSID to define a page set and associated buffer pool.

Note: You can issue DEFINE PSID only from the CSQINP1 initialization data set. If more than one DEFINE PSID command is issued for the same page set, only the last one is actioned.

Synonym: DEF PSID

DEFINE PSID

```
                             ┌─BUFFPOOL(0)───────┐
►►──DEFINE PSID(psid-number)─┤                   ├─────────────────────────────────────────►◄
                             └─BUFFPOOL(integer)─┘
```

Keyword and parameter descriptions

(psid-number)
Identifier of the page set. This is required.

In MQSeries for OS/390 a one-to-one relationship exists between page sets and the VSAM data sets used to store the pages. The identifier consists of a number in the range 00 through 99. It is used to generate a *ddname*, which references the VSAM ESDS data set, in the range CSQP0000 through CSQP0099.

The identifier must not be the same as any other page set identifier currently defined on this queue manager.

BUFFPOOL(*integer*)
The buffer pool number (in the range 0 through 3). This is optional. The default is 0.

See "DEFINE BUFFPOOL" on page 89.

DEFINE QALIAS

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

Use DEFINE QALIAS to define a new alias queue, and set its attributes.

Note: An alias queue provides a level of indirection to another queue. The queue to which the alias refers must be another local or remote queue, defined at this queue manager. It cannot be another alias queue.

Synonym: DEF QA

DEFINE QALIAS

```
►►──DEFINE QALIAS(q-name)──┬──────────────────┬─┬──────────────────┬─┬──────────────────┬──────────────►◄
                           └┤ define attrs ├──┘ └┤ common q attrs ├─┘ └┤ alias q attrs ├──┘
```

Define attrs:

```
                            ┌─NOREPLACE─┐
├──┬──────────────────────┬─┼───────────┼──────────────────────────────────────────────────────────────┤
   └─LIKE(qalias-name)────┘ └─REPLACE───┘
```

Common q attrs:

```
              (1)                (1)                 (1)                (1)
   ┌─DEFPRTY(0)────────┐ ┌─DEFPSIST(NO)──────┐ ┌─DESCR(' ')──────┐ ┌─PUT(ENABLED)──────┐
├──┼───────────────────┼─┼───────────────────┼─┼─────────────────┼─┼───────────────────┼──────────────┤
   └─DEFPRTY(integer)──┘ └─DEFPSIST(YES)─────┘ └─DESCR(string)───┘ └─PUT(DISABLED)─────┘
```

Alias q attrs:

```
              (1)  (2)                (1)  (2)                 (1)  (2)               (1)
   ┌─CLUSNL(' ')──────────┐ ┌─CLUSTER(' ')──────────┐ ┌─DEFBIND(OPEN)──────────┐ ┌─GET(ENABLED)──┐
├──┼──────────────────────┼─┼───────────────────────┼─┼────────────────────────┼─┼───────────────┼──────►
   │               (2)    │ │                 (2)   │ │                 (2)    │ └─GET(DISABLED)─┘
   └─CLUSNL(nlname)───────┘ └─CLUSTER(clustername)──┘ └─DEFBIND(NOTFIXED)──────┘

              (1)  (3)              (1)
   ┌─SCOPE(QMGR)──────────┐ ┌─TARGQ(' ')──────┐
►──┼──────────────────────┼─┼─────────────────┼──────────────────────────────────────────────────────┤
   │             (3)      │ └─TARGQ(string)───┘
   └─SCOPE(CELL)──────────┘
```

Notes:

1 This is the default supplied with MQSeries, but your installation might have changed it.

2 Valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

3 Valid only on Digital OpenVMS, OS/2 Warp, UNIX systems, and Windows NT.

Keyword and parameter descriptions

(q-name)

Local name of the queue. This is required.

The name must not be the same as any other queue name (of whatever queue type) currently defined on this queue manager (unless REPLACE is specified). See “Rules for naming MQSeries objects” on page 4.

Define attributes

LIKE(*qalias-name***)**

The name of an object of the same type, whose attributes will be used to model this definition.

If this field is not filled in, and you do not complete the attribute fields related to the command, the values are taken from the default definition for this object.

This is equivalent to defining the following object:

```
LIKE(SYSTEM.DEFAULT.ALIAS.QUEUE)
```

A default definition for each object type is provided, but these can be altered by the installation to the default values required. See “Rules for naming MQSeries objects” on page 4.

NOREPLACE and **REPLACE**

Whether the existing definition is to be replaced with this one. This is optional. The default is NOREPLACE.

NOREPLACE
The definition should not replace any existing definition of the same name.

REPLACE
If the object does exist, the effect is similar to issuing the ALTER command without the FORCE option and with *all* the other attributes specified.

(The difference between the ALTER command without the FORCE option, and the DEFINE command with the REPLACE option, is that ALTER does not change unspecified attributes, but DEFINE with REPLACE sets *all* the attributes. When you use REPLACE, the attributes are taken either from the object named on the LIKE option, or from the default definition, and the attributes of the object being replaced, if one exists, are ignored.)

The command fails if both of the following are true:

- The command sets attributes that would require the use of the FORCE option if you were using the ALTER command
- The object is open

The ALTER command with the FORCE option succeeds in this situation.

| If SCOPE(CELL) is specified on Digital OpenVMS, OS/2, UNIX systems,
| or Windows NT, and there is already a queue with the same name in the
| cell directory, the command fails, whether or not REPLACE is specified.

Common queue attributes

DEFPRTY(*integer***)**

The default priority of messages put on the queue. The value must be greater than or equal to zero, (the lowest priority) and less than or equal to the MAXPRTY queue manager attribute. (MAXPRTY is 9.)

DEFPSIST

Specifies the message persistence to be used when applications specify the MQPER_PERSISTENCE_AS_Q_DEF option.

NO Messages on this queue are lost across a restart of the queue manager. This is the default supplied with MQSeries, but your installation might have changed it.

YES Messages on this queue survive a restart of the queue manager.

DESCR(*string*)

Plain-text comment. It provides descriptive information about the object when an operator issues the DISPLAY QUEUE command.

It should contain only displayable characters. The maximum length is 64 characters. In a DBCS installation, it can contain DBCS characters (subject to a maximum length of 64 bytes).

Note: If characters are used that are not in the coded character set identifier (CCSID) for this queue manager, they might be translated incorrectly if the information is sent to another queue manager.

PUT Whether messages can be put on the queue.

ENABLED	Messages can be added to the queue (by suitably authorized applications). This is the default supplied with MQSeries, but your installation might have changed it.
DISABLED	Messages cannot be added to the queue.

This attribute can also be changed using the **MQSET** API call.

Alias queue attributes

| **CLUSNL(*nlname*)**

| The name of the namelist that specifies a list of clusters to which the queue belongs. Changes to this parameter do not affect instances of the queue that are already open. Only one of the resultant values of CLUSTER or CLUSNL can be nonblank; you cannot specify a value for both.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

CLUSTER(*clustername*)

The name of the cluster to which the queue belongs. The maximum length is 48 characters conforming to the rules for naming MQSeries objects. Changes to this parameter do not affect instances of the queue that are already open. Only one of the resultant values of CLUSNL or CLUSTER can be nonblank; you cannot specify a value for both.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

DEFBIND

Specifies the binding to be used when the application specifies MQOO_BIND_AS_Q_DEF on the **MQOPEN** call, and the queue is a cluster queue.

OPEN	The queue handle is bound to a specific instance of the cluster queue when the queue is opened.

NOTFIXED	The queue handle is not bound to any particular instance of the cluster queue. This allows the queue manager to select a specific queue instance when the message is put using **MQPUT**, and to change that selection subsequently should the need arise.

The **MQPUT1** call always behaves as if NOTFIXED had been specified.

This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

GET Whether applications are permitted to get messages from this queue.

ENABLED	Messages can be retrieved from the queue (by suitably authorized applications). This is the default supplied with MQSeries, but your installation might have changed it.
DISABLED	Applications cannot retrieve messages from the queue.

This attribute can also be changed using the **MQSET** API call.

SCOPE
Specifies the scope of the queue definition.

QMGR	The queue definition has queue-manager scope. This means that the definition of the queue does not extend beyond the queue manager that owns it. To open the queue for output from some other queue manager, either the name of the owning queue manager must be specified, or the other queue manager must have a local definition of the queue.
CELL	The queue definition has cell scope. This means that the queue is known to all of the queue managers in the cell, and can be opened for output merely by specifying the name of the queue; the name of the queue manager that owns the queue need not be specified. If there is already a queue with the same name in the cell directory, the command fails. This value is valid only if a name service supporting a cell directory (for example, the supplied DCE name service) has been configured.

This attribute is supported only on Digital OpenVMS, OS/2, Windows NT, and UNIX systems.

TARGQ(*string*)
The local name of the base queue being aliased. (See “Rules for naming MQSeries objects” on page 4.) The maximum length is 48 characters.

This must be one of the following (although this is not checked until the alias queue is opened by an application):
- A local queue (not a model queue)
- A cluster queue
- A local definition of a remote queue

This queue need not be defined until an application process attempts to open the alias queue.

Usage notes

1. `DEFINE QALIAS(`*`otherqname`*`) TARGQ(`*`aliasqueue`*`) CLUSTER(`*`c`*`)` has the effect of advertising queue *aliasqueue* by the name *otherqname*.
2. `DEFINE QALIAS(`*`otherqname`*`) TARGQ(`*`aliasqueue`*`)` has the effect of allowing a queue advertised by the name *otherqname* to be used on this queue manager by the name *aliasqueue*.

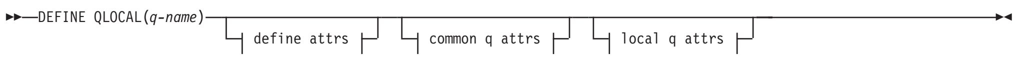
DEFINE QLOCAL

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

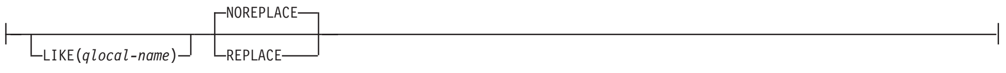
Use DEFINE QLOCAL to define a new local queue, and set its attributes.

Synonym: DEF QL

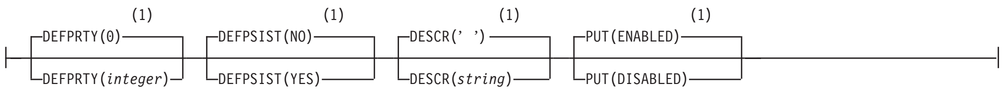
DEFINE QLOCAL



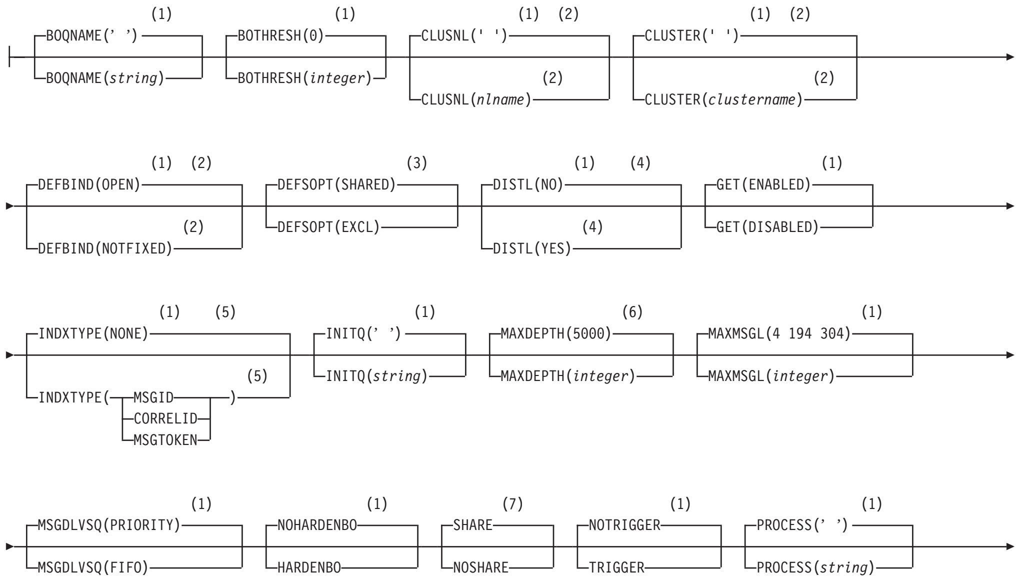
Define attrs:



Common q attrs:



Local q attrs:



```
              (1)
 ┌QDEPTHHI(80)──────┐
►─┤                  ├──────────────────────────────────────────────────────────────►
 └QDEPTHHI(integer)─┘


                (1)                   (1)                   (1)                    (1)
 ┌QDEPTHLO(40)──────┐ ┌QDPHIEV(DISABLED)─┐ ┌QDPLOEV(DISABLED)─┐ ┌QDPMAXEV(ENABLED)──┐
►─┤                  ├─┤                  ├─┤                  ├─┤                   ├──►
 └QDEPTHLO(integer)─┘ └QDPHIEV(ENABLED)──┘ └QDPLOEV(ENABLED)──┘ └QDPMAXEV(DISABLED)─┘

                (1)                     (1)                        (1)
 ┌QSVCIEV(NONE)───────┐ ┌QSVCINT(999 999 999)─┐ ┌RETINTVL(999 999 999)─┐
►─┤                    ├─┤                     ├─┤                      ├─────────────►
 └QSVCIEV(──┬HIGH─┬──)─┘ └QSVCINT(integer)────┘ └RETINTVL(integer)────┘
           └OK───┘

             (1)    (8)                     (1)  (5)          (1)               (1)
 ┌SCOPE(QMGR)──────────┐ ┌STGCLASS('DEFAULT')────┐ ┌TRIGDATA(' ')────┐ ┌TRIGDPTH(1)───────┐
►─┤                     ├─┤                       ├─┤                 ├─┤                  ├─►
 │           (8)       │ │                  (5)  │ └TRIGDATA(string)─┘ └TRIGDPTH(integer)─┘
 └SCOPE(CELL)──────────┘ └STGCLASS(string)───────┘

             (1)                   (1)                (1)
 ┌TRIGMPRI(0)────────┐ ┌TRIGTYPE(FIRST)──────────┐ ┌USAGE(NORMAL)─┐
►─┤                   ├─┤                         ├─┤              ├───────────────────►◄
 └TRIGMPRI(integer)──┘ └TRIGTYPE(──┬EVERY─┬──)───┘ └USAGE(XMITQ)──┘
                                  ├DEPTH─┤
                                  └NONE──┘
```

Notes:

1 This is the default supplied with MQSeries, but your installation might have changed it.

2 Valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

3 This is the default supplied with MQSeries (except on OS/390, where it is EXCL), but your installation might have changed it.

4 Valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

5 Used only on OS/390.

6 This is the default supplied with MQSeries (except on OS/390, where it is 999 999 999), but your installation might have changed it.

7 This is the default supplied with MQSeries (except on OS/390, where it is NOSHARE), but your installation might have changed it.

8 Valid only on Digital OpenVMS, OS/2 Warp, UNIX systems, and Windows NT.

Keyword and parameter descriptions

A local queue is one that is owned by the queue manager to which it is being defined.

(q-name)

Local name of the queue. This is required.

The name must not be the same as any other queue name (of whatever queue type) currently defined on this queue manager (unless REPLACE is specified). See "Rules for naming MQSeries objects" on page 4.

Define attributes

LIKE(*qlocal-name*)
The name of an object of the same type, whose attributes will be used to model this definition.

If this field is not filled in, and you do not complete the attribute fields related to the command, the values are taken from the default definition for this object.

This is equivalent to defining the following object:

```
LIKE(SYSTEM.DEFAULT.LOCAL.QUEUE)
```

A default definition for each object type is provided, but these might be altered by the installation to the default values required. See "Rules for naming MQSeries objects" on page 4.

NOREPLACE and **REPLACE**
Whether the existing definition is to be replaced with this one. This is optional. The default is NOREPLACE.

NOREPLACE The definition should not replace any existing definition of the same name.

REPLACE If the object does exist, the effect is similar to issuing the ALTER command without the FORCE option and with *all* the other attributes specified. In particular, note that any messages that are on the existing queue are retained.

(The difference between the ALTER command without the FORCE option, and the DEFINE command with the REPLACE option, is that ALTER does not change unspecified attributes, but DEFINE with REPLACE sets *all* the attributes. When you use REPLACE, unspecified attributes are taken either from the object named on the LIKE option, or from the default definition, and the attributes of the object being replaced, if one exists, are ignored.)

The command fails if both of the following are true:

- The command sets attributes that would require the use of the FORCE option if you were using the ALTER command
- The object is open

The ALTER command with the FORCE option succeeds in this situation.

| If SCOPE(CELL) is specified on Digital OpenVMS, UNIX systems, OS/2 Warp, or Windows NT, and there is already a queue with the same name in the cell directory, the command fails, whether or not REPLACE is specified.

Common queue attributes

DEFPRTY(*integer*)
The default priority of messages put on the queue. The value must be greater than or equal to zero, (the lowest priority) and less than or equal to the MAXPRTY queue manager attribute. MAXPRTY can be displayed using the DISPLAY QMGR command. (MAXPRTY is 9.)

DEFPSIST
Specifies the message persistence to be used when applications specify the MQPER_PERSISTENCE_AS_Q_DEF option.

NO	Messages on this queue are lost across a restart of the queue manager. This is the default supplied with MQSeries, but your installation might have changed it.
YES	Messages on this queue survive a restart of the queue manager.

DESCR(*string*)
Plain-text comment. It provides descriptive information about the object when an operator issues the DISPLAY QUEUE command.

It should contain only displayable characters. The maximum length is 64 characters. In a DBCS installation, it can contain DBCS characters (subject to a maximum length of 64 bytes).

Note: If characters are used that are not in the coded character set identifier (CCSID) for this queue manager, they might be translated incorrectly if the information is sent to another queue manager.

PUT Whether messages can be put on the queue.

ENABLED	Messages can be added to the queue (by suitably authorized applications). This is the default supplied with MQSeries, but your installation might have changed it.
DISABLED	Messages cannot be added to the queue.

This attribute can also be changed using the **MQSET** API call.

Local queue attributes

BOQNAME(*string*)
| The excessive backout requeue name. Apart from maintaining a value for
| this attribute, the queue manager takes no action based on its value.

BOTHRESH(*integer*)
| The backout threshold. Apart from maintaining a value for this attribute,
| the queue manager takes no action based on its value.

Specify a value greater than or equal to zero, and less than or equal to 999 999 999.

| **CLUSNL(*nlname*)**
| The name of the namelist that specifies a list of clusters to which the queue
| belongs. Changes to this parameter do not affect instances of the queue
| that are already open.

| Only one of the resultant values of CLUSTER or CLUSNL can be
| nonblank; you cannot specify a value for both.

| This parameter cannot be set for transmission, SYSTEM.CHANNEL.xx,
| SYSTEM.CLUSTER.xx, or SYSTEM.COMMAND.xx queues.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400,
| Sun Solaris, and Windows NT.

CLUSTER(*clustername*)
The name of the cluster to which the queue belongs. The maximum length is 48 characters conforming to the rules for naming MQSeries objects. Changes to this parameter do not affect instances of the queue that are already open.

Only one of the resultant values of CLUSNL or CLUSTER can be nonblank; you cannot specify a value for both.

This parameter cannot be set for transmission, SYSTEM.CHANNEL.xx, SYSTEM.CLUSTER.xx, or SYSTEM.COMMAND.xx queues.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

DEFBIND
Specifies the binding to be used when the application specifies MQOO_BIND_AS_Q_DEF on the **MQOPEN** call, and the queue is a cluster queue.

OPEN	The queue handle is bound to a specific instance of the cluster queue when the queue is opened.
NOTFIXED	The queue handle is not bound to any particular instance of the cluster queue. This allows the queue manager to select a specific queue instance when the message is put using **MQPUT**, and to change that selection subsequently should the need arise.

The **MQPUT1** call always behaves as if NOTFIXED had been specified.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

DEFSOPT
The default share option for applications opening this queue for input:

EXCL	The open request is for exclusive input from the queue
SHARED	The open request is for shared input from the queue

DISTL
Whether distribution lists are supported by the partner queue manager.

YES	Distribution lists are supported by the partner queue manager.
NO	Distribution lists are not supported by the partner queue manager.

Note: You should not normally change this attribute, because it is set by the MCA. However you can set this attribute when defining a transmission queue if the distribution list capability of the destination queue manager is known.

This keyword is valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

GET Whether applications are to be permitted to get messages from this queue:

ENABLED	Messages can be retrieved from the queue (by suitably authorized applications). This is the default supplied with MQSeries, but your installation might have changed it.
DISABLED	Applications cannot retrieve messages from the queue.

This attribute can also be changed using the **MQSET** API call.

INDXTYPE
The type of index maintained by the queue manager to expedite **MQGET** operations on the queue:

NONE	No index is maintained. Use this when messages are usually retrieved sequentially or use both the message identifier and the correlation identifier as a selection criterion on the **MQGET** call.
MSGID	An index of message identifiers is maintained. Use this when messages are usually retrieved using the message identifier as a selection criterion on the **MQGET** call with the correlation identifier set to NULL.
CORRELID	An index of correlation identifiers is maintained. Use this when messages are usually retrieved using the correlation identifier as a selection criterion on the **MQGET** call with the message identifier set to NULL.
MSGTOKEN	An index of message tokens is maintained. Use this when the queue is a WLM managed queue that you are using with the Workload Manager functions of OS/390. **Note:** If the queue is a transmission queue you cannot set INDXTYPE to MSGTOKEN.

The INDXTYPE attribute can be changed to NONE, MSGID, or CORRELID at any time, and the change takes effect immediately if all the following conditions are satisfied:
- No applications have the queue open
- The queue is empty
- There are no uncommitted **MQPUT** or **MQGET** operations outstanding against the queue

If these conditions are not satisfied, the attribute is changed immediately, but the index is not rebuilt until the next time the queue manager is restarted. The reply sent by the queue manager indicates if this is the case.

This attribute can be changed to MSGTOKEN only when there are no messages on the queue. If you attempt to change this attribute to MSGTOKEN while there are messages on the queue, the command fails.

This attribute is supported only on OS/390. On other platforms, retrieval optimization might be provided, but it is not controlled by a queue attribute.

INITQ(*string*)
The local name of a local queue (known as the *initiation queue*) on this queue manager, to which trigger messages relating to this queue are written. See “Rules for naming MQSeries objects” on page 4.

MAXDEPTH(*integer*)
The maximum number of messages allowed on the queue. Specify a value greater than or equal to zero, and less than or equal to:
- 999 999 999 if the queue is on OS/390
- 640 000 if the queue is on any other MQSeries platform

Other factors can still cause the queue to be treated as full, for example, if there is no further DASD space available.

If this value is reduced, any messages that are already on the queue that cause the new maximum to be exceeded remain intact.

MAXMSGL(*integer*)
The maximum length of messages on this queue.

| On AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT,
| specify a value greater than or equal to zero, and less than or equal to the

maximum message length for the queue manager as defined by the MAXMSGL parameter of the ALTER QMGR command. See "ALTER QMGR" on page 62 for more information.

On other platforms, specify a value greater than or equal to zero, and less than or equal to 4 MB, or 4 194 304 bytes.

For a transmission queue, this value includes the space required for headers. It is recommended that the value should be at least 4000 bytes larger than the maximum expected length of user data in any message that could be put on a transmission queue.

If this value is reduced, any messages that are already on the queue, whose length exceeds the new maximum, are not affected.

Applications can use this attribute to determine the size of buffer they need to retrieve messages from the queue. Therefore, the value should only be reduced if it is known that this will not cause an application to operate incorrectly.

MSGDLVSQ

Message delivery sequence:

PRIORITY	Messages are delivered (in response to **MQGET** API calls) in first-in-first-out (FIFO) order within priority. This is the default supplied with MQSeries, but your installation might have changed it.
FIFO	Messages are delivered (in response to **MQGET** API calls) in FIFO order. Priority is ignored for messages on this queue.

If the message delivery sequence is changed from PRIORITY to FIFO while there are messages on the queue, the order of the messages already enqueued is not changed. Messages added to the queue subsequently take the default priority of the queue, and so might be processed before some of the existing messages.

If the message delivery sequence is changed from FIFO to PRIORITY, the messages enqueued while the queue was set to FIFO take the default priority.

NOHARDENBO and **HARDENBO**

Whether hardening should be used to ensure that the count of the number of times that a message has been backed out is accurate.

NOHARDENBO	The count is not hardened. This is the default supplied with MQSeries, but your installation might have changed it.
HARDENBO	The count is hardened.

NOSHARE and **SHARE**

Whether multiple applications can get messages from this queue:

NOSHARE	A single application instance only can get messages from the queue
SHARE	More than one application instance can get messages from the queue

NOTRIGGER and **TRIGGER**

Whether trigger messages are written to the initiation queue (named by the INITQ attribute) to trigger the application (named by the PROCESS attribute):

NOTRIGGER	Triggering is not active, and trigger messages are not written to the initiation queue. This is the default supplied with MQSeries, but your installation might have changed it.
TRIGGER	Triggering is active, and trigger messages are written to the initiation queue.

This attribute can also be changed using the **MQSET** API call.

PROCESS(*string*)
The local name of the MQSeries process. This is the name of a process instance that identifies the application started by the queue manager when a trigger event occurs. See “Rules for naming MQSeries objects” on page 4.

The process does not have to be defined when the local queue is defined, but it *must* be available for a trigger event to occur.

If the queue is a transmission queue, the process gives the name of the channel to be started. This parameter is optional for transmission queues on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT; if you do not specify it, the channel name is taken from the value specified for the TRIGDATA parameter.

QDEPTHHI(*integer*)
The threshold against which the queue depth is compared to generate a Queue Depth High event.

This event indicates that an application has put a message on a queue, and this has caused the number of messages on the queue to become greater than or equal to the queue depth high threshold. See the QDPHIEV attribute.

The value is expressed as a percentage of the maximum queue depth (MAXDEPTH attribute), and must be greater than or equal to zero, and less than or equal to 100.

QDEPTHLO(*integer*)
The threshold against which the queue depth is compared to generate a Queue Depth Low event.

This event indicates that an application has retrieved a message from a queue, and this has caused the number of messages on the queue to become less than or equal to the queue depth low threshold. See the QDPLOEV attribute.

The value is expressed as a percentage of the maximum queue depth (MAXDEPTH attribute), and must be greater than or equal to zero, and less than or equal to 100.

QDPHIEV
Controls whether Queue Depth High events are generated.

A Queue Depth High event indicates that an application has put a message on a queue, and this has caused the number of messages on the queue to become greater than or equal to the queue depth high threshold (see the QDEPTHHI attribute).

Note: The value of this attribute can change implicitly. See the description of the Queue Depth High event in the *MQSeries Programmable System Management* manual for more details.

ENABLED	Queue Depth High events are generated

DISABLED	Queue Depth High events are not generated

QDPLOEV

Controls whether Queue Depth Low events are generated.

A Queue Depth Low event indicates that an application has retrieved a message from a queue, and this has caused the number of messages on the queue to become less than or equal to the queue depth low threshold (see the QDEPTHLO attribute).

Note: The value of this attribute can change implicitly. See the description of the Queue Depth Low event in the *MQSeries Programmable System Management* manual for more details.

ENABLED	Queue Depth Low events are generated
DISABLED	Queue Depth Low events are not generated

QDPMAXEV

Controls whether Queue Full events are generated.

A Queue Full event indicates that a put to a queue has been rejected because the queue is full, that is, the queue depth has already reached its maximum value.

Note: The value of this attribute can change implicitly. See the description of the Queue Full event in the *MQSeries Programmable System Management* manual for more details.

ENABLED	Queue Full events are generated
DISABLED	Queue Full events are not generated

QSVCIEV

Controls whether Service Interval High or Service Interval OK events are generated.

A Service Interval High event is generated when a check indicates that no messages have been retrieved from the queue for at least the time indicated by the QSVCINT attribute.

A Service Interval OK event is generated when a check indicates that messages have been retrieved from the queue within the time indicated by the QSVCINT attribute.

Note: The value of this attribute can change implicitly. See the description of the Service Interval High and Service Interval OK events in the *MQSeries Programmable System Management* manual for more details.

HIGH	Service Interval High events are generated
OK	Service Interval OK events are generated
NONE	No service interval events are generated

QSVCINT(*integer*)

The service interval used for comparison to generate Service Interval High and Service Interval OK events. See the QSVCIEV attribute.

The value is in units of milliseconds, and must be greater than or equal to zero, and less than or equal to 999 999 999.

RETINTVL(*integer*)
The number of hours (greater than or equal to zero, and less than or equal to 999 999 999) from the queue creation date and time (the date and time at which the queue was defined), after which the queue is no longer needed. The CRDATE and CRTIME can be displayed using the DISPLAY QUEUE command.

This information is available for use by an operator or a housekeeping application to delete queues that are no longer required.

Note: The queue manager does not delete queues based on this value, nor does it prevent queues from being deleted if their retention interval has not expired. It is the user's responsibility to take any required action.

SCOPE
Specifies the scope of the queue definition.

QMGR	The queue definition has queue-manager scope. This means that the definition of the queue does not extend beyond the queue manager that owns it. To open the queue for output from some other queue manager, either the name of the owning queue manager must be specified, or the other queue manager must have a local definition of the queue.
CELL	The queue definition has cell scope. This means that the queue is known to all of the queue managers in the cell, and can be opened for output merely by specifying the name of the queue; the name of the queue manager that owns the queue need not be specified. If there is already a queue with the same name in the cell directory, the command fails. The REPLACE option has no effect on this. This value is valid only if a name service supporting a cell directory (for example, the supplied DCE name service) has been configured.

| This attribute is valid only on Digital OpenVMS, OS/2 Warp, UNIX
| systems, and Windows NT.

STGCLASS(*string*)
The name of the storage class. This is an installation-defined name.

This attribute is used only on OS/390. See the *MQSeries for OS/390 System Management Guide* for more details. The first character of the name must be uppercase A–Z, and subsequent characters either uppercase A–Z or numeric 0–9.

Note: This attribute can be changed only if the queue is empty and closed.

On platforms other than OS/390, this attribute is ignored.

TRIGDATA(*string*)
The data that is inserted in the trigger message. The maximum length of the string is 64 bytes.

For a transmission queue on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, or Windows NT, you can use this parameter to specify the name of the channel to be started.

This attribute can also be changed using the **MQSET** API call.

TRIGDPTH(*integer*)
The number of messages that have to be on the queue before a trigger

message is written, if TRIGTYPE is DEPTH. The value must be greater than zero, and less than or equal to 999 999 999.

This attribute can also be changed using the **MQSET** API call.

TRIGMPRI(*integer*)
The message priority number that will trigger this queue. The value must be greater than or equal to zero, and less than or equal to the MAXPRTY queue manager attribute (see "DISPLAY QMGR" on page 206 for details).

This attribute can also be changed using the **MQSET** API call.

TRIGTYPE
Whether and under what conditions a trigger message is written to the initiation queue (named by the INITQ attribute):

FIRST	Whenever the first message of priority equal to or greater than that specified by the TRIGMPRI attribute of the queue arrives on the queue.
EVERY	Every time a message arrives on the queue with priority equal to or greater than that specified by the TRIGMPRI attribute of the queue.
DEPTH	When the number of messages with priority equal to or greater than that specified by TRIGMPRI is equal to the number indicated by the TRIGDPTH attribute.
NONE	No trigger messages are written.

This attribute can also be changed using the **MQSET** API call.

USAGE
Queue usage:

NORMAL	The queue is not a transmission queue.
XMITQ	The queue is a transmission queue, which is used to hold messages that are destined for a remote queue manager. When an application puts a message to a remote queue, the message is stored on the appropriate transmission queue until it has been successfully transmitted and stored at the remote queue manager. If you specify this option, do not specify values for CLUSTER and CLUSNL and do not specify INDXTYPE(MSGTOKEN).

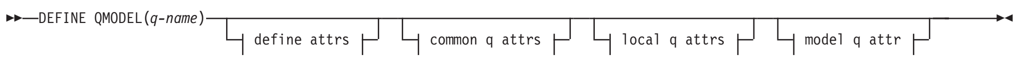
DEFINE QMODEL

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

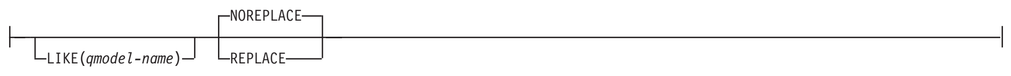
Use DEFINE QMODEL to define a new model queue, and set its attributes.

Synonym: DEF QM

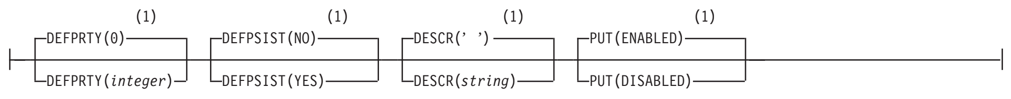
DEFINE QMODEL



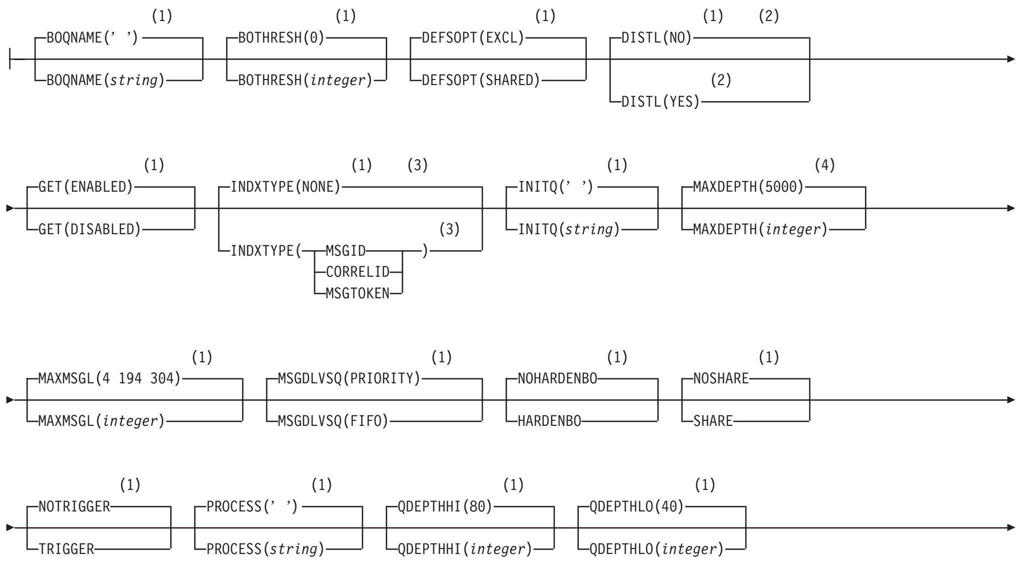
Define attrs:



Common q attrs:



Local q attrs:



```
                     (1)                         (1)
  ┌─QDPHIEV(DISABLED)──────┐  ┌─QDPLOEV(DISABLED)──────┐
►─┼────────────────────────┼──┼────────────────────────┼──────────────────────────────────►
  └─QDPHIEV(ENABLED)───────┘  └─QDPLOEV(ENABLED)───────┘


                       (1)                 (1)                          (1)
  ┌─QDPMAXEV(ENABLED)──────┐  ┌─QSVCIEV(NONE)──────┐  ┌─QSVCINT(999 999 999)───────┐
►─┼────────────────────────┼──┼────────────────────┼──┼────────────────────────────┼──────►
  └─QDPMAXEV(DISABLED)─────┘  └─QSVCIEV(──┬─HIGH─┬─)┘  └─QSVCINT(integer)───────────┘
                                          └─OK───┘


                         (1)                      (1)  (3)                  (1)                   (1)
  ┌─RETINTVL(999 999 999)───┐  ┌─STGCLASS('DEFAULT')──────────┐  ┌─TRIGDATA(' ')─────┐  ┌─TRIGDPTH(1)──────────┐
►─┼─────────────────────────┼──┼──────────────────────────────┼──┼───────────────────┼──┼──────────────────────┼──►
  └─RETINTVL(integer)───────┘  │                      (3)     │  └─TRIGDATA(string)──┘  └─TRIGDPTH(integer)────┘
                               └─STGCLASS(string)─────────────┘


                 (1)                      (1)                    (1)
  ┌─TRIGMPRI(0)──────────┐  ┌─TRIGTYPE(FIRST)───────────┐  ┌─USAGE(NORMAL)─────┐
►─┼──────────────────────┼──┼───────────────────────────┼──┼───────────────────┼─────────────────────┤
  └─TRIGMPRI(integer)────┘  └─TRIGTYPE(──┬─EVERY─┬──)───┘  └─USAGE(XMITQ)──────┘
                                         ├─DEPTH─┤
                                         └─NONE──┘
```

Model q attr:

```
                     (1)
  ┌─DEFTYPE(TEMPDYN)───────┐
├─┼────────────────────────┼─────────────────────────────────────────────────────────────┤
  └─DEFTYPE(PERMDYN)───────┘
```

Notes:

1 This is the default supplied with MQSeries, but your installation might have changed it.

2 Valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

3 Used only on OS/390.

4 This is the default supplied with MQSeries (except on OS/390, where it is 999 999 999), but your installation might have changed it.

Keyword and parameter descriptions

A model queue is not a real queue, but a collection of attributes that you can use when creating *dynamic* queues with the **MQOPEN** API call.

When it has been defined, a model queue (like any other queue) has a complete set of applicable attributes, even if some of these are defaults.

(q-name)
: Local name of the queue. This is required.

  The name must not be the same as any other queue name (of whatever queue type) currently defined on this queue manager (unless REPLACE is specified). See "Rules for naming MQSeries objects" on page 4.

Define attributes

LIKE(*qmodel-name***)**
: The name of an object of the same type, whose attributes will be used to model this definition.

If this field is not filled in, and you do not complete the attribute fields related to the command, the values are taken from the default definition for this object.

This is equivalent to specifying:

```
LIKE(SYSTEM.DEFAULT.MODEL.QUEUE)
```

A default definition for each object type is provided, but these can be altered by the installation to the default values required. See "Rules for naming MQSeries objects" on page 4.

NOREPLACE and **REPLACE**
Whether the existing definition is to be replaced with this one. This is optional. The default is NOREPLACE.

NOREPLACE	The definition should not replace any existing definition of the same name.
REPLACE	The definition should replace any existing definition of the same name. If a definition does not exist, one is created.

Common queue attributes

DEFPRTY(*integer*)
The default priority of messages put on the queue. The value must be greater than or equal to zero, (the lowest priority) and less than or equal to the MAXPRTY queue manager attribute. MAXPRTY can be displayed using the DISPLAY QMGR command. (MAXPRTY is 9.)

DEFPSIST
Specifies the message persistence to be used when applications specify the MQPER_PERSISTENCE_AS_Q_DEF option.

NO	Messages on this queue are lost across a restart of the queue manager. This is the default supplied with MQSeries, but your installation might have changed it.
YES	Messages on this queue survive a restart of the queue manager. Persistent messages are not allowed on a temporary dynamic queue. In order to avoid an error if a message is put to such a queue with default persistence, do not set the DEFPSIST attribute to YES for model queue definitions that have a DEFTYPE of TEMPDYN.

DESCR(*string*)
Plain-text comment. It provides descriptive information about the object when an operator issues the DISPLAY QUEUE command.

It should contain only displayable characters. The maximum length is 64 characters. In a DBCS installation, it can contain DBCS characters (subject to a maximum length of 64 bytes).

Note: If characters are used that are not in the coded character set identifier (CCSID) for this queue manager, they might be translated incorrectly if the information is sent to another queue manager.

PUT Whether messages can be put on the queue.

ENABLED	Messages can be added to the queue (by suitably authorized applications). This is the default supplied with MQSeries, but your installation might have changed it.

DISABLED	Messages cannot be added to the queue.

This attribute can also be changed using the **MQSET** API call.

Local queue attributes

BOQNAME(*string***)**
The excessive backout requeue name. Apart from maintaining a value for this attribute, the queue manager takes no action based on its value.

BOTHRESH(*integer***)**
The backout threshold. Apart from maintaining a value for this attribute, the queue manager takes no action based on its value.

Specify a value greater than or equal to zero, and less than or equal to 999 999 999.

DEFSOPT
The default share option for applications opening this queue for input:

EXCL	The open request is for exclusive input from the queue
SHARED	The open request is for shared input from the queue

DISTL
Whether distribution lists are supported by the partner queue manager.

YES	Distribution lists are supported by the partner queue manager.
NO	Distribution lists are not supported by the partner queue manager.

Note: You should not normally change this attribute, because it is set by the MCA. However you can set this attribute when defining a transmission queue if the distribution list capability of the destination queue manager is known.

This keyword is valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

GET Whether applications are to be permitted to get messages from this queue:

ENABLED	Messages can be retrieved from the queue (by suitably authorized applications). This is the default supplied with MQSeries, but your installation might have changed it.
DISABLED	Applications cannot retrieve messages from the queue.

This attribute can also be changed using the **MQSET** API call.

INDXTYPE
The type of index maintained by the queue manager to expedite **MQGET** operations on the queue:

NONE	No index is maintained. Use this when messages are usually retrieved sequentially or use both the message identifier and the correlation identifier as a selection criterion on the **MQGET** call.
MSGID	An index of message identifiers is maintained. Use this when messages are usually retrieved using the message identifier as a selection criterion on the **MQGET** call with the correlation identifier set to NULL.

CORRELID	An index of correlation identifiers is maintained. Use this when messages are usually retrieved using the correlation identifier as a selection criterion on the **MQGET** call with the message identifier set to NULL.
MSGTOKEN	An index of message tokens is maintained. Use this when the queue is a WLM managed queue that you are using with the Workload Manager functions of OS/390. **Note:** If the queue is a transmission queue or a temporary-dynamic queue, you cannot set INDXTYPE to MSGTOKEN.

The INDXTYPE attribute can be changed to NONE, MSGID, or CORRELID at any time, and the change takes effect immediately if all the following conditions are satisfied:
- No applications have the queue open
- The queue is empty
- There are no uncommitted **MQPUT** or **MQGET** operations outstanding against the queue

If these conditions are not satisfied, the attribute is changed immediately, but the index is not rebuilt until the next time the queue manager is restarted. The reply sent by the queue manager indicates if this is the case.

This attribute can only be changed to MSGTOKEN when there are no messages on the queue. If you attempt to change this attribute to MSGTOKEN while there are messages on the queue, the command fails.

This attribute is supported only on OS/390. On other platforms, retrieval optimization might be provided, but it is not controlled by a queue attribute.

INITQ(*string*)
The local name of a local queue (known as the *initiation queue*) on this queue manager, to which trigger messages relating to this queue are written. See “Rules for naming MQSeries objects” on page 4.

MAXDEPTH(*integer*)
The maximum number of messages allowed on the queue. Specify a value greater than or equal to zero, and less than or equal to:
- 999 999 999 if the queue is on OS/390
- 640 000 if the queue is on any other MQSeries platform

Other factors might still cause the queue to be treated as full, for example, if there is no further DASD space available.

If this value is reduced, any messages that are already on the queue that cause the new maximum to be exceeded remain intact.

MAXMSGL(*integer*)
The maximum length of messages on this queue.

| On AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT, specify a value greater than or equal to zero, and less than or equal to the maximum message length for the queue manager as defined by the MAXMSGL parameter of the ALTER QMGR command. See “ALTER QMGR” on page 62 for more information.

| On other platforms, specify a value greater than or equal to zero, and less than or equal to 4 MB, or 4 194 304 bytes.

For a transmission queue, this value includes the space required for headers. It is recommended that the value should be at least 4000 bytes larger than the maximum expected length of user data in any message that could be put on a transmission queue.

If this value is reduced, any messages that are already on the queue, whose length exceeds the new maximum, are not affected.

Applications can use this attribute to determine the size of buffer they need to retrieve messages from the queue. Therefore, the value should only be reduced if it is known that this will not cause an application to operate incorrectly.

MSGDLVSQ
Message delivery sequence:

PRIORITY	Messages are delivered (in response to **MQGET** API calls) in first-in-first-out (FIFO) order within priority. This is the default supplied with MQSeries, but your installation might have changed it.
FIFO	Messages are delivered (in response to **MQGET** API calls) in FIFO order. Priority is ignored for messages on this queue.

If the message delivery sequence is changed from PRIORITY to FIFO while there are messages on the queue, the order of the messages already enqueued is not changed. Messages added to the queue subsequently take the default priority of the queue, and so might be processed before some of the existing messages.

If the message delivery sequence is changed from FIFO to PRIORITY, the messages enqueued while the queue was set to FIFO take the default priority.

NOHARDENBO and **HARDENBO**
| Whether hardening should be used to ensure that the count of the number
| of times that a message has been backed out is accurate.

NOHARDENBO	The count is not hardened. This is the default supplied with MQSeries, but your installation might have changed it.
HARDENBO	The count is hardened.

NOSHARE and **SHARE**
Whether multiple applications can get messages from this queue:

NOSHARE	A single application instance only can get messages from the queue
SHARE	More than one application instance can get messages from the queue

NOTRIGGER and **TRIGGER**
Whether trigger messages are written to the initiation queue (named by the INITQ attribute) to trigger the application (named by the PROCESS attribute):

NOTRIGGER	Triggering is not active, and trigger messages are not written to the initiation queue. This is the default supplied with MQSeries, but your installation might have changed it.
TRIGGER	Triggering is active, and trigger messages are written to the initiation queue.

This attribute can also be changed using the **MQSET** API call.

PROCESS(*string*)
The local name of the MQSeries process. This is the name of a process instance that identifies the application started by the queue manager when a trigger event occurs. See "Rules for naming MQSeries objects" on page 4.

The process does not have to be defined when the local queue is defined, but it *must* be available for a trigger event to occur.

If the queue is a transmission queue, the process gives the name of the channel to be started. This parameter is optional for transmission queues on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT; if you do not specify it, the channel name is taken from the value specified for the TRIGDATA parameter.

QDEPTHHI(*integer*)
The threshold against which the queue depth is compared to generate a Queue Depth High event.

This event indicates that an application has put a message on a queue, and this has caused the number of messages on the queue to become greater than or equal to the queue depth high threshold. See the QDPHIEV attribute.

The value is expressed as a percentage of the maximum queue depth (MAXDEPTH attribute), and must be greater than or equal to zero, and less than or equal to 100.

QDEPTHLO(*integer*)
The threshold against which the queue depth is compared to generate a Queue Depth Low event.

This event indicates that an application has retrieved a message from a queue, and this has caused the number of messages on the queue to become less than or equal to the queue depth low threshold. See the QDPLOEV attribute.

The value is expressed as a percentage of the maximum queue depth (MAXDEPTH attribute), and must be greater than or equal to zero, and less than or equal to 100.

QDPHIEV
Controls whether Queue Depth High events are generated.

A Queue Depth High event indicates that an application has put a message on a queue, and this has caused the number of messages on the queue to become greater than or equal to the queue depth high threshold (see the QDEPTHHI attribute).

Note: The value of this attribute can change implicitly. See the description of the Queue Depth High event in the *MQSeries Programmable System Management* manual for more details.

ENABLED	Queue Depth High events are generated
DISABLED	Queue Depth High events are not generated

QDPLOEV
Controls whether Queue Depth Low events are generated.

A Queue Depth Low event indicates that an application has retrieved a message from a queue, and this has caused the number of messages on the queue to become less than or equal to the queue depth low threshold (see the QDEPTHLO attribute).

Note: The value of this attribute can change implicitly. See the description of the Queue Depth Low event in the *MQSeries Programmable System Management* manual for more details.

ENABLED	Queue Depth Low events are generated
DISABLED	Queue Depth Low events are not generated

QDPMAXEV

Controls whether Queue Full events are generated.

A Queue Full event indicates that a put to a queue has been rejected because the queue is full, that is, the queue depth has already reached its maximum value.

Note: The value of this attribute can change implicitly. See the description of the Queue Full event in the *MQSeries Programmable System Management* manual for more details.

ENABLED	Queue Full events are generated
DISABLED	Queue Full events are not generated

QSVCIEV

Controls whether Service Interval High or Service Interval OK events are generated.

A Service Interval High event is generated when a check indicates that no messages have been retrieved from the queue for at least the time indicated by the QSVCINT attribute.

A Service Interval OK event is generated when a check indicates that messages have been retrieved from the queue within the time indicated by the QSVCINT attribute.

Note: The value of this attribute can change implicitly. See the description of the Service Interval High and Service Interval OK events in the *MQSeries Programmable System Management* manual for more details.

HIGH	Service Interval High events are generated
OK	Service Interval OK events are generated
NONE	No service interval events are generated

QSVCINT(*integer*)

The service interval used for comparison to generate Service Interval High and Service Interval OK events. See the QSVCIEV attribute.

The value is in units of milliseconds, and must be greater than or equal to zero, and less than or equal to 999 999 999.

RETINTVL(*integer*)

The number of hours (greater than or equal to zero, and less than or equal to 999 999 999) from the queue creation date and time (the date and time at which the queue was defined), after which the queue is no longer needed. The CRDATE and CRTIME can be displayed using the DISPLAY QUEUE command.

This information is available for use by an operator or a housekeeping application to delete queues that are no longer required.

Note: The queue manager does not delete queues based on this value, nor does it prevent queues from being deleted if their retention interval has not expired. It is the user's responsibility to take any required action.

STGCLASS(*string*)
The name of the storage class. This is an installation-defined name.

This attribute is used only on OS/390. See the *MQSeries for OS/390 System Management Guide* for more details. The first character of the name must be uppercase A–Z, and subsequent characters either uppercase A–Z or numeric 0–9.

Note: This attribute can be changed only if the queue is empty and closed.

On platforms other than OS/390, this attribute is ignored.

TRIGDATA(*string*)
The data that is inserted in the trigger message. The maximum length of the string is 64 bytes.

For a transmission queue on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, or Windows NT, you can use this parameter to specify the name of the channel to be started.

This attribute can also be changed using the **MQSET** API call.

TRIGDPTH(*integer*)
The number of messages that have to be on the queue before a trigger message is written, if TRIGTYPE is DEPTH. The value must be greater than zero, and less than or equal to 999 999 999.

This attribute can also be changed using the **MQSET** API call.

TRIGMPRI(*integer*)
The message priority number that will trigger this queue. The value must be greater than or equal to zero, and less than or equal to the MAXPRTY queue manager attribute (see "DISPLAY QMGR" on page 206 for details).

This attribute can also be changed using the **MQSET** API call.

TRIGTYPE
Whether and under what conditions a trigger message is written to the initiation queue (named by the INITQ attribute):

FIRST	Whenever the first message of priority equal to or greater than that specified by the TRIGMPRI attribute of the queue arrives on the queue.
EVERY	Every time a message arrives on the queue with priority equal to or greater than that specified by the TRIGMPRI attribute of the queue.
DEPTH	When the number of messages with priority equal to or greater than that specified by TRIGMPRI is equal to the number indicated by the TRIGDPTH attribute.
NONE	No trigger messages are written.

This attribute can also be changed using the **MQSET** API call.

USAGE
Queue usage:

NORMAL	The queue is not a transmission queue.
XMITQ	The queue is a transmission queue, which is used to hold messages that are destined for a remote queue manager. When an application puts a message to a remote queue, the message is stored on the appropriate transmission queue until it has been successfully transmitted and stored at the remote queue manager. If you specify this option, do not specify INDXTYPE(MSGTOKEN).

Model queue attributes

DEFTYPE
Queue definition type:

TEMPDYN	A temporary dynamic queue is created when an application issues an **MQOPEN** API call with the name of this model queue specified in the object descriptor (MQOD). Do not specify this value for a model queue definition with a DEFPSIST attribute of YES. If you specify this option, do not specify INDXTYPE(MSGTOKEN).
PERMDYN	A permanent dynamic queue is created when an application issues an **MQOPEN** API call with the name of this model queue specified in the object descriptor (MQOD).

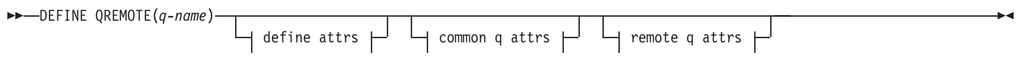
DEFINE QREMOTE

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

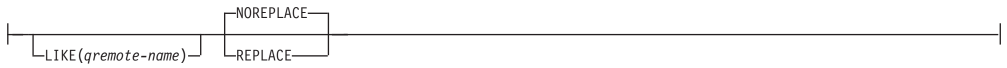
Use DEFINE QREMOTE to define a new local definition of a remote queue, a queue-manager alias, or a reply-to queue alias, and to set its attributes.

Synonym: DEF QR

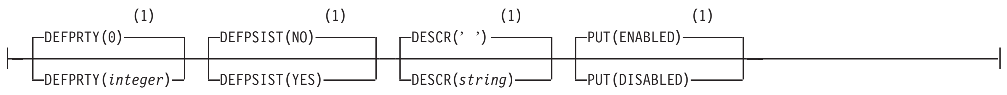
DEFINE QREMOTE



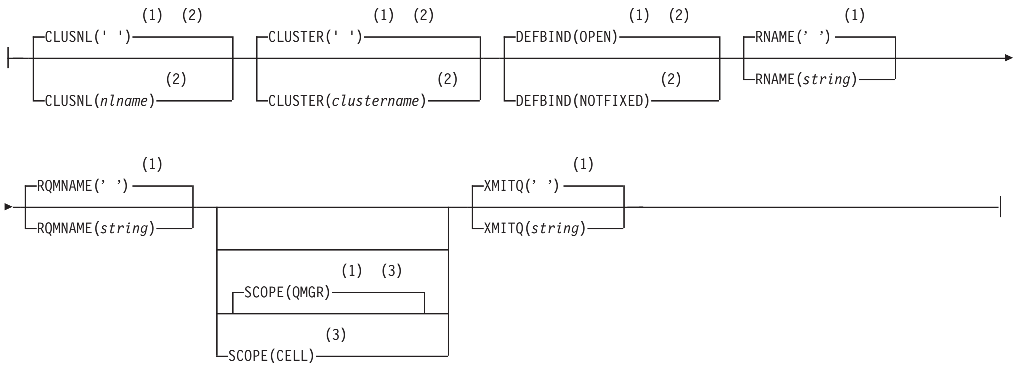
Define attrs:



Common q attrs:



Remote q attrs:



Notes:

1 This is the default supplied with MQSeries, but your installation might have changed it.

2 Valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

3 Valid only on Digital OpenVMS, OS/2 Warp, UNIX systems, and Windows NT.

Keyword and parameter descriptions

A remote queue is one that is owned by another queue manager that application processes connected to this queue manager need to access.

(q-name)
Name of the local definition of the remote queue. This is required.

The name must not be the same as any other queue name (of whatever queue type) currently defined on this queue manager (unless REPLACE is specified). See "Rules for naming MQSeries objects" on page 4.

Define attributes

LIKE(*qremote-name***)**
The name of an object of the same type, whose attributes will be used to model this definition.

If this field is not filled in, and you do not complete the attribute fields related to the command, the values are taken from the default definition for this object.

This is equivalent to defining the following object:

```
LIKE(SYSTEM.DEFAULT.REMOTE.QUEUE)
```

A default definition for each object type is provided, but these might be altered by the installation to the default values required. See "Rules for naming MQSeries objects" on page 4.

NOREPLACE and **REPLACE**
Whether the existing definition is to be replaced with this one. This is optional. The default is NOREPLACE.

NOREPLACE	The definition should not replace any existing definition of the same name.
REPLACE	If the object does not exist already, one is created.

If the object does exist, the effect is similar to issuing the ALTER command without the FORCE option and with *all* the other attributes specified.

(The difference between the ALTER command without the FORCE option, and the DEFINE command with the REPLACE option, is that ALTER does not change unspecified attributes, but DEFINE with REPLACE sets *all* the attributes. When you use REPLACE, the attributes are taken either from the object named on the LIKE option, or from the default definition, and the attributes of the object being replaced, if one exists, are ignored.)

The command fails if both of the following are true:

- The command sets attributes that would require the use of the FORCE option if you were using the ALTER command
- The object is open

The ALTER command with the FORCE option succeeds in this situation.

| If SCOPE(CELL) is specified on Digital OpenVMS, OS/2 Warp, UNIX
| systems, or Windows NT, and there is already a queue with the same
| name in the cell directory, the command fails, whether or not REPLACE
| is specified.

Common queue attributes

DEFPRTY(*integer*)
The default priority of messages put on the queue. The value must be greater than or equal to zero, (the lowest priority) and less than or equal to the MAXPRTY queue manager attribute. MAXPRTY can be displayed using the DISPLAY QMGR command. (MAXPRTY is 9.)

DEFPSIST
Specifies the message persistence to be used when applications specify the MQPER_PERSISTENCE_AS_Q_DEF option.

NO	Messages on this queue are lost across a restart of the queue manager. This is the default supplied with MQSeries, but your installation might have changed it.
YES	Messages on this queue survive a restart of the queue manager.

DESCR(*string*)
Plain-text comment. It provides descriptive information about the object when an operator issues the DISPLAY QUEUE command.

It should contain only displayable characters. The maximum length is 64 characters. In a DBCS installation, it can contain DBCS characters (subject to a maximum length of 64 bytes).

Note: If characters are used that are not in the coded character set identifier (CCSID) for this queue manager, they might be translated incorrectly if the information is sent to another queue manager.

PUT Whether messages can be put on the queue.

ENABLED	Messages can be added to the queue (by suitably authorized applications). This is the default supplied with MQSeries, but your installation might have changed it.
DISABLED	Messages cannot be added to the queue.

This attribute can also be changed using the **MQSET** API call.

Remote queue attributes

CLUSTER(*clustername*)
The name of the cluster to which the queue belongs. The maximum length is 48 characters conforming to the rules for naming MQSeries objects. Changes to this parameter will not affect instances of the queue that are already open.

Only one of the resultant values of CLUSNL or CLUSTER can be nonblank; you cannot specify a value for both.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400,
| Sun Solaris, and Windows NT.

CLUSNL(*nlname*)
The name of the namelist that specifies a list of clusters to which the queue belongs. Changes to this parameter will not affect instances of the queue that are already open.

Only one of the resultant values of CLUSTER or CLUSNL can be nonblank; you cannot specify a value for both.

This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

DEFBIND
Specifies the binding to be used when the application specifies MQOO_BIND_AS_Q_DEF on the **MQOPEN** call, and the queue is a cluster queue.

OPEN	The queue handle is bound to a specific instance of the cluster queue when the queue is opened.
NOTFIXED	The queue handle is not bound to any particular instance of the cluster queue. This allows the queue manager to select a specific queue instance when the message is put using **MQPUT**, and to change that selection subsequently should the need arise.

The **MQPUT1** call always behaves as if NOTFIXED had been specified.

This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

RNAME(*string*)
Name of remote queue. This is the local name of the queue as defined on the queue manager specified by RQMNAME.

- If this definition is used for a local definition of a remote queue, RNAME must not be blank when the open occurs.
- If this definition is used for a queue-manager alias definition, RNAME must be blank when the open occurs.
- If this definition is used for a reply-to alias, this name is the name of the queue that is to be the reply-to queue.

The name is *not* checked to ensure that it contains only those characters normally allowed for queue names (see “Rules for naming MQSeries objects” on page 4).

RQMNAME(*string*)
The name of the remote queue manager on which the queue RNAME is defined.

- If an application opens the local definition of a remote queue, RQMNAME must not be blank or the name of the local queue manager. When the open occurs, if XMITQ is blank there must be a local queue of this name, which is to be used as the transmission queue.
- If this definition is used for a queue-manager alias, RQMNAME is the name of the queue manager that is being aliased. It can be the name of the local queue manager. Otherwise, then if XMITQ is blank, when the open occurs there must be a local queue of this name, which is to be used as the transmission queue.
- If this definition is used for a reply-to alias, this name is the name of the queue manager that is to be the reply-to queue manager.

The name is *not* checked to ensure that it contains only those characters normally allowed for MQSeries object names (see “Rules for naming MQSeries objects” on page 4).

SCOPE
Specifies the scope of the queue definition.

QMGR
The queue definition has queue-manager scope. This means that the definition of the queue does not extend beyond the queue manager which owns it. To open the queue for output from some other queue manager, either the name of the owning queue manager must be specified, or the other queue manager must have a local definition of the queue.

CELL
The queue definition has cell scope. This means that the queue is known to all of the queue managers in the cell, and can be opened for output merely by specifying the name of the queue; the name of the queue manager that owns the queue need not be specified.

If there is already a queue with the same name in the cell directory, the command fails.

This value is valid only if a name service supporting a cell directory (for example, the supplied DCE name service) has been configured.

| This attribute is supported only on Digital OpenVMS, OS/2 Warp, UNIX systems, and Windows NT.

XMITQ(*string*)
The name of the transmission queue to be used for forwarding messages to the remote queue, for either a remote queue or for a queue-manager alias definition.

If XMITQ is blank, a queue with the same name as RQMNAME is used instead as the transmission queue.

This attribute is ignored if the definition is being used as a queue-manager alias and RQMNAME is the name of the local queue manager.

It is also ignored if the definition is used as a reply-to queue alias definition.

Usage notes

1. `DEFINE QREMOTE(`*rqueue*`) RNAME(`*otherq*`) RQMNAME(`*otherqm*`) CLUSTER(`*cl*`)` has the effect of advertising this queue manager as a store and forward gateway to which messages for queue *rqueue* can be sent. It has no effect as a reply-to queue alias, except on the local queue manager.

   `DEFINE QREMOTE(`*otherqm*`) RNAME() RQMNAME(`*anotherqm*`) XMITQ(`*xq*`) CLUSTER` has the effect of advertising this queue manager as a store and forward gateway to which messages for *anotherqm* can be sent.
2. RQMNAME can itself be the name of a cluster queue manager within the cluster, thus (as with QALIAS definitions) you can map the advertised queue manager name to another name locally.
3. It is possible for the values of RQMNAME and QREMOTE to be the same if RQMNAME is itself a cluster queue manager. If this definition is also advertised using a CLUSTER attribute, care should be taken not to choose the local queue manager in the cluster workload exit because a cyclic definition will result.
4. | Remote queues do not have to be defined locally. The advantage of doing so is that applications can refer to the queue by a simple, locally-defined name, rather than by one that is qualified by the ID of the queue manager on which the queue resides. This means that applications do not need to be aware of the real location of the queue.

5. A remote queue definition can also be used as a mechanism for holding a queue-manager alias definition, or a reply-to queue alias definition. The name of the definition in these cases is:
   - The queue-manager name being used as the alias for another queue-manager name (queue-manager alias), or
   - The queue name being used as the alias for the reply-to queue (reply-to queue alias).

DEFINE STGCLASS

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

Use DEFINE STGCLASS to define a storage class to page set mapping.

Synonym: DEF STC

DEFINE STGCLASS

```
                                           (1)
                                  ┌─DESCR(' ')────┐                            ┌─NOREPLACE─┐
►►──DEFINE STGCLASS(storage class)─┼───────────────┼──┬──────────────────────┬──┼───────────┼──┬─────────────────┬──►
                                  └─DESCR(string)─┘  └─LIKE(stgclass-name)──┘  └─REPLACE───┘  └─PSID(integer)───┘

       (1)                      (1)
  ┌─XCFGNAME(' ')────┐  ┌─XCFMNAME(' ')────┐
►─┼──────────────────┼──┼──────────────────┼──────────────────────────────────────────────►◄
  └─XCFGNAME(gname)──┘  └─XCFMNAME(mname)──┘
```

Notes:

1 This is the default supplied with MQSeries, but your installation might have changed it.

Keyword and parameter descriptions

(storage-class)
Name of the storage class. This is required.

This is 1 through 8 characters. The first character is in the range A through Z; subsequent characters are A through Z or 0 through 9.

Note: Exceptionally, certain all numeric storage class names are allowed, but are reserved for the use of IBM service personnel.

The storage class must not be the same as any other storage class currently defined on this queue manager.

DESCR(*description***)**
Plain-text comment. It provides descriptive information about the object when an operator issues the DISPLAY STGCLASS command.

It should contain only displayable characters. The maximum length is 64 characters. In a DBCS installation, it can contain DBCS characters (subject to a maximum length of 64 bytes).

Note: If characters are used that are not in the coded character set identifier (CCSID) for this queue manager, they might be translated incorrectly if the information is sent to another queue manager

LIKE(*stgclass-name***)**
The name of an object of the same type, whose attributes will be used to model this definition.

If this field is not filled in, and you do not complete the attribute fields related to the command, the values are taken from the default definition for this object.

This is equivalent to specifying:

```
LIKE(SYSTEMST)
```

This default storage class definition can be altered by your installation to the default values required.

NOREPLACE and **REPLACE**
Whether the existing definition is to be replaced with this one. This is optional, the default is NOREPLACE.

NOREPLACE	The definition should not replace any existing definition of the same name.
REPLACE	The definition should replace any existing definition of the same name. If a definition does not exist, one is created. If you use the REPLACE option, all queues that use this storage class must be empty.

PSID(*integer*)
The page set identifier that this storage class is to be associated with. If you do not specify this, the value is taken from the default storage class SYSTEMST.

Note: No check is made that the page set has been defined; an error will be raised only when you try to put a message to a queue that specifies this storage class (MQRC_PAGESET_ERROR).

The string consists of two numeric characters, in the range 00 through 99. See "DEFINE PSID" on page 128.

XCFGNAME(*group name*)
If you are using the IMS bridge, this is the name of the XCF group to which the IMS system belongs. (This is the group name specified in the IMS parameter list.)

This is 1 through 8 characters. The first character is in the range A through Z; subsequent characters are A through Z or 0 through 9.

XCFMNAME(*member name*)
If you are using the IMS bridge, this is the XCF member name of the IMS system within the XCF group specified in XCFGNAME. (This is the member name specified in the IMS parameter list.)

This is 1 through 16 characters. The first character is in the range A through Z; subsequent characters are A through Z or 0 through 9.

Usage notes

1. The resultant values of XCFGNAME and XCFMNAME must either both be blank or both be nonblank.

DELETE CHANNEL

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

Use DELETE CHANNEL to delete a channel definition.

Notes for OS/390 users:

1. This is valid only for channels used for distributed queuing without CICS. If you are using CICS for distributed queuing, see Note 2 on page 13.
2. The command fails if the channel initiator has not been started, or the channel status is RUNNING, except for client-connection channels which can be deleted without the channel initiator running.
3. You can only delete cluster-sender channels that have been created manually.

Synonym: DELETE CHL

DELETE CHANNEL

```
                                ┌─CHLTABLE(QMGRTBL)─┐
►►──DELETE CHANNEL(channel-name)─┴─CHLTABLE(CLNTTBL)─┴──────────────────────────────────►◄
```

Keyword and parameter descriptions

(channel-name)
: The name of the channel definition to be deleted. This is required. The name must be that of an existing channel.

CHLTABLE
: Specifies the channel definition table that contains the channel to be deleted. This is optional.

QMGRTBL	The channel table is that associated with the target queue manager. This table does not contain any channels of type CLNTCONN. This is the default.
CLNTTBL	The channel table for CLNTCONN channels. On Digital OpenVMS, OS/2 Warp, OS/400, Tandem NSK, UNIX systems, and Windows NT this is normally associated with a queue manager, but can be a system-wide, queue-manager independent channel table if you set up a number of environment variables. For more information about setting up environment variables, see the*MQSeries Clients* manual. On OS/390, this is associated with the target queue manager, but separate from the main channel table.

DELETE NAMELIST

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓	✓	✓		✓	✓

Use DELETE NAMELIST to delete a namelist definition.

Notes:

1. On UNIX systems, the command is valid only on AIX, HP-UX, and Sun Solaris.

Synonym: DELETE NL

DELETE NAMELIST

```
►►──DELETE NAMELIST(name)──────────────────────────────────────────────►◄
```

Keyword and parameter descriptions

You must specify which namelist definition you want to delete.

(name) The name of the namelist definition to be deleted. The name must be defined to the local queue manager.

If an application has this namelist open, the command fails.

DELETE PROCESS

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

Use DELETE PROCESS to delete a process definition.

Synonym: DELETE PRO

DELETE PROCESS

```
►►──DELETE PROCESS(process-name)──────────────────────────────────────────►◄
```

Keyword and parameter descriptions

You must specify which process definition you want to delete.

(process-name)
The name of the process definition to be deleted. The name must be defined to the local queue manager.

If an application has this process open, the command fails.

DELETE QALIAS

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

Use DELETE QALIAS to delete an alias queue definition.

Synonym: DELETE QA

DELETE QALIAS

```
►►──DELETE QALIAS(q-name)────────────────────────────────────────────────►◄
```

Keyword and parameter descriptions

You must specify which alias queue you want to delete.

(q-name)
: The local name of the alias queue to be deleted. The name must be defined to the local queue manager.

  If an application has this queue open, or has a queue open that eventually resolves to this queue, the command fails.

  If this queue has a SCOPE attribute of CELL, the entry for the queue is also deleted from the cell directory.

DELETE QLOCAL

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

Use DELETE QLOCAL to delete a local queue definition. You can specify that the queue must not be deleted if it contains messages, or that it can be deleted even if it contains messages.

Synonym: DELETE QL

DELETE QLOCAL

```
                         ┌─NOPURGE─┐
►►──DELETE QLOCAL(q-name)─┴─PURGE───┴──────────────────────────────────────────►◄
```

Keyword and parameter descriptions

You must specify which local queue you want to delete.

Note: A queue cannot be deleted if it contains uncommitted messages.

(q-name)
The name of the local queue to be deleted. The name must be defined to the local queue manager.

If an application has this queue open, or has open a queue that eventually resolves to this queue, the command fails. The command also fails if this queue is a transmission queue, and any queue that is, or resolves to, a remote queue that references this transmission queue, is open.

If this queue has a SCOPE attribute of CELL, the entry for the queue is also deleted from the cell directory.

NOPURGE and **PURGE**
Specifies whether or not any existing committed messages on the queue named by the DELETE command are to be purged for the delete command to work. The default is NOPURGE.

NOPURGE	The deletion is not to go ahead if there are any committed messages on the named queue.
PURGE	The deletion is to go ahead even if there are committed messages on the named queue, and these messages are also to be purged.

DELETE QMODEL

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

Use DELETE QMODEL to delete a model queue definition.

Synonym: DELETE QM

DELETE QMODEL

```
►►──DELETE QMODEL(q-name)──────────────────────────────────────────────────►◄
```

Keyword and parameter descriptions

You must specify which model queue you want to delete.

(q-name)
: The local name of the model queue to be deleted. The name must be defined to the local queue manager.

DELETE QREMOTE

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

Use DELETE QREMOTE to delete a local definition of a remote queue. It does not affect the definition of that queue on the remote system.

Synonym: DELETE QR

DELETE QREMOTE

```
►►──DELETE QREMOTE(q-name)────────────────────────────────────────────────►◄
```

Keyword and parameter descriptions

You must specify which remote queue you want to delete.

(q-name)
The local name of the remote queue to be deleted. The name must be defined to the local queue manager.

If an application has this queue open, or has open a queue that eventually resolves to this queue, the command fails. The command also fails if an application has a queue open which resolved through this definition as a queue-manager alias.

An application using the definition as a reply-to queue alias, however, does not cause this command to fail.

If this queue has a SCOPE attribute of CELL, the entry for the queue is also deleted from the cell directory.

DELETE STGCLASS

Digital OpenVMS	OS/390	OS/400	OS/2	Tandem NSK	UNIX systems	Windows NT
	✓					

Use DELETE STGCLASS to delete a storage class definition

Synonym: DELETE STC

DELETE STGCLASS

```
►►──DELETE STGCLASS(name)──────────────────────────────────────────────►◄
```

Keyword and parameter descriptions

You must specify which storage class definition you want to delete.

All queues that use the storage class must be empty and closed.

(name) The name of the storage class definition to be deleted. The name must be defined to the local queue manager.

The command fails unless all queues referencing the storage class are empty and closed.

DISPLAY CHANNEL

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

Use DISPLAY CHANNEL to display a channel definition.

Notes:

1. On OS/390, this is valid only for channels used for distributed queuing without CICS. If you are using CICS for distributed queuing, see Note 2 on page 13.
2. You can only display cluster-sender channels if they were created manually.

Synonym: DIS CHL

DISPLAY CHANNEL

```
                                       ┌─TYPE(ALL)──────────────────┐
►►──DISPLAY CHANNEL(generic-channel-name)─┼────────────────────────────┼──┬─────┬──┤ requested attrs ├──────────►◄
                                       └─TYPE(──┬─SDR────────────┬─)─┘  └─ALL─┘
                                               ├─SVR────────────┤
                                               ├─RCVR───────────┤
                                               ├─RQSTR──────────┤
                                               ├─CLNTCONN───────┤
                                               ├─SVRCONN────────┤
                                               │         (1)    │
                                               ├─CLUSSDR────────┤
                                               │          (1)   │
                                               └─CLUSRCVR───────┘
```

Requested attrs:

```
      ┌─,──────────────┐
      ▼                │
├─────┬────────────────┬┴──────────────────────────────────────────────┤
      │        (1)     │
      ├─ALTDATE────────┤
      │        (1)     │
      ├─ALTTIME────────┤
      │          (2)   │
      ├─AUTOSTART──────┤
      │         (1)    │
      ├─BATCHINT───────┤
      ├─BATCHSZ────────┤
      ├─CHLTYPE────────┤
      │        (1)     │
      ├─CLUSTER────────┤
      │       (1)      │
      ├─CLUSNL─────────┤
      ├─CONNAME────────┤
      ├─CONVERT────────┤
      ├─DESCR──────────┤
      ├─DISCINT────────┤
      │      (1)       │
      ├─HBINT──────────┤
      ├─LONGRTY────────┤
      ├─LONGTMR────────┤
      ├─MAXMSGL────────┤
      ├─MCANAME────────┤
      │        (1)     │
      ├─MCATYPE────────┤
      ├─MCAUSER────────┤
      ├─MODENAME───────┤
      │       (3)      │
      ├─MRDATA─────────┤
      │       (3)      │
      ├─MREXIT─────────┤
      │      (3)       │
      ├─MRRTY──────────┤
      │      (3)       │
      ├─MRTMR──────────┤
      ├─MSGDATA────────┤
      ├─MSGEXIT────────┤
      │        (1)     │
      ├─NETPRTY────────┤
      │         (1)    │
      ├─NPMSPEED───────┤
      ├─PASSWORD───────┤
      ├─PUTAUT─────────┤
      ├─QMNAME─────────┤
      ├─RCVDATA────────┤
      ├─RCVEXIT────────┤
      ├─SCYDATA────────┤
      ├─SCYEXIT────────┤
      ├─SENDDATA───────┤
      ├─SENDEXIT───────┤
      ├─SEQWRAP────────┤
      ├─SHORTRTY───────┤
      ├─SHORTTMR───────┤
      ├─TPNAME─────────┤
      ├─TRPTYPE────────┤
      ├─USERID─────────┤
      └─XMITQ──────────┘
```

Notes:

1 Valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

2 Valid only on Tandem NSK.

3 Not valid on OS/390.

Keyword and parameter descriptions

You must specify the name of the channel definition you want to display. This can be a specific channel name or a generic channel name. By using a generic channel name, you can display either:

- All channel definitions

- One or more channel definitions that match the specified name

(generic-channel-name)
The name of the channel definition to be displayed (see "Rules for naming MQSeries objects" on page 4). A trailing asterisk (*) matches all channel definitions with the specified stem followed by zero or more characters. An asterisk (*) on its own specifies all channel definitions. The names must all be defined to the local queue manager.

TYPE This is optional. It can be used to restrict the display to channels of one type.

The value is one of the following:

ALL	Channels of all types (excluding client-connection channels) are displayed (this is the default). On OS/390, client connection channels are also displayed.
SDR	Sender channels only are displayed.
SVR	Server channels only are displayed.
RCVR	Receiver channels only are displayed.
RQSTR	Requester channels only are displayed.
CLNTCONN	Client-connection channels only are displayed.
SVRCONN	Server-connection channels only are displayed.
CLUSSDR	Cluster-sender channels only are displayed (valid on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT only).
CLUSRCVR	Cluster-receiver channels only are displayed (valid on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT only).

On AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT, CHLTYPE(*type*) can be used as a synonym for this parameter.

ALL Specify this to cause all attributes to be displayed. If this keyword is specified, any attributes that are also requested specifically have no effect; all attributes are still displayed.

On AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT, this is the default if you do not specify a generic name and do not request any specific attributes.

If no attributes are specified (and the ALL keyword is not specified or defaulted), the default is that the channel names only are displayed. On OS/390, the CHLTYPE is also displayed.

Requested attributes

Specify one or more attributes that define the data to be displayed. You can specify the attributes in any order, but do not specify the same attribute more than once.

Some attributes are relevant only for channels of a particular type or types. Attributes that are not relevant for a particular type of channel cause no output, nor is an error raised.

ALTDATE
The date on which the definition was last altered, in the form `yyyy-mm-dd`.

ALTTIME
The time at which the definition was last altered, in the form `hh.mm.ss`.

AUTOSTART
Whether an LU 6.2 responder process should be started for the channel.

BATCHINT
Minimum batch duration.

BATCHSZ
Batch size.

CHLTYPE
Channel type.

| On AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT the channel type is always displayed if you specify a generic channel name and do not request any other attributes. On OS/390, the channel type is always displayed.

| On AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT, TYPE(*type*) can be used as a synonym for this parameter.

CLUSTER
The name of the cluster to which the channel belongs.

CLUSNL
The name of the namelist that specifies the list of clusters to which the channel belongs.

CONNAME
Connection name.

CONVERT
Whether sender should convert application message data.

DESCR
Description.

DISCINT
Disconnection interval.

HBINT
Heartbeat interval.

LONGRTY
Long retry count.

LONGTMR
Long retry timer.

MAXMSGL
Maximum message length for channel.

MCANAME
Message channel agent name.

MCATYPE
Whether message channel agent runs as a separate process or a separate thread.

MCAUSER
Message channel agent user identifier.

MODENAME
LU 6.2 mode name.

MRDATA
Channel message-retry exit user data.

MREXIT
Channel message-retry exit name.

MRRTY
Channel message-retry exit retry count.

MRTMR
Channel message-retry exit retry time.

MSGDATA
Channel message exit user data.

MSGEXIT
Channel message exit names.

NETPRTY
The priority for the network connection.

NPMSPEED
Nonpersistent message speed.

PASSWORD
Password for initiating LU 6.2 session (if nonblank, this is displayed as asterisks).

PUTAUT
Put authority.

QMNAME
Queue manager name.

RCVDATA
Channel receive exit user data.

RCVEXIT
Channel receive exit names.

SCYDATA
Channel security exit user data.

SCYEXIT
Channel security exit names.

SENDDATA
Channel send exit user data.

SENDEXIT
Channel send exit names.

SEQWRAP
Sequence number wrap value.

SHORTRTY
Short retry count.

SHORTTMR
Short retry timer.

TPNAME
LU 6.2 transaction program name.

TRPTYPE
Transport type.

USERID
User identifier for initiating LU 6.2 session.

XMITQ
Transmission queue name.

DISPLAY CHSTATUS

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	UNIX systems	Tandem NSK	Windows NT
✓	✓	✓	✓	✓	✓	✓

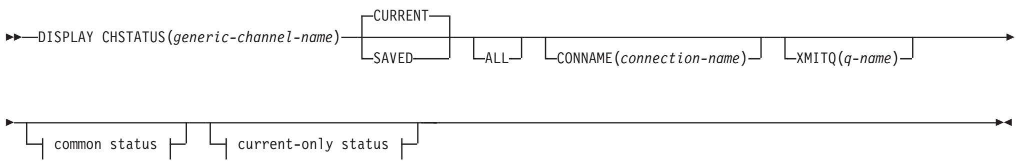
Use DISPLAY CHSTATUS to display the status of one or more channels.

Notes:

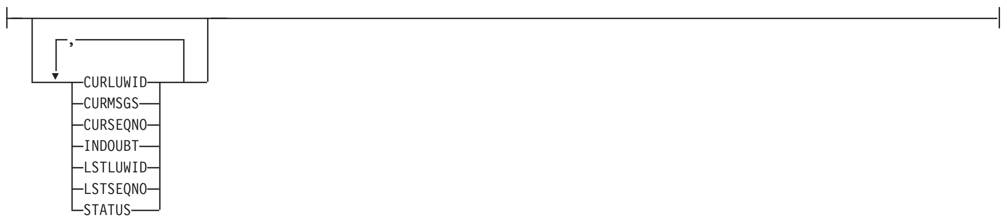
1. On OS/390, this is valid only for channels used for distributed queuing without CICS.
2. This command cannot be used for CLNTCONN channels.
3. On OS/390, the command fails if the channel initiator has not been started.

Synonym: DIS CHS

DISPLAY CHSTATUS


DISPLAY CHSTATUS(*generic-channel-name*)
CURRENT
SAVED
ALL
CONNAME(*connection-name*)
XMITQ(*q-name*)
common status
current-only status

Common status:



Current-only status:

```
├─┬──────────────────────┬────────────────────────────────────────────────────────────────────────┤
  │ ┌─,──────────────────┐ │
  │ ▼                    │ │
  └───┬─BATCHES─────┬────┴─┘
      ├─BATCHSZ─────┤
      ├─BUFSRCVD────┤
      ├─BUFSSENT────┤
      ├─BYTSRCVD────┤
      ├─BYTSSENT────┤
      ├─CHSTADA─────┤
      ├─CHSTATI─────┤
      │      (1)    │
      ├─HBINT───────┤
      │        (2)  │
      ├─JOBNAME─────┤
      ├─LONGRTS─────┤
      ├─LSTMSGDA────┤
      ├─LSTMSGTI────┤
      │        (3)  │
      ├─MAXMSGL─────┤
      │        (2)  │
      ├─MCASTAT─────┤
      ├─MSGS────────┤
      │         (1) │
      ├─NPMSPEED────┤
      ├─SHORTRTS────┤
      └─STOPREQ─────┘
```

Notes:

1 Valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

2 Ignored if specified on OS/390.

3 Valid only on OS/390.

Keyword and parameter descriptions

You must specify the name of the channel for which you want to display status information. This can be a specific channel name or a generic channel name. By using a generic channel name, you can display either:
- Status information for all channels, or
- Status information for one or more channels that match the specified name.

You must also specify whether you want:
- The current status data (of current channels only), or
- The saved status data of all channels.

Status for all channels that meet the selection criteria is given, whether the channels were defined manually or automatically.

Before explaining the syntax and options for this command, it is necessary to describe the format of the status data that is available for channels and the states that channels can have.

There are two classes of data available for channel status. These are **saved** and **current**. The status fields available for saved data are a subset of the fields available for current data and are called **common** status fields. Note that although the common data *fields* are the same, the data *values* might be different for saved and current status. The rest of the fields available for current data are called **current-only** status fields.

- **Saved** data consists of the common status fields noted in the syntax diagram. This data is reset at the following times:
  – For all channels:
    - When the channel enters or leaves STOPPED or RETRY state

- On AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT, when the queue manager is ended
- For a sending channel:
  - Before requesting confirmation that a batch of messages has been received
  - When confirmation has been received
- For a receiving channel:
  - Just before confirming that a batch of messages has been received
- For a server connection channel:
  - No data is saved

Therefore, a channel that has never been current cannot have any saved status.

Note: Status is not saved until a persistent message is transmitted across a channel, or a nonpersistent message is transmitted with a NPMSPEED of NORMAL. Because status is saved at the end of each batch, a channel will not have any saved status until at least one batch has been transmitted.

- **Current** data consists of the common status fields and current-only status fields as noted in the syntax diagram. The data fields are continually updated as messages are sent/received.

This method of operation has the following consequences:

- An inactive channel might not have any saved status – if it has never been current or has not yet reached a point where saved status is reset.
- The “common” data fields might have different values for saved and current status.
- An current channel always has current status and might have saved status.

Channels can be current or inactive:

Current channels
These are channels that have been started, or on which a client has connected, and that have not finished or disconnected normally. They might not yet have reached the point of transferring messages, or data, or even of establishing contact with the partner. Current channels have **current** status and might also have **saved** status.

The term **Active** is used to describe the set of current channels which are not stopped.

Inactive channels
These are channels that either:

- Have not been started
- On which a client has not connected
- Have finished
- Have disconnected normally

(Note that if a channel is stopped, it is not yet considered to have finished normally – and is, therefore, still current.) Inactive channels have either **saved** status or no status at all.

There can be more than one instance of a receiver, requester, cluster-sender, cluster-receiver, or server-connection channel current at the same time (the requester is acting as a receiver). This occurs if several senders, at different queue managers, each initiate a session with this receiver, using the same channel name. For channels of other types, there can only be one instance current at any time.

For all channel types, however, there can be more than one set of saved status information available for a given channel name. At most one of these sets relates to a current instance of the channel, the rest relate to previously-current instances. Multiple instances arise if different transmission queue names or connection names have been used in connection with the same channel. This can happen in the following cases:

- At a sender or server:
  - If the same channel has been connected to by different requesters (servers only)
  - If the transmission queue name has been changed in the definition
  - If the connection name has been changed in the definition
- At a receiver or requester:
  - If the same channel has been connected to by different senders or servers
  - If the connection name has been changed in the definition (for requester channels initiating connection)

The number of sets which are displayed for a given channel can be limited by using the XMITQ, CONNAME, and CURRENT keywords on the command.

(*generic-channel-name*)
The name of the channel definition for which status information is to be displayed. A trailing asterisk (*) matches all channel definitions with the specified stem followed by zero or more characters. An asterisk (*) on its own specifies all channel definitions. The channels must all be defined to the local queue manager.

XMITQ(*q-name*)
The name of the transmission queue for which status information is to be displayed, for the specified channel or channels.

This keyword can be used to limit the number of sets of status information that is displayed. If it is not specified, the display is not limited in this way.

CONNAME(*connection-name*)
The connection name for which status information is to be displayed, for the specified channel or channels.

This keyword can be used to limit the number of sets of status information that is displayed. If it is not specified, the display is not limited in this way.

The value returned for CONNAME might not be the same as in the channel definition, and might differ between the current channel status and the saved channel status. (Using CONNAME for limiting the number of sets of status is therefore not recommended.) For example, if CONNAME is blank in the channel definition or (when using TCP) is in “host name” format, the channel status value will have the resolved network address; if the CONNAME includes the port number (again when using TCP), the current channel status value will include the port number, but the saved channel status value will not.

This value could also be the queue manager name of the remote system.

CURRENT
This is the default, and indicates that current status information for current channels only is to be displayed.

Both common and current-only status information can be requested for current channels.

SAVED
Specify this to cause saved status information for both current and inactive channels to be displayed.

Only common status information can be displayed. Current-only status information is not displayed for current channels if this keyword is specified.

ALL Specify this to display all of the status information for each relevant instance.

If SAVED is specified, this causes only common status information to be displayed, not current-only status information.

If this keyword is specified, any keywords requesting specific status information that are also specified have no effect; all of the information is displayed.

The following information is always returned, for each set of status information:
- The channel name
- The channel type
- The transmission queue name (for sender and server channels)
- The connection name
- The type of status information returned (CURRENT or SAVED)
- On OS/390, STATUS

If no keywords requesting specific status information are specified (and the ALL keyword is not specified), no further information is returned.

If status information is requested which is not relevant for the particular channel type, this is not an error.

Common status

The following information applies to all sets of channel status, whether or not the set is current. The information applies to all channel types except server-connection.

CURLUWID
The logical unit of work identifier associated with the current batch, for a sending or a receiving channel.

For a sending channel, when the channel is in doubt it is the LUWID of the in-doubt batch.

For a saved channel instance, this attribute has meaningful information only if the channel instance is in doubt. However, the attribute value is still returned when requested, even if the channel instance is not in doubt.

It is updated with the LUWID of the next batch when this is known.

CURMSGS
For a sending channel, this is the number of messages that have been sent in the current batch. It is incremented as each message is sent, and when the channel becomes in doubt it is the number of messages that are in doubt.

For a saved channel instance, this attribute has meaningful information only if the channel instance is in doubt. However, the attribute value is still returned when requested, even if the channel instance is not in doubt.

For a receiving channel, it is the number of messages that have been received in the current batch. It is incremented as each message is received.

The value is reset to zero, for both sending and receiving channels, when the batch is committed.

CURSEQNO
For a sending channel, this is the message sequence number of the last message sent. It is updated as each message is sent, and when the channel becomes in doubt it is the message sequence number of the last message in the in-doubt batch.

For a saved channel instance, this attribute has meaningful information only if the channel instance is in doubt. However, the attribute value is still returned when requested, even if the channel instance is not in doubt.

For a receiving channel, it is the message sequence number of the last message that was received. It is updated as each message is received.

INDOUBT
Whether the channel is currently in doubt.

This is only YES while the sending Message Channel Agent is waiting for an acknowledgment that a batch of messages, which it has sent, has been successfully received. It is NO at all other times, including the period during which messages are being sent, but before an acknowledgment has been requested.

For a receiving channel, the value is always NO.

LSTLUWID
The logical unit of work identifier associated with the last committed batch of messages transferred.

LSTSEQNO
Message sequence number of the last message in the last committed batch. This number is not incremented by nonpersistent messages using channels with a NPMSPEED of FAST.

STATUS
Current status of the channel. This is one of the following:

STARTING	A request has been made to start the channel but the channel has not yet begun processing. A channel is in this state if it is waiting to become active.
BINDING	Channel is performing channel negotiation and is not yet ready to transfer messages.
INITIALIZING	The channel initiator is attempting to start a channel. This is valid only on AIX, Digital OpenVMS, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT. On OS/390, this is displayed as INITIALIZI.
RUNNING	The channel is either transferring messages at this moment, or is waiting for messages to arrive on the transmission queue so that they can be transferred.
STOPPING	Channel is stopping or a close request has been received.
RETRYING	A previous attempt to establish a connection has failed. The MCA will re-attempt connection after the specified time interval.
PAUSED	The channel is waiting for the message-retry interval to complete before retrying an MQPUT operation. This is not valid on OS/390.

STOPPED	This state can be caused by one of the following: • Channel manually stopped — A user has entered a stop channel command against this channel. • Retry limit reached — The MCA has reached the limit of retry attempts at establishing a connection. No further attempt will be made to establish a connection automatically. A channel in this state can be restarted only by issuing the START CHANNEL command, or starting the MCA program in an operating-system dependent manner.
REQUESTING	A local requester channel is requesting services from a remote MCA.

Note: For an inactive channel, CURMSGS, CURSEQNO, and CURLUWID have meaningful information only if the channel is INDOUBT. However they are still displayed and returned if requested.

Current-only status

The following information applies only to current channel instances. The information applies to all channel types, except where stated.

BATCHES
Number of completed batches during this session (since the channel was started).

BATCHSZ
The batch size being used for this session (valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT).

This parameter does not apply to server-connection channels, and no values are returned; if specified on the command, this is ignored.

BUFSRCVD
Number of transmission buffers received. This includes transmissions to receive control information only.

BUFSSENT
Number of transmission buffers sent. This includes transmissions to send control information only.

BYTSRCVD
Number of bytes received during this session (since the channel was started). This includes control information received by the message channel agent.

BYTSSENT
Number of bytes sent during this session (since the channel was started). This includes control information sent by the message channel agent.

CHSTADA
Date when this channel was started (in the form yyyy-mm-dd).

CHSTATI
Time when this channel was started (in the form hh.mm.ss).

JOBNAME
Name of job currently serving the channel.

- On Digital OpenVMS, this is the process identifier, displayed in hex.

- On OS/2 Warp, OS/400, UNIX systems, and Windows NT, this is the concatenation of the process identifier and the thread identifier of the MCA program, displayed in hex.
- On Tandem NSK, this is the CPU ID and PID, displayed in hex.

This information is not available on OS/390. The keyword is ignored if specified.

HBINT
The heartbeat interval being used for this session.

LONGRTS
Number of long retry wait start attempts left. This applies only to sender or server channels.

LSTMSGDA
Date when the last message was sent or MQI call was handled, see LSTMSGTI.

LSTMSGTI
Time when the last message was sent or MQI call was handled.

For a sender or server, this is the time the last message (the last part of it if it was split) was sent. For a requester or receiver, it is the time the last message was put to its target queue. For a server-connection channel, it is the time when the last MQI call completed.

MAXMSGL
The maximum message length being used for this session (valid only on OS/390).

MCASTAT
Whether the Message Channel Agent is currently running. This is either ″running″ or ″not running″.

Note that it is possible for a channel to be in stopped state, but for the program still to be running.

This information is not available on OS/390. The keyword is ignored if specified.

MSGS
Number of messages sent or received (or, for server-connection channels, the number of MQI calls handled) during this session (since the channel was started).

NPMSPEED
The nonpersistent message handling technique being used for this session.

SHORTRTS
Number of short retry wait start attempts left. This applies only to sender or server channels.

STOPREQ
Whether a user stop request is outstanding. This is either YES or NO.

DISPLAY CLUSQMGR

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓	✓	✓		✓	✓

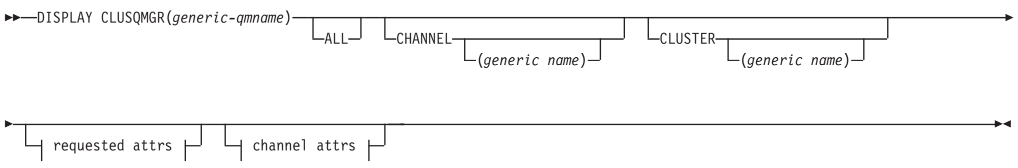
Use DISPLAY CLUSQMGR to display a cluster information about queue managers in a cluster.

Notes:

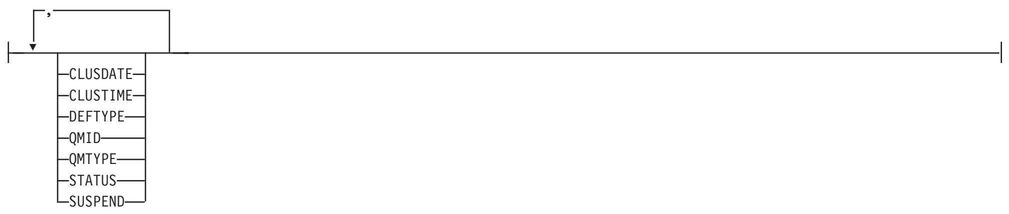
1. On UNIX systems, the command is valid only on AIX, HP-UX, and Sun Solaris.
2. On OS/390, the command fails if the channel initiator has not been started.

Synonym: DIS CLUSQMGR

DISPLAY CLUSQMGR



Requested attrs:



Channel attrs:

```
   ┌─,──────────┐
   ▼            │
├──┬─ALTDATE────┬┴──────────────────────────────────────────────────────────┤
   ├─ALTTIME────┤
   ├─BATCHINT───┤
   ├─BATCHSZ────┤
   ├─CONNAME────┤
   ├─CONVERT────┤
   ├─DESCR──────┤
   ├─DISCINT────┤
   ├─HBINT──────┤
   ├─LONGRTY────┤
   ├─LONGTMR────┤
   ├─MAXMSGL────┤
   ├─MCANAME────┤
   ├─MCATYPE────┤
   ├─MCAUSER────┤
   ├─MODENAME───┤
   │        (1) │
   ├─MRDATA─────┤
   │        (1) │
   ├─MREXIT─────┤
   │       (1)  │
   ├─MRRTY──────┤
   │       (1)  │
   ├─MRTMR──────┤
   ├─MSGDATA────┤
   ├─MSGEXIT────┤
   ├─NETPRTY────┤
   ├─NPMSPEED───┤
   │          (1)
   ├─PASSWORD───┤
   ├─PUTAUT─────┤
   ├─RCVDATA────┤
   ├─RCVEXIT────┤
   ├─SCYDATA────┤
   ├─SCYEXIT────┤
   ├─SENDDATA───┤
   ├─SENDEXIT───┤
   ├─SEQWRAP────┤
   ├─SHORTRTY───┤
   ├─SHORTTMR───┤
   ├─TPNAME─────┤
   ├─TRPTYPE────┤
   │        (1) │
   └─USERID─────┘
```

Notes:

1 Not valid on OS/390.

Keyword and parameter descriptions

(*generic qmname***)**
The name of the cluster queue manager to be displayed.

A trailing asterisk(*) matches all cluster queue managers with the specified stem followed by zero or more characters. An asterisk (*) on its own specifies all cluster queue managers.

ALL Specify this to cause all attributes to be displayed. If this keyword is specified, any attributes that are also requested specifically have no effect; all attributes are still displayed. This is the default if you do not specify a generic name and do not request any specific attributes.

CHANNEL(*generic-name***)**
This is optional, and limits the information displayed to cluster queue managers with the specified channel name. The value can be a generic name.

CLUSTER(*generic-name*)
This is optional, and limits the information displayed to cluster queue managers with the specified cluster name. The value can be a generic name.

Requested attributes

Specify one or more attributes that define the data to be displayed. The attributes can be specified in any order, but do not specify the same attribute more than once.

Some attributes are relevant only for channels of a particular type or types. Attributes that are not relevant for a particular type of channel cause no output, and do not cause an error.

CLUSDATE
The date on which the definition became available to the local queue manager, in the form `yyyy-mm-dd`.

CLUSTIME
The time at which the definition became available to the local queue manager, in the form `hh.mm.ss`.

DEFTYPE
How the cluster queue manager was defined:

CLUSSDR	As a cluster-sender channel from an explicit definition.
CLUSSDRA	As a cluster-sender channel by auto-definition alone.
CLUSSDRB	As a cluster-sender channel by auto-definition and an explicit definition.
CLUSRCVR	As a cluster-receiver channel from an explicit definition.

QMTYPE
The function of the queue manager in the cluster:

REPOS	Provides a full repository service.
NORMAL	Does not provide a full repository service.

QMID
The internally generated unique name of the queue manager.

STATUS
The current status of the channel for this queue manager. This is one of the following:

STARTING	A request has been made to start the channel but the channel has not yet begun processing. A channel is in this state if it is waiting to become active.
BINDING	The channel is performing channel negotiation and is not yet ready to transfer messages.
INACTIVE	The channel is not active.
INITIALIZING	The channel initiator is attempting to start a channel. On OS/390, this is displayed as INITIALIZI.
RUNNING	The channel is either transferring messages at this moment, or is waiting for messages to arrive on the transmission queue so that they can be transferred.
STOPPING	The channel is stopping, or a close request has been received.
RETRYING	A previous attempt to establish a connection has failed. The MCA will re-attempt connection after the specified time interval.
PAUSED	The channel is waiting for the message-retry interval to complete before retrying an **MQPUT** operation.

STOPPED	This state can be caused by one of the following: • Channel manually stopped. A user has entered a stop channel command against this channel. • Retry limit reached. The MCA has reached the limit of retry attempts at establishing a connection. No further attempt is made to establish a connection automatically. A channel in this state can be restarted only by issuing the START CHANNEL command, or starting the MCA program in an operating-system dependent manner.
REQUESTING	A local requester channel is requesting services from a remote MCA.

SUSPEND
Whether this queue manager is suspended from the cluster or not (as a result of the SUSPEND QMGR command). This is either YES or NO.

Channel attributes

ALTDATE
The date on which the definition or information was last altered, in the form `yyyy-mm-dd`

ALTTIME
The time at which the definition or information was last altered, in the form `hh.mm.ss`

BATCHINT
Minimum batch duration

BATCHSZ
Batch size

CONNAME
Connection name

CONVERT
Whether the sender should convert application message data

DESCR
Description

DISCINT
Disconnection interval

HBINT
Heartbeat interval

LONGRTY
Long retry count

LONGTMR
Long retry timer

MAXMSGL
Maximum message length for channel

MCANAME
Message channel agent name

MCATYPE
Whether the message channel agent runs as a separate process or a separate thread

MCAUSER
Message channel agent user identifier

MODENAME
LU 6.2 mode name

MRDATA
Channel message-retry exit user data

MREXIT
Channel message-retry exit name

MRRTY
Channel message-retry exit retry count

MRTMR
Channel message-retry exit retry time

MSGDATA
Channel message exit user data

MSGEXIT
Channel message exit names

NETPRTY
The priority for the network connection

NPMSPEED
Nonpersistent message speed

PASSWORD
Password for initiating LU 6.2 session (if nonblank, this is displayed as asterisks)

PUTAUT
Put authority

RCVDATA
Channel receive exit user data

RCVEXIT
Channel receive exit names

SCYDATA
Channel security exit user data

SCYEXIT
Channel security exit name

SENDDATA
Channel send exit user data

SENDEXIT
Channel send exit names

SEQWRAP
Sequence number wrap value

SHORTRTY
Short retry count

SHORTTMR
Short retry timer

TRPTYPE
Transport type

TPNAME
LU 6.2 transaction program name

USERID
User identifier for initiating LU 6.2 session

DISPLAY CMDSERV

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

Use DISPLAY CMDSERV to display the status of the command server.

Synonym: DIS CS

DISPLAY CMDSERV

```
►►──DISPLAY CMDSERV─────────────────────────────────────────────────────►◄
```

Usage notes

1. The command server takes messages from the system command input queue and processes them. DISPLAY CMDSERV displays the status of the command server.
2. The response to this command is a message showing the current status of the command server, which is one of the following:

ENABLED	Available to process messages
DISABLED	Not available to process messages
STARTING	START CMDSERV in progress
STOPPING	STOP CMDSERV in progress
STOPPED	STOP CMDSERV completed
RUNNING	Processing a message
WAITING	Waiting for a message

DISPLAY DQM

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

Use DISPLAY DQM to display information about the channel initiator.

Note: This is valid only for channels used for distributed queuing without CICS. If you are using CICS for distributed queuing, see Note 2 on page 13.

Synonym: DIS DQM

DISPLAY DQM

```
►►──DISPLAY DQM──────────────────────────────────────────────────────────────►◄
```

Usage notes

1. The response to this command is a series of messages showing the current status of the channel initiator. This includes the following:
   - Whether the channel initiator is running or not
   - Whether the TCP listener is started or not, and what port it is using
   - Whether the LU 6.2 listener is started or not, and what LU name it is using
   - How many dispatchers are started, and how many were requested
   - How many adapter subtasks are started, and how many were requested
   - The TCP system name
   - How many channel connections are current, and whether they are active, stopped, or retrying
   - The maximum number of current connections

DISPLAY MAXSMSGS

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

Use DISPLAY MAXSMSGS to see the maximum number of messages that a task can get or put within a single unit of recovery.

Notes:

1. This command is valid only on OS/390. For other platforms, use the MAXUMSGS keyword of the DISPLAY QMGR command instead.
2. You can issue the DISPLAY MAXSMSGS command at any time to see the number of messages allowed.

Synonym: DIS MAXSM

DISPLAY MAXSMSGS

```
►►──DISPLAY MAXSMSGS──────────────────────────────────────────────────────────────────►◄
```

DISPLAY NAMELIST

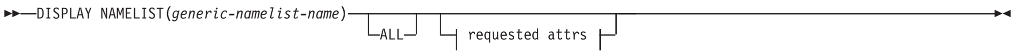
Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓	✓	✓		✓	✓

Use DISPLAY NAMELIST to display the names in a namelist.

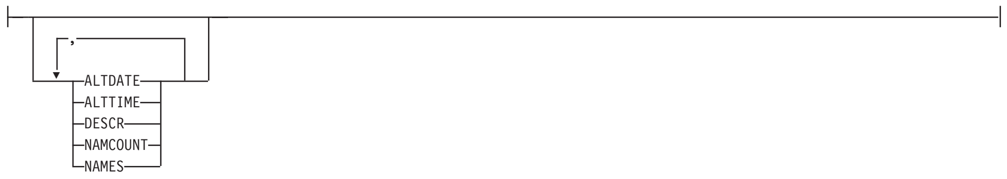
Note: On UNIX systems, the command is valid only on AIX, HP-UX, and Sun Solaris.

Synonym: DIS NL

DISPLAY NAMELIST



Requested attrs:



Keyword and parameter descriptions

You must specify the name of the namelist definition you want to display. This can be a specific namelist name or a generic namelist name. By using a generic namelist name, you can display either:

- All namelist definitions
- One or more namelists that match the specified name

(*generic-namelist-name*)
The name of the namelist definition to be displayed (see "Rules for naming MQSeries objects" on page 4). A trailing asterisk (*) matches all namelists with the specified stem followed by zero or more characters. An asterisk (*) on its own specifies all namelists. The namelists must all be defined to the local queue manager.

ALL Specify this to display all the attributes. If this keyword is specified, any attributes that are requested specifically have no effect; all the attributes are displayed.

This is the default if you do not specify a generic name, and do not request any specific attributes.

Requested attributes

You can request the following information for each namelist definition:

ALTDATE
The date on which the definition was last altered, in the form `yyyy-mm-dd`

ALTTIME
The time at which the definition was last altered, in the form `hh.mm.ss`

DESCR
Description

NAMCOUNT
Number of names in the list

NAMES
List of names

See “DEFINE NAMELIST” on page 122 for more information about the DESCR and NAMES attributes.

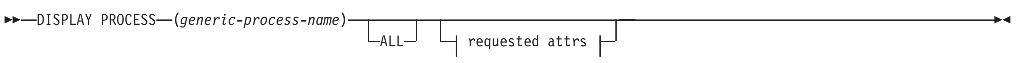
DISPLAY PROCESS

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

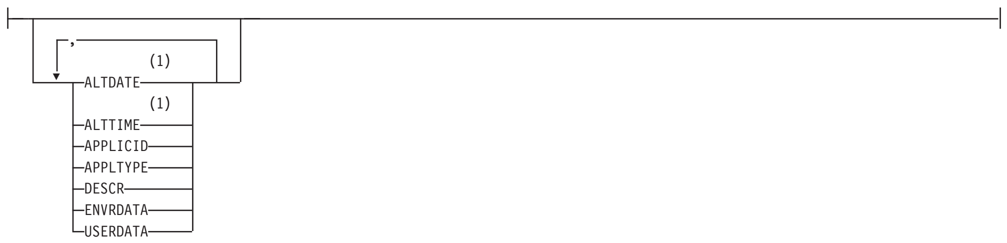
Use DISPLAY PROCESS to display the attributes of one or more MQSeries processes.

Synonym: DIS PRO

DISPLAY PROCESS



Requested attrs:



Notes:

1 Valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

Keyword and parameter descriptions

You must specify the name of the process you want to display. This can be a specific process name or a generic process name. By using a generic process name, you can display either:

- All process definitions
- One or more processes that match the specified name

(generic-process-name)
The name of the process definition to be displayed (see "Rules for naming MQSeries objects" on page 4). A trailing asterisk (*) matches all processes with the specified stem followed by zero or more characters. An asterisk (*) on its own specifies all processes. The names must all be defined to the local queue manager.

ALL Specify this to display all the attributes. If this keyword is specified, any attributes that are requested specifically have no effect; all attributes are still displayed.

On AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT, this is the default if you do not specify a generic name and do not request any specific attributes.

On other platforms, if no attributes are specified (and the ALL keyword is not specified), the default is that the process names are returned.

Requested attributes

You can request the following information for the process name:

ALTDATE
The date on which the definition was last altered, in the form `yyyy-mm-dd`

ALTTIME
The time at which the definition was last altered, in the form `hh.mm.ss`

APPLICID
Application identifier

APPLTYPE
Application type

DESCR
Description

ENVRDATA
Environment data

USERDATA
User data

See “DEFINE PROCESS” on page 124 for more information about individual attributes.

DISPLAY QUEUE

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

Use DISPLAY QUEUE to display the attributes of one or more queues of any type.

Notes:

1. On AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT, you can use the following commands (or their synonyms) as an alternative way to display these attributes.
   - DISPLAY QALIAS
   - DISPLAY QCLUSTER
   - DISPLAY QLOCAL
   - DISPLAY QMODEL
   - DISPLAY QREMOTE

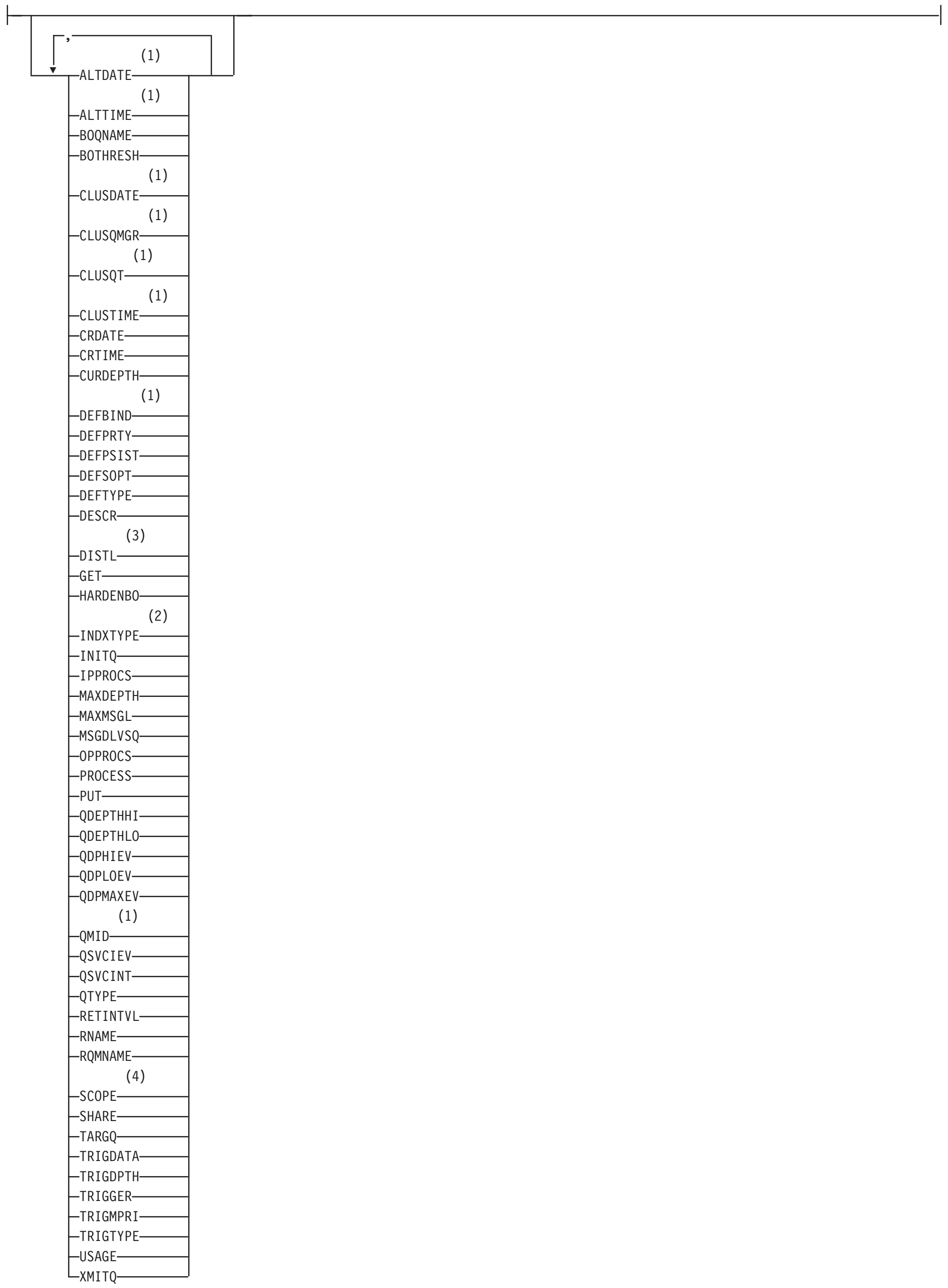
   These commands produce the same output as the DISPLAY QUEUE TYPE(*queue-type*) command. If you enter the commands this way, do not use the TYPE keyword because this causes an error.
2. On OS/390, the channel initiator must be running before you can display information about cluster queues (using TYPE(QCLUSTER) or the CLUSINFO keyword).

Synonym: DIS Q

DISPLAY QUEUE

```
►►──DISPLAY QUEUE(generic-q-name)──┬─────┬──┬──────────────┬──┬────────────────────────────┬──────►
                                   └─ALL─┘  │           (1)│  ├─CLUSTER─┬────────────────┤
                                            └─CLUSINFO─────┘  │         │             (1)│
                                                                        └─(generic-name)─┘

►──┬───────────────────────────┬──┬────────────────────────────┬──┬──────────────────┬────────────►
   ├─CLUSNL─┬──────────────────┤  └─STGCLASS─┬────────────────┬┘  └─TYPE(queue-type)─┘
   │        │              (1) │             │             (2)│
            └─(generic-name)───┘             └─(generic-name)─┘

►──┬─────────────────────┬────────────────────────────────────────────────────────────────────────►◄
   └─┤ requested attrs ├─┘
```

Requested attrs:



Notes:

1 Valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

2 Valid only on OS/390.

3 Valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

4 Not valid on OS/390 or OS/400.

Keyword and parameter descriptions

You must specify the name of the queue definition you want to display. This can be a specific queue name or a generic queue name. By using a generic queue name, you can display either:

- All queue definitions
- One or more queues that match the specified name

(generic-q-name)
The local name of the queue definition to be displayed (see "Rules for naming MQSeries objects" on page 4). A trailing asterisk (*) matches all queues with the specified stem followed by zero or more characters. An asterisk (*) on its own specifies all queues. The names must all be defined to the local queue manager.

ALL Specify this to cause all attributes to be displayed. If this keyword is specified, any attributes that are also requested specifically have no effect; all attributes are still displayed.

| On AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows
| NT, this is the default if you do not specify a generic name and do not
| request any specific attributes.

CLUSINFO
This requests that, in addition to information about attributes of queues defined on this queue manager, information about these and other queues in the cluster that match the selection criteria is displayed. In this case, there might be multiple queues with the same name displayed. The cluster information is obtained from the repository on this queue manager.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400,
| Sun Solaris, and Windows NT.

CLUSTER(*generic-name***)**
This is optional, and limits the information displayed to queues with the specified cluster name if entered with a value in brackets. The value can be a generic name. Only queue types for which CLUSTER is a valid attribute are restricted in this way by this keyword; other queue types that meet the other selection criteria are displayed.

If you do not enter a value to qualify this parameter, it is treated as a requested attribute, and cluster name information is returned about all the queues displayed.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400,
| Sun Solaris, and Windows NT.

CLUSNL(*generic-name***)**
This is optional, and limits the information displayed if entered with a value in brackets:

- For queues defined on the local queue manager, only those with the specified cluster list. The value can be a generic name. Only queue types for which CLUSNL is a valid attribute are restricted in this way; other queue types that meet the other selection criteria are displayed.
- For cluster queues, only those belonging to clusters in the specified cluster list if the value is not a generic name. If the value is a generic name, no restriction is applied to cluster queues.

If you do not enter a value to qualify this parameter, it is treated as a requested attribute, and cluster list information is returned about all the queues displayed.

This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

STGCLASS*(generic-name)*
This is optional, and limits the information displayed to queues with the storage class specified if entered with a value in brackets. The value can be a generic name.

If you do not enter a value to qualify this parameter, it is treated as a requested attribute, and storage class information is returned about all the queues displayed.

This keyword is valid only on OS/390.

TYPE*(queue-type)*
This is optional, and specifies the type of queues you want to be displayed. The default is to display all queue types; this includes cluster queues if CLUSINFO is also specified.

You can specify any of the queue types allowed for a DEFINE command (QLOCAL, QALIAS, QREMOTE, or their synonyms). A queue type of QCLUSTER can be specified to display only cluster queue information on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

On AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT, QTYPE(*type*) can be used as a synonym for this parameter.

If no attributes are specified (and the ALL keyword is not specified or defaulted), the queue name and queue type are displayed.

Requested attributes

Specify one or more attributes that define the data to be displayed. The attributes can be specified in any order, but do not specify the same attribute more than once.

Most attributes are relevant only for queues of a particular type or types. Attributes that are not relevant for a particular type of queue cause no output, nor is an error raised.

Table 3 shows the attributes that are relevant for each type of queue. There is a brief description of each attribute after the table, but for more information, see the DEFINE command for each queue type.

Table 3. Attributes that can be returned by the DISPLAY QUEUE command

	Local queue	Model queue	Alias queue	Remote queue	Cluster queue
ALTDATE[1]	✓	✓	✓	✓	✓
ALTTIME[1]	✓	✓	✓	✓	✓
BOQNAME	✓	✓			
BOTHRESH	✓	✓			
CLUSDATE[1]					✓
CLUSNL[1]	✓		✓	✓	
CLUSQMGR[1]					✓
CLUSQT[1]					✓
CLUSTER[1]	✓		✓	✓	✓
CLUSTIME[1]					✓

Table 3. Attributes that can be returned by the DISPLAY QUEUE command (continued)

	Local queue	Model queue	Alias queue	Remote queue	Cluster queue
CRDATE	✓	✓			
CRTIME	✓	✓			
CURDEPTH	✓				
DEFBIND[1]	✓		✓	✓	
DEFPRTY	✓	✓	✓	✓	✓
DEFPSIST	✓	✓	✓	✓	✓
DEFSOPT	✓	✓			
DEFTYPE	✓	✓			
DESCR	✓	✓	✓	✓	✓
DISTL[2]	✓	✓			
GET	✓	✓	✓		
HARDENBO	✓	✓			
INDXTYPE[3]	✓	✓			
INITQ	✓	✓			
IPPROCS	✓				
MAXDEPTH	✓	✓			
MAXMSGL	✓	✓			
MSGDLVSQ	✓	✓			
OPPROCS	✓				
PROCESS	✓	✓			
PUT	✓	✓	✓	✓	✓
QDEPTHHI	✓	✓			
QDEPTHLO	✓	✓			
QDPHIEV	✓	✓			
QDPLOEV	✓	✓			
QDPMAXEV	✓	✓			
QMID[1]					✓
QSVCIEV	✓	✓			
QSVCINT	✓	✓			
QTYPE	✓	✓	✓	✓	✓
RETINTVL	✓	✓			
RNAME				✓	
RQMNAME				✓	
SCOPE[4]	✓		✓	✓	
SHARE	✓	✓			
STGCLASS[3]	✓	✓			
TARGQ			✓		
TRIGDATA	✓	✓			
TRIGDPTH	✓	✓			

Table 3. Attributes that can be returned by the DISPLAY QUEUE command (continued)

	Local queue	Model queue	Alias queue	Remote queue	Cluster queue
TRIGGER	✓	✓			
TRIGMPRI	✓	✓			
TRIGTYPE	✓	✓			
USAGE	✓	✓			
XMITQ				✓	

Notes:
1. Supported only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT
2. Supported only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT
3. Supported only on OS/390
4. Not supported on OS/390 or OS/400

ALTDATE
The date on which the definition or information was last altered, in the form `yyyy-mm-dd`.

ALTTIME
The time at which the definition or information was last altered, in the form `hh.mm.ss`.

BOQNAME
Backout requeue name.

BOTHRESH
Backout threshold.

CLUSDATE
The date on which the definition became available to the local queue manager, in the form `yyyy-mm-dd`.

CLUSNL
The namelist that defies the cluster that the queue is in.

CLUSQMGR
The name of the queue manager that hosts the queue.

CLUSQT
Cluster queue type. This can be:

QALIAS	The cluster queue represents an alias queue.
QLOCAL	The cluster queue represents a local queue.
QMGR	The cluster queue represents a queue manager alias.
QREMOTE	The cluster queue represents a remote queue.

CLUSTER
The name of the cluster that the queue is in.

CLUSTIME
The time at which the definition became available to the local queue manager, in the form `hh.mm.ss`.

CRDATE
The date on which the queue was defined (in the form `yyyy-mm-dd`).

CRTIME
The time at which the queue was defined (in the form `hh.mm.ss`).

CURDEPTH
Current depth of queue.

DEFBIND
Default message binding.

DEFPRTY
Default priority of the messages put on the queue.

DEFPSIST
Whether the default persistence of messages put on this queue is set to NO or YES. NO means that messages are lost across a restart of the queue manager.

DEFSOPT
Default share option on a queue opened for input.

DEFTYPE
Queue definition type. This can be:

- PREDEFINED (Predefined)

  The queue was created with a DEFINE command, either by an operator or by a suitably authorized application sending a command message to the service queue.
- PERMDYN (Permanent dynamic)

  Either the queue was created by an application issuing **MQOPEN** with the name of a model queue specified in the object descriptor (MQOD), or (if this is a model queue) this determines the type of dynamic queue that can be created from it.
- TEMPDYN (Temporary dynamic)

  Either the queue was created by an application issuing **MQOPEN** with the name of a model queue specified in the object descriptor (MQOD), or (if this is a model queue) this determines the type of dynamic queue that can be created from it.

DESCR
Descriptive comment.

DISTL
Whether distribution lists are supported by the partner queue manager. (Supported only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.)

GET Whether the queue is enabled for gets.

HARDENBO
Whether to harden the get back out count.

INDXTYPE
Index type (supported only on OS/390).

INITQ
Initiation queue name.

IPPROCS
Number of handles indicating that the queue is open for input.

MAXDEPTH
Maximum depth of queue.

MAXMSGL
Maximum message length.

MSGDLVSQ
Message delivery sequence.

OPPROCS
Number of handles indicating that the queue is open for output.

PROCESS
Process name.

PUT Whether the queue is enabled for puts.

QDEPTHHI
Queue Depth High event generation threshold.

QDEPTHLO
Queue Depth Low event generation threshold.

QDPHIEV
Whether Queue Depth High events are generated.

QDPLOEV
Whether Queue Depth Low events are generated.

QDPMAXEV
Whether Queue Full events are generated.

QMID
The internally generated unique name of the queue manager that hosts the queue.

QSVCIEV
Whether service interval events are generated.

QSVCINT
Service interval event generation threshold.

QTYPE
Queue type.

| On AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT, the queue type is always displayed if you specify a generic queue name and do not request any other attributes. On OS/390, the queue type is always displayed.

| On AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT, TYPE(*type*) can be used as a synonym for this parameter.

RETINTVL
Retention interval.

RNAME
Name of the local queue, as known by the remote queue manager.

RQMNAME
Remote queue manager name.

SCOPE
| Scope of queue definition (not supported on OS/390 or OS/400).

SHARE
Whether the queue can be shared.

STGCLASS
Storage class.

TARGQ
Local name of aliased queue.

TRIGDATA
Trigger data.

TRIGDPTH
Trigger depth.

TRIGGER
Whether triggers are active.

TRIGMPRI
Threshold message priority for triggers.

TRIGTYPE
Trigger type.

USAGE
Whether or not the queue is a transmission queue.

XMITQ
Transmission queue name.

DISPLAY QMGR

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

Use DISPLAY QMGR to display the queue manager attributes for this queue manager.

Synonym: DIS QMGR

DISPLAY QMGR.

```
►►──DISPLAY QMGR──┬─────┬──┬─────────────────────┬──────────────────────────────────►◄
                  └─ALL─┘  └─┤ requested attrs ├─┘
```

Requested attrs:

```
├──┬──────────────────────────┬─────────────────────────────────────────────────────┤
   │ ┌─,──────────────────┐   │
   │ ▼         (1)        │   │
   └───┬─ALTDATE─────────┬─┴───┘
       │       (1)       │
       ├─ALTTIME─────────┤
       ├─AUTHOREV────────┤
       ├─CCSID───────────┤
       │    (2)          │
       ├─CHAD────────────┤
       │      (1)        │
       ├─CHADEV──────────┤
       │        (1)      │
       ├─CHADEXIT────────┤
       │        (1)      │
       ├─CLWLEXIT────────┤
       │        (1)      │
       ├─CLWLDATA────────┤
       │       (1)       │
       ├─CLWLLEN─────────┤
       ├─CMDLEVEL────────┤
       ├─COMMANDQ────────┤
       │        (3)      │
       ├─CPILEVEL────────┤
       ├─DEADQ───────────┤
       ├─DEFXMITQ────────┤
       ├─DESCR───────────┤
       │     (2)         │
       ├─DISTL───────────┤
       ├─INHIBTEV────────┤
       ├─LOCALEV─────────┤
       ├─MAXHANDS────────┤
       ├─MAXMSGL─────────┤
       ├─MAXPRTY─────────┤
       │        (4)      │
       ├─MAXUMSGS────────┤
       ├─PERFMEV─────────┤
       ├─PLATFORM────────┤
       │    (1)          │
       ├─QMID────────────┤
       ├─QMNAME──────────┤
       ├─REMOTEEV────────┤
       │     (1)         │
       ├─REPOS───────────┤
       │       (1)       │
       ├─REPOSNL─────────┤
       ├─STRSTPEV────────┤
       ├─SYNCPT──────────┤
       └─TRIGINT─────────┘
```

Notes:

1 Valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

2 Valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

3 Valid only on OS/390.

4 Not valid on OS/390.

Keyword and parameter descriptions

ALL Specify this to cause all attributes to be displayed. If this keyword is specified, any attributes that are requested specifically have no effect; all attributes are still displayed.

| On AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT, this
| is the default if you do not request any specific attributes.

Requested attributes

Specify one or more attributes that define the data to be displayed. The attributes can be specified in any order, but do not specify the same attribute more than once.

Note: If no attributes are specified (and the ALL keyword is not specified or defaulted), the queue manager name is returned.

You can request the following information for the queue manager:

ALTDATE
The date on which the definition was last altered, in the form `yyyy-mm-dd`.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400,
| Sun Solaris, and Windows NT.

ALTTIME
The time at which the definition was last altered, in the form `hh.mm.ss`.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400,
| Sun Solaris, and Windows NT.

AUTHOREV
Whether authorization events are generated.

CCSID
Coded character set identifier. This applies to all character string fields defined by the application programming interface (API), including the names of objects, and the creation date and time of each queue. It does not apply to application data carried as the text of messages.

CHAD
Whether auto-definition of receiver and server-connection channels is enabled. This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

CHADEV
| Whether auto-definition events are enabled. This parameter is valid only
| on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

CHADEXIT
The name of the channel auto-definition exit. This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT.

CLWLEXIT
The name of the cluster workload exit.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400,
| Sun Solaris, and Windows NT.

CLWLDATA
The data passed to the cluster workload exit.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400,
| Sun Solaris, and Windows NT.

CLWLLEN
The maximum number of bytes of message data that is passed to the cluster workload exit.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400,
| Sun Solaris, and Windows NT.

CMDLEVEL
Command level. This indicates the function level of the queue manager.

COMMANDQ
The name of the system-command input queue. Suitably authorized applications can put commands on this queue.

CPILEVEL
Reserved, this value has no significance.

DEADQ
The name of the queue to which messages are sent if they cannot be routed to their correct destination (the dead-letter queue or undelivered-message queue). The default is blanks.

For example, messages are put on this queue when:

- A message arrives at a queue manager, destined for a queue that is not yet defined on that queue manager
- A message arrives at a queue manager, but the queue for which it is destined cannot receive it because, possibly:
  - The queue is full
  - The queue is inhibited for puts
  - The sending node does not have authority to put the message on the queue
- An exception message needs to be generated, but the queue named is not known to that queue manager

Note: Messages that have passed their expiry time are *not* transferred to this queue when they are discarded.

If the dead-letter queue is not defined, or full, or unusable for some other reason, a message which would have been transferred to it by a message channel agent is retained instead on the transmission queue.

If a dead-letter queue or undelivered-message queue is not specified, all blanks are returned for this attribute.

DEFXMITQ
Default transmission queue name. This is the transmission queue on which messages, destined for a remote queue manager, are put if there is no other suitable transmission queue defined.

DESCR
Description.

DISTL
Whether distribution lists are supported by the queue manager. This is valid only on AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT.

INHIBTEV
Whether inhibit events are generated.

LOCALEV
Whether local error events are generated.

MAXHANDS
The maximum number of open handles that any one task can have at any one time.

MAXMSGL
The maximum message length that can be handled by the queue manager. Individual queues might have a smaller or greater maximum than this. (See the description of MAXMSGL under "ALTER CHANNEL" on page 14 for more information.)

MAXPRTY
The maximum priority. This is 9.

MAXUMSGS
Maximum number of uncommitted messages within one syncpoint.

This keyword is not supported on OS/390; use DISPLAY MAXSMSGS instead.

PERFMEV
Whether performance-related events are generated.

PLATFORM
The architecture of the platform on which the queue manager is running. This is MVS, OPENVMS, NSK, OS2, OS400, UNIX, or WINDOWSNT.

QMID
The internally generated unique name of the queue manager.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400,
| Sun Solaris, and Windows NT.

QMNAME
The name of the local queue manager. See "Rules for naming MQSeries objects" on page 4.

REMOTEEV
Whether remote error events are generated.

REPOS
The name of a cluster for which this queue manager is to provide a repository manager service.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400,
| Sun Solaris, and Windows NT.

REPOSNL
The name of a list of clusters for which this queue manager is to provide a repository manager service.

| This parameter is valid only on AIX, HP-UX, OS/2 Warp, OS/390, OS/400,
| Sun Solaris, and Windows NT.

STRSTPEV
Whether start and stop events are generated.

SYNCPT
| Whether syncpoint support is available with the queue manager. On OS/2
| Warp, OS/390, OS/400, UNIX systems, and Windows NT it is always
| available.

TRIGINT
The trigger interval.

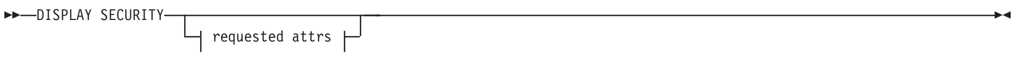
DISPLAY SECURITY

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

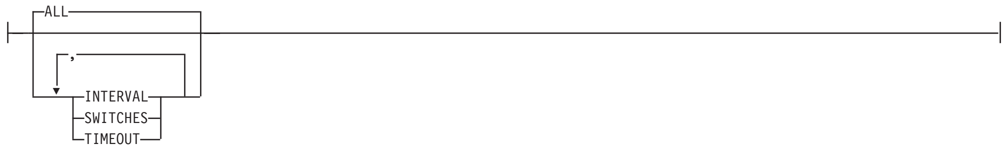
Use DISPLAY SECURITY to display the current settings for the security attributes.

Synonym: DIS SEC

DISPLAY SECURITY



Requested attrs:



Keyword and parameter descriptions

ALL Display the TIMEOUT, INTERVAL, and SWITCHES attributes. This is the default if no requested attributes are specified.

INTERVAL
Time interval between checks.

SWITCHES
Display the current setting of the switch profiles.

If the ssid.NO.SUBSYS.SECURITY switch is off, no other switch profile settings are displayed. If the ssid.NO.SUBSYS.SECURITY switch is on, the following switch profile settings are displayed:
- ssid.NO.SUBSYS.SECURITY (subsystem security)
- ssid.NO.CONNECT.CHECKS (connection security)
- ssid.NO.CMD.CHECKS (command security)
- ssid.NO.CMD.RESC.CHECKS (command resource security)
- ssid.NO.QUEUE.CHECKS (queue security)
- ssid.NO.PROCESS.CHECKS (process security)
- ssid.NO.NLIST.CHECKS (namelist security)
- ssid.NO.CONTEXT.CHECKS (context security)
- ssid.NO.ALTERNATE.USER.CHECKS (alternate user security)

TIMEOUT
Timeout value.

See “ALTER SECURITY” on page 81 for details of the TIMEOUT and INTERVAL attributes.

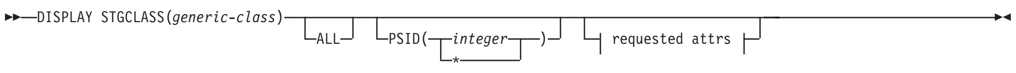
DISPLAY STGCLASS

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

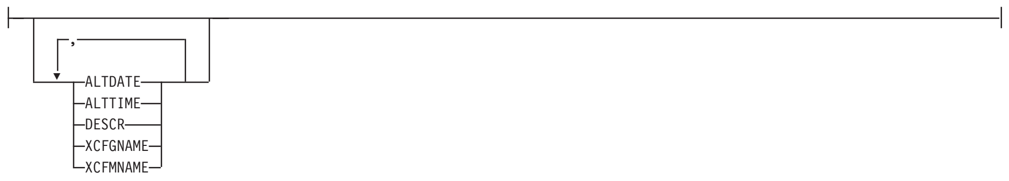
Use DISPLAY STGCLASS to display information about storage classes.

Synonym: DIS STC

DISPLAY STGCLASS



Requested attrs:



Keyword and parameter descriptions

You use DISPLAY STGCLASS to show the page set identifiers that are associated with each storage class.

(generic-class)
: Name of the storage class. This is required.

  This is 1 through 8 characters. The first character is in the range A through Z; subsequent characters are A through Z or 0 through 9.

  A trailing asterisk (*) matches all storage classes with the specified stem followed by zero or more characters. An asterisk (*) on its own specifies all storage classes.

PSID(*integer***)**
: The page set identifier that a storage class maps to. This is optional.

  The string consists of two numeric characters, in the range 00 through 99. An asterisk (*) on its own specifies all page set identifiers. See “DEFINE PSID” on page 128.

ALL
: Specify this to cause all attributes to be displayed. If this keyword is specified, any attributes that are also requested specifically have no effect; all attributes are still displayed.

  This is the default if you do not specify a generic name, and do not request any specific attributes.

Requested attributes

Specify one or more attributes that define the data to be displayed. The attributes can be specified in any order, but do not specify the same attribute more than once.

The default, if no attributes are specified (and the ALL keyword is not specified) is the storage class names and their page set identifiers are displayed.

ALTDATE
The date on which the definition was last altered, in the form `yyyy-mm-dd`.

ALTTIME
The time at which the definition was last altered, in the form `hh.mm.ss`.

DESCR
Descriptive comment.

XCFGNAME
The name of the XCF group that MQSeries is a member of.

XCFMNAME
The XCF member name of the IMS system within the XCF group specified in XCFGNAME.

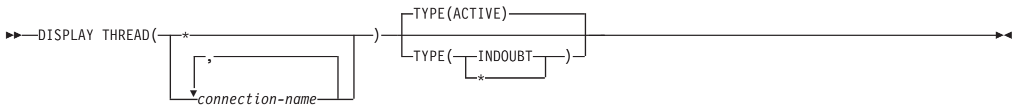
DISPLAY THREAD

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

Use DISPLAY THREAD to display information about active and in-doubt threads. Threads shown as in doubt on one invocation of this command will probably be resolved for subsequent invocations.

Synonym: DIS THD

DISPLAY THREAD



Keyword and parameter descriptions

(connection-name)
List of one or more *connection-names* (of 1 through 8 characters each).
- For batch connections, this name is the batch job name
- For CICS connections, this name is the CICS applid
- For IMS connections, this name is the IMS job name
- For TSO connections, this name is the TSO user ID
- For RRS connections, this is RRSBATCH

Threads are selected from the address spaces associated with these connections only.

(*) Displays threads associated with all connections to MQSeries.

A *connection-name* or * must be used; no default is available.

TYPE The type of thread to display. This parameter is optional.

ACTIVE Display only active threads.

An active thread is one for which a unit of recovery has started but not completed. Resources are held in MQSeries on its behalf.

This is the default if TYPE is omitted.

INDOUBT Display only in-doubt threads.

An in-doubt thread is one that is in the second phase of the two-phase commit operation. Resources are held in MQSeries on its behalf. External intervention is needed to resolve the status of in-doubt threads. You might only have to start the recovery coordinator (CICS, IMS, or RRS), or you might need to do more. They might have been in doubt at the last restart, or they might have become in doubt since the last restart.

***** Display both active and in-doubt threads.

If, during command processing, an active thread becomes in doubt, it might appear twice: once as active and once as in doubt.

For more information about the DISPLAY THREAD command and in-doubt recovery, see the *MQSeries for OS/390 System Management Guide* and messages CSQV401I through CSQV406I in the *MQSeries for OS/390 Messages and Codes* manual.

Note: This command is issued internally by MQSeries when taking a checkpoint, and when the queue manager is starting and stopping, so that a list of threads that are in doubt at the time is written to the OS/390 console log.

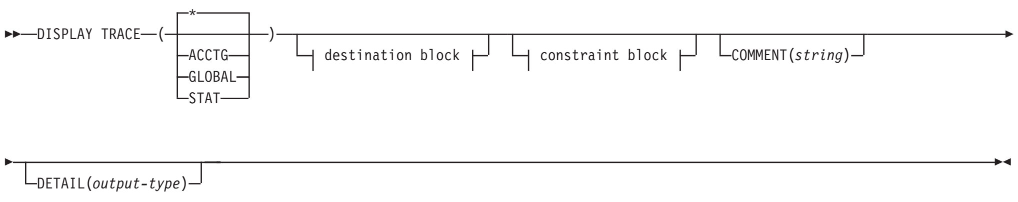
DISPLAY TRACE

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

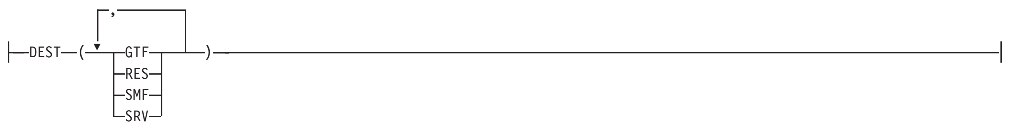
Use DISPLAY TRACE to display a list of active traces.

Synonym: DIS TRACE

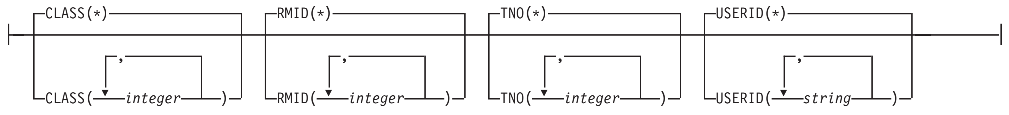
DISPLAY TRACE



Destination block:



Constraint block:



Keyword and parameter descriptions

All parameters are optional. Each option that is used limits the effect of the command to active traces that were started using the same option, either explicitly or by default, with exactly the same parameter values.

*****
Does not limit the list of traces. This is the default. The CLASS option cannot be used with DISPLAY TRACE(*).

Each of the remaining keywords in this section limits the list to traces of the corresponding type:

ACCTG
Accounting data (the synonym is A)

GLOBAL
Service data from the entire MQSeries subsystem (the synonym is G)

STAT
Statistical data (the synonym is S)

COMMENT(*string*)
Specifies a comment. This does not appear in the display, but it might be recorded in trace output.

DETAIL(*output-type*)
Limits the information that a trace displays based on the *output-type* specified.

Possible values for *output-type* are:

1	Display summary trace information: TNO, TYPE, CLASS, and DEST
2	Display qualification trace information: TNO and RMID. Refer to message CSQW127I (in the *MQSeries for OS/390 Messages and Codes* manual) for more information about trace qualification.
1,2	Display both summary and qualification information
*****	Display both summary and qualification information

If no parameter follows DETAIL (either DETAIL() or just DETAIL is used), type 1 trace information is displayed.

Destination block

DEST
Limits the list to traces started for particular destinations. More than one value can be specified, but do not use the same value twice. If no value is specified, the list is not limited.

Possible values and their meanings are:

GTF	The Generalized Trace Facility
RES	A wrap-around table residing in the ECSA (extended common service area)
SMF	The System Management Facility
SRV	A serviceability routine designed for IBM for problem diagnosis

See “START TRACE” on page 241 for a list of allowed destinations for each trace type.

Constraint block

CLASS(*integer*)
Limits the list to traces started for particular classes. See “START TRACE” on page 241 for a list of allowed classes.

The default is CLASS(*), which does not limit the list.

RMID(*integer*)
Limits the list to traces started for particular resource managers. See “START TRACE” on page 241 for a list of allowed resource manager identifiers. Do not use this option with STAT.

The default is RMID(*), which does not limit the list.

Note: Information about RMID 231 might be inaccurate if the trace has been altered using the ALTER TRACE command, or if the channel initiator has been stopped.

TNO(*integer*)
Limits the list to particular traces, identified by their trace number (1 to

32). Up to 8 trace numbers can be used. If more than one number is used, only one value for USERID can be used. The default is TNO(*), which does not limit the list.

USERID(*string*)
Limits the list to traces started for particular user IDs. Up to 8 user IDs can be used. If more than one user ID is used, only one value can be used for TNO. Do not use this option with STAT. The default is USERID(*), which does not limit the list.

DISPLAY USAGE

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

Use DISPLAY USAGE to display information about the current state of a page set.

Synonym: DIS USAGE

DISPLAY USAGE

```
                  ┌─PSID(*)───────┐
►►──DISPLAY USAGE─┴─PSID(integer)─┴──────────────────────────────────────►◄
```

Keyword and parameter descriptions

PSID(*integer*)
The page-set identifier that a storage class maps to. This is optional.

This is a number, in the range 00 through 99. An asterisk (*) on its own specifies all page set identifiers. This is the default. See "DEFINE PSID" on page 128.

DISPLAY USAGE returns three sets of information in the following messages:

CSQI018I
The number of pages currently being used on the page set specified.

CSQI030I
The number of extents at restart, and the number of times the page set has been expanded dynamically since restart.

CSQI024I
The restart RBA (relative byte address) for the subsystem. This value can be used to determine where to truncate logs, if required.

See the *MQSeries for OS/390 Messages and Codes* manual for more information about these messages.

Note: This command is issued internally by MQSeries during shutdown so that the restart RBA is recorded on the OS/390 console log.

PING CHANNEL

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

Use PING CHANNEL to test a channel by sending data as a special message to the remote queue manager, and checking that the data is returned. The data is generated by the local queue manager.

Notes:

1. On OS/390, this is valid only for channels used for distributed queuing without CICS. If you are using CICS for distributed queuing, see Note 2 on page 13.
2. On OS/390, the command fails if the channel initiator has not been started.
3. Where there is both a locally defined channel and an auto-defined cluster-sender channel of the same name, the command applies to the locally defined channel. If there is no locally defined channel but more than one auto-defined cluster-sender channel, the command applies to the channel that was last added to the local queue manager's repository.

This command can be used only for sender (SDR), server (SVR), and cluster-sender (CLUSSDR) channels (including those that have been defined automatically). It is not valid if the channel is running; however, it is valid if the channel is stopped or in retry mode.

Synonym: PING CHL

PING CHANNEL

```
                                  ┌─DATALEN(16)──────┐
►►──PING CHANNEL(channel-name)────┼──────────────────┼──────────────────────────────────►◄
                                  └─DATALEN(integer)─┘
```

Keyword and parameter descriptions

(channel-name)
: The name of the channel to be tested. This is required.

DATALEN(*integer*)
: The length of the data, in the range 16 through 32 768. This is optional.

PING QMGR

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓		✓	✓	✓	✓	✓

Use PING QMGR to test whether the queue manager is responsive to commands.

Note: If commands are issued to the queue manager by sending messages to the command server queue, this command causes a special message to be sent to it, consisting of a command header only, and checking that a positive reply is returned.

Synonym: PING QMGR

PING QMGR

```
►►──PING QMGR──────────────────────────────────────────────────────────────►◄
```

RECOVER BSDS

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

Use RECOVER BSDS to reestablish a dual bootstrap data set (BSDS) after one has been disabled by a data set error.

Note: Command processing consists of allocating a data set with the same name as the one that encountered the error and copying onto the new data set the contents of the BSDS that does not have an error.

Synonym: REC BSDS

RECOVER BSDS

```
►►──RECOVER BSDS──────────────────────────────────────────────────────────►◄
```

REFRESH CLUSTER

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓	✓	✓		✓	✓

Use REFRESH CLUSTER to discard all locally held cluster information (including any autodefined channels that are in doubt), and force it to be rebuilt. This enables you to perform a "cold-start" on the cluster.

Notes:

1. On UNIX systems, the command is valid only on AIX, HP-UX, and Sun Solaris.
2. On OS/390, the command fails if the channel initiator has not been started.

Synonym: REF CLUSTER

RESUME QMGR

```
►►──REFRESH CLUSTER(clustername)──────────────────────────────────────────────►◄
```

Keyword and parameter descriptions

(clustername)
The name of the cluster to be refreshed. This is required.

REFRESH SECURITY

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

Use REFRESH SECURITY to cause a security refresh to be carried out.

Synonym: REF SEC

REFRESH SECURITY

```
►►──REFRESH SECURITY──(──┬─*───────┬──)──────────────────────────────────────────►◄
                         ├─MQADMIN─┤
                         ├─MQNLIST─┤
                         ├─MQPROC──┤
                         └─MQQUEUE─┘
```

Keyword and parameter descriptions

This command causes MQSeries to refresh in-storage ESM (external security manager, for example RACF) profiles. The in-storage profiles for the resources being requested are deleted. New entries are created when security checks for them are performed, and are validated when the user next requests access.

You must specify the resource class for which the security refresh is to be performed. The classes are:

*****
All resource classes

MQADMIN
Administration type resources

MQNLIST
Namelist resources

MQPROC
Process resources

MQQUEUE
Queue resources

Note: If, when refreshing this class, it is determined that a security switch relating to one of the other classes has been changed, a refresh for that class also takes place.

REBUILD SECURITY is another synonym for REFRESH SECURITY.

RESET CHANNEL

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

Use RESET CHANNEL to reset the message sequence number for an MQSeries channel with, optionally, a specified sequence number to be used the next time that the channel is started.

Notes:

1. On OS/390, this is valid only for channels used for distributed queuing without CICS. If you are using CICS for distributed queuing, see Note 2 on page 13.
2. This command can be issued to a channel of any type except SVRCONN and CLNTCONN channels, (including those that have been defined automatically). However, if it is issued to a sender, server or cluster-sender channel, then in addition to resetting the value at the end at which the command is issued, the value at the other (receiver, requester, or cluster-receiver) end is also reset to the same value the next time this channel is initiated (and resynchronized if necessary).
3. If the command is issued to a receiver, requester, or cluster-requester channel, the value at the other end is *not* reset as well; this must be done separately if necessary.
4. Where there is both a locally defined channel and an auto-defined cluster-sender channel of the same name, the command applies to the locally defined channel. If there is no locally defined channel but more than one auto-defined cluster-sender channel, the command applies to the channel that was last added to the local queue manager's repository.

Synonym: RESET CHL

RESET CHANNEL

```
                                   ┌─SEQNUM(1)───────┐
►►──RESET CHANNEL(channel-name)───┼─────────────────┼──────────────────────────────────────►◄
                                   └─SEQNUM(integer)─┘
```

Keyword and parameter descriptions

(channel-name)
: The name of the channel to be reset. This is required.

SEQNUM(*integer*)
: The new message sequence number, which must be greater than or equal to 1, and less than or equal to 999 999 999. This is optional.

RESET CLUSTER

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓	✓	✓		✓	✓

Use RESET CLUSTER to perform special operations on clusters.

Notes:

1. On UNIX systems, the command is valid only on AIX, HP-UX, and Sun Solaris.
2. On OS/390, the command fails if the channel initiator has not been started.

Synonym: None

RESUME QMGR

```
►►──RESET CLUSTER(clustername)──ACTION(FORCEREMOVE)──QMNAME(qmname)──────────────────────────►◄
```

Keyword and parameter descriptions

(clustername)
The name of the cluster to be reset. This is required.

ACTION(FORCEREMOVE)
Requests that the queue manager is forcibly removed from the cluster. This might be needed to ensure proper clean up after a queue manager has been deleted.

This action can be requested only by a repository queue manager.

QMNAME(*qmname***)**
The name of the queue manager to be forcibly removed.

RESET TPIPE

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

Use RESET TPIPE to reset the recoverable sequence numbers for an IMS Tpipe used by the MQSeries-IMS bridge.

Notes:

1. This command is used in response to the resynchronization error reported in message CSQ2020E, and initiates resynchronization of the Tpipe with IMS.
2. The command fails if the queue manager is not connected to the specified XCF member.
3. The command fails if the queue manager is connected to the specified XCF member, but the Tpipe is open.
4. RESET TPIPE cannot be issued from the CSQINP1 and CSQINP2 initialization data sets.

Synonym: There is no synonym for this command.

RESET TPIPE

```
►►──RESET TPIPE(tpipe-name)──XCFMNAME(mname)──┬─────────────────────────┬──┬────────────────────────┬──────────────►
                                              └─ACTION(─┬─COMMIT──┬─)─┘  └─SENDSEQ(X'integer') ─┘
                                                        └─BACKOUT─┘

►──┬──────────────────────┬──┬──────────────────┬──────────────────────────────────────────────────────────────────►◄
   └─RCVSEQ(X'integer') ─┘  └─XCFGNAME(gname)─┘
```

Keyword and parameter descriptions

(*tpipe-name***)**
: The name of the Tpipe to be reset. This is required.

XCFMNAME(*mname***)**
: The name of the XCF member within the group specified by XCFGNAME to which the Tpipe belongs. This is 1 through 16 characters long, and is required.

ACTION
: Specifies whether to commit or back out any unit of recovery associated with this Tpipe. This is required if there is such a unit of recovery reported in message CSQ2020E; otherwise it is ignored.

  COMMIT
  : The messages from MQSeries are confirmed as having already transferred to IMS; that is, they are deleted from the MQSeries-IMS bridge queue.

  BACKOUT
  : The messages from MQSeries are backed out; that is, they are returned to the MQSeries-IMS bridge queue.

SENDSEQ(*integer***)**
: The new recoverable sequence number to be set in the Tpipe for messages

sent by MQSeries and to be set as the partner’s receive sequence number. It must be hexadecimal and can be up to 8 digits long. It is optional; if omitted, the sequence number is not changed but the partner’s receive sequence is set to the MQSeries send sequence number.

RCVSEQ(*integer*)
The new recoverable sequence number to be set in the Tpipe for messages received by MQSeries and to be set as the partner’s send sequence number. It must be hexadecimal and can be up to 8 digits long. It is optional; if omitted, the sequence number is not changed but the partner’s send sequence is set to the MQSeries receive sequence number.

XCFGNAME(*gname*)
The name of the XCF group to which the Tpipe belongs. This is 1 through 8 characters long. It is optional; if omitted, the group name used is that specified in the OTMACON system parameter.

RESOLVE CHANNEL

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

Use RESOLVE CHANNEL to request a channel to commit or back out in-doubt messages.

Notes:

1. On OS/390, this is valid only for channels used for distributed queuing without CICS. If you are using CICS for distributed queuing, see Note 2 on page 13.
2. On OS/390, the command fails if the channel initiator has not been started.
3. This command can be used only for sender (SDR), server (SVR), and cluster-sender (CLUSSDR) channels (including those that have been defined automatically).
4. Where there is both a locally defined channel and an auto-defined cluster-sender channel of the same name, the command applies to the locally defined channel. If there is no locally defined channel but more than one auto-defined cluster-sender channel, the command applies to the channel that was last added to the local queue manager's repository.

Synonym: RESOLVE CHL (RES CHL on OS/390)

RESOLVE CHANNEL

```
►►──RESOLVE CHANNEL(channel-name)──ACTION(──┬─COMMIT──┬──)──────────────────────────────────────────────────►◄
                                            └─BACKOUT─┘
```

Keyword and parameter descriptions

(channel-name)
: The name of the channel for which in-doubt messages are to be resolved. This is required.

ACTION
: Specifies whether to commit or back out the in-doubt messages (this is required):

COMMIT	The messages are committed, that is, they are deleted from the transmission queue
BACKOUT	The messages are backed out, that is, they are restored to the transmission queue

Usage notes

This command is used when the other end of a link fails during the confirmation period, and for some reason it is not possible to reestablish the connection. In this situation the sending end remains in doubt, as to whether or not the messages were received. Any outstanding units of work need to be resolved by being backed out or committed.

Take care when using this command. If the resolution specified is not the same as the resolution at the receiving end, messages can be lost or duplicated.

RESOLVE INDOUBT

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

Use RESOLVE INDOUBT to resolve threads left in doubt because MQSeries or a transaction manager could not resolve them automatically.

Note: This command does not apply to units of recovery associated with batch or TSO applications, unless you are using the RRS adapter.

Synonym: RES IND

RESOLVE INDOUBT

```
►►──RESOLVE INDOUBT(connection-name)──ACTION(─┬─COMMIT──┬─)──NID(─┬─*──────────────────┬─)──────────────────►◄
                                              └─BACKOUT─┘         │   ┌─,──────────┐   │
                                                                  │   ▼            │   │
                                                                  └───network-id───┴───┘
```

Keyword and parameter descriptions

(connection-name)
: 1 through 8 character connection name.
- For a CICS connection it is the CICS applid.
- For an IMS adaptor connection, it is the IMS control region job name.
- For an IMS bridge connection, it is the MQSeries subsystem name.
- For an RRS connection, it is RRSBATCH.

ACTION
: Specifies whether to commit or back out the in-doubt threads:

COMMIT
: Commits the threads

BACKOUT
: Backs out the threads

NID Network identifier. Specifies the thread or threads to be resolved.

(*network-id***)**
: This is as returned by the DISPLAY THREAD command, and is of the form *net-node.net-urid*, where:
- *net-node* identifies the originator of the thread, except for RRSBATCH where it is omitted.
- *net-urid* is the hexadecimal number assigned to the unit of recovery by the originating system for the specific thread to be resolved.

When *net-node* is present there must be a period (.) between it and *net-urid*.

(*) Resolves all threads associated with the connection.

Examples:

```
RESOLVE INDOUBT(CICSA) ACTION(COMMIT) NID(CICSA.ABCDEF0123456789)
RESOLVE INDOUBT(CICSA) ACTION(BACKOUT) NID(*)
```

RESUME QMGR

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓	✓	✓		✓	✓

Use RESUME QMGR to inform other queue mangers in a cluster that the local queue manager is available again for processing and can be sent messages. It reverses the action of the SUSPEND QMGR command.

Notes:

1. On UNIX systems, the command is valid only on AIX, HP-UX, and Sun Solaris.
2. On OS/390, the command fails if the channel initiator has not been started.

Synonym: None

RESUME QMGR

```
►►──RESUME QMGR──┬─CLUSTER(clustername)─┬──────────────────────────────────────────────►◄
                 └─CLUSNL(nlname)───────┘
```

Keyword and parameter descriptions

CLUSTER*(clustername)*
: The name of the cluster to resume availability for.

CLUSNL*(nlname)*
: The name of the namelist specifying a list of clusters to resume availability for.

RVERIFY SECURITY

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

Use RVERIFY SECURITY to set a reverification flag for all specified users. The user is reverified the next time that security is checked for that user.

Synonym: REV SEC

RVERIFY SECURITY

```
                         ┌─,──────────┐
►►──RVERIFY SECURITY──(──▼──userid────┴──)──────────────────────────────────────►◄
```

Keyword and parameter descriptions

userid You must specify one or more user IDs. Each user ID specified is signed off and signed back on again the next time that a request is issued on behalf of that user that requires security checking.

Note: REVERIFY SECURITY is another synonym for RVERIFY SECURITY.

START CHANNEL

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

Use START CHANNEL to start a channel.

Notes:

1. On OS/390, this is valid only for channels used for distributed queuing without CICS. If you are using CICS for distributed queuing, see Note 2 on page 13.
2. On OS/390, the command fails if the channel initiator has not been started.
3. This command can be issued to a channel of any type except CLNTCONN channels (including those that have been defined automatically). If, however, it is issued to a receiver (RCVR), server-connection (SVRCONN) or cluster-receiver (CLUSRCVR) channel, the only action is to enable the channel, not to start it.
4. Where there is both a locally defined channel and an auto-defined cluster-sender channel of the same name, the command applies to the locally defined channel. If there is no locally defined channel but more than one auto-defined cluster-sender channel, the command applies to the channel that was last added to the local queue manager's repository.

Synonym: STA CHL

START CHANNEL

```
►►──START CHANNEL(channel-name)──────────────────────────────────────────────►◄
```

Keyword and parameter descriptions

(channel-name)
: The name of the channel definition to be started. This is required. The name must be that of an existing channel defined on this queue manager.

START CHINIT

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓		✓	✓

Use START CHINIT to start a channel initiator.

Note: On OS/390, this is valid only for channels used for distributed queuing without CICS.

Synonym: STA CHI

MQSeries for OS/390

START CHINIT

```
                                                ┌─PARM(CSQXPARM)──────┐
►►──START CHINIT──┬──────────────────────────┬──┼─────────────────────┼──────────────────────────────►◄
                  └─ENVPARM(jcl-substitution)─┘  └─PARM(member-name)───┘
```

MQSeries on other platforms

START CHINIT

```
►►──START CHINIT──┬──────────────────┬───────────────────────────────────────────────────────────────►◄
                  └─INITQ(string)────┘
```

Keyword and parameter descriptions

ENVPARM(*jcl-substitution*)
: The parameters and values to be substituted in the JCL procedure (xxxxCHIN, where xxxx is the queue manager name) that is used to start the channel initiator address space.

  jcl-substitution
  : One or more character strings of the form `keyword=value` enclosed in single quotation marks. If you use more than one character string, separate the strings by commas and enclose the entire list in single quotation marks, for example ENVPARM('HLQ=CSQ,VER=120').

    This parameter is valid only on OS/390.

INITQ(*string*)
: The name of the initiation queue for the channel initiation process. This is the initiation queue that is specified in the definition of the transmission queue.

  This must not be specified on OS/390 (the initiation queue on OS/390 is always SYSTEM.CHANNEL.INITQ). On AIX, HP-UX, OS/2 Warp, OS/400, Sun Solaris, and Windows NT, you can specify which initiation queue to use; if you do not specify this, SYSTEM.CHANNEL.INITQ is used. On other platforms it must be specified.

PARM(*member-name*)
: The load module that contains the channel initiator initialization parameters. *member-name* is the name of a load module provided by the installation. The default is CSQXPARM, which is provided by MQSeries.

  This keyword is valid only on OS/390.

START CMDSERV

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

Use START CMDSERV to initialize the command server.

Synonym: STA CS

START CMDSERV

```
►►──START CMDSERV──────────────────────────────────────────────────────────►◄
```

Usage notes

1. START CMDSERV starts the command server and allows it to process commands in the system-command input queue (SYSTEM.COMMAND.INPUT).
2. If this command is issued through the initialization files or through the operator console before work is released to the queue manager (that is, before the command server is started automatically), it overrides any earlier STOP CMDSERV command and allows the queue manager to start the command server automatically by putting it into an ENABLED state.
3. If this command is issued through the operator console while the command server is in a STOPPED or DISABLED state, it starts the command server and allows it to process commands on the system-command input queue immediately.
4. If the command server is in a RUNNING or WAITING state (including the case when the command is issued through the command server itself), or if the command server has been stopped automatically because the queue manager is closing down, no action is taken, the command server remains in its current state, and an error message is returned to the command originator.

START LISTENER

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓	✓	✓		✓	✓

Use START LISTENER to start a channel listener.

Notes:

1. On UNIX systems, the command is valid only for AIX, HP-UX, and Sun Solaris.
2. On OS/390, it is valid only for channels used for distributed queuing without CICS, and fails if the channel initiator has not been started.
3. On OS/400, OS/2 Warp, UNIX systems, and Windows NT, it is valid only for channels for which the transmission protocol (TRPTYPE) is TCP.

Synonym: STA LSTR

START LISTENER

```
                                                     (1)  (3)                    (1)
                                                ┌PORT(1414)──────────┐   ┌TRPTYPE(TCP)──────┐
►►──START LISTENER──┬──────────────────────────┬─┼────────────────────┼───┼──────────────────┼──────────►◄
                    │               (1)  (2)   │ │             (1)  (3)│   │               (1)│
                    └─LUNAME(string──────────)─┘ └─PORT(port-number)──┘   └─TRPTYPE(LU62)────┘
```

Notes:

1 Valid only on OS/390.

2 Valid only for TRPTYPE(LU62).

3 Valid only for TRPTYPE(TCP).

Keyword and parameter descriptions

LUNAME(*string*)
: The symbolic destination name for the logical unit as specified in the APPC side information data set. (This LU must be the same LU that is specified in the channel initiator parameters to be used for outbound transmissions.)

  This parameter is valid only for channels with a transmission protocol (TRPTYPE) of LU 6.2. A START LISTENER command which specifies TRPTYPE(LU62) must also specify the LUNAME parameter.

  This parameter is supported only on OS/390.

PORT(*port-number*)
: Port number for TCP. This is valid only if the transmission protocol (TRPTYPE) is TCP.

  This parameter is supported only on OS/390.

TRPTYPE
: Transport type to be used. This is optional.

TCP	TCP. This is the default if TRPTYPE is not specified.
LU62	SNA LU 6.2.

This parameter is supported only on OS/390.

START QMGR

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

Use START QMGR to initialize the queue manager. When the operation has been completed, the queue manager is active and available to CICS, IMS, batch, and TSO applications.

Synonym: STA QMGR

START QMGR

```
                                                   ┌─PARM(CSQZPARM)────┐
►►──START QMGR──┬─────────────────────────────┬──┼───────────────────┼─────────────────────────────────►◄
                │                        (1)  │  └─PARM(member-name)─┘
                └─ENVPARM(jcl-substitution)───┘
```

Notes:

1 MSTR is accepted as a synonym for ENVPARM

Keyword and parameter descriptions

These are optional.

ENVPARM(*jcl-substitution***)**
The parameters and values to be substituted in the JCL procedure (xxxxMSTR, where xxxx is the queue manager name) that is used to start the queue manager address space.

jcl-substitution
One or more character strings of the form:

```
keyword=value
```

enclosed in single quotation marks. If you use more than one character string, separate the strings by commas and enclose the entire list in single quotation marks, for example ENVPARM('HLQ=CSQ,VER=210').

MSTR is accepted as a synonym for ENVPARM

PARM(*member-name***)**
The load module that contains the queue manager initialization parameters. *member-name* is the name of a load module provided by the installation.

The default is CSQZPARM, which is provided by MQSeries.

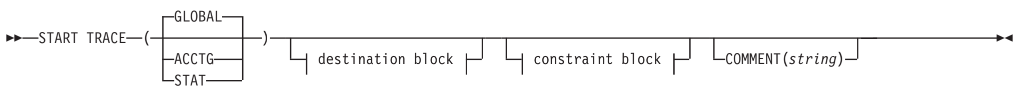
START TRACE

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

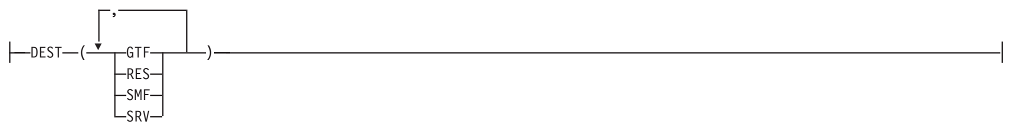
Use START TRACE to start traces. When you issue this command, a trace number is returned in message number CSQW130I. You can use this trace number (TNO) in ALTER TRACE, DISPLAY TRACE, and STOP TRACE commands.

Synonym: STA TRACE

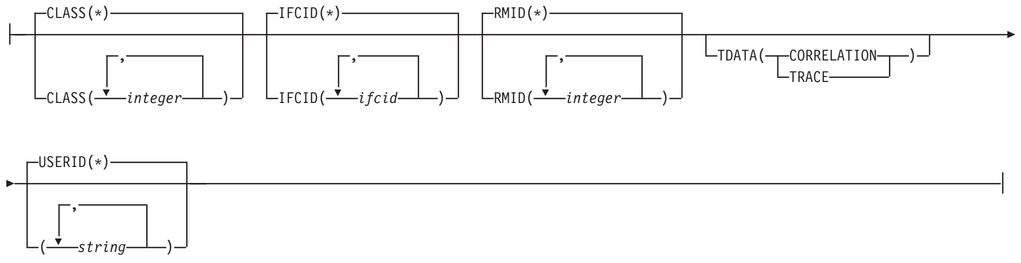
START TRACE



Destination block:



Constraint block:



Keyword and parameter descriptions

If you do not specify a trace type to be started, the default (GLOBAL) trace is started. The types are:

ACCTG

Collects accounting data that can be used to charge your customers for their use of your queue manager. The synonym is A.

Note: Accounting data can be lost if the accounting trace is started or stopped while applications are running. See the *MQSeries for OS/390 System Management Guide* for information about the conditions that must be satisfied for successful collection of accounting data.

GLOBAL
This includes data from the entire queue manager. The synonym is G.

STAT Collects statistical data broadcast by various components of MQSeries, at time intervals that can be chosen during installation. The synonym is S.

COMMENT(*string*)
Specifies a comment that is reproduced in the trace output record (except in the resident trace tables). It can be used to record why the command was issued.

string is any character string. It must be enclosed in single quotation marks if it includes a blank, comma, or special character.

Destination block

DEST
Specifies where the trace output is to be recorded. More than one value can be specified, but do not use the same value twice.

The meaning of each value is as follows:

GTF	The OS/390 Generalized Trace Facility (GTF). If used, the GTF must be started and accepting user (USR) records before the START TRACE command is issued.
RES	A wrap-around table residing in the ECSA, or a data space for RMID 231.
SMF	The System Management Facility (SMF). If used, the SMF must be functioning before the START TRACE command is issued. The SMF record numbers reserved for use by MQSeries are 115 and 116.
SRV	A serviceability routine reserved for IBM use only; not for general use. **Note:** If your IBM support center need you to use this destination for your trace data they will supply you with module CSQWVSER. If you try to use destination SRV without CSQWVSER an error message will be produced at the OS/390 console when you issue the START TRACE command.

Allowed values, and the default value, depend on the type of trace started, as shown in the following table:

Table 4. Destinations allowed for each trace type

Type	**GTF**	**RES**	**SMF**	**SRV**
GLOBAL	Allowed	Default	No	Allowed
STAT	No	No	Default	Allowed
ACCTG	Allowed	No	Default	Allowed

Constraint block

The constraint block places optional constraints on the kinds of data collected by the trace. The allowed constraints depend on the type of trace started, as shown in the following table:

Table 5. Constraints allowed for each trace type

Type	**CLASS**	**IFCID**	**RMID**	**USERID**
GLOBAL	Allowed	Allowed	Allowed	Allowed
STAT	Allowed	No	No	No
ACCTG	Allowed	No	No	No

CLASS

Introduces a list of classes of data gathered. The classes allowed, and their meaning, depend on the type of trace started:

(*) Starts a trace for all classes of data.

(*integer*)

Any number in the class column of the table that follows. You can use more than one of the classes that are allowed for the type of trace started. A range of classes can be specified as m:n (for example, CLASS(01:03)). If you do not specify a class, the default is to start class 1.

Table 6. IFCID descriptions for IFCID trace events and classes

Class	IFCID	Description
		Global trace
01	0000	Reserved for IBM service
02	0018	User parameter error detected in a control block
03	0016	User parameter error detected on entry to MQI
	0017	User parameter error detected on exit from MQI
	0018	User parameter error detected in a control block
04	Various	Reserved for IBM service
		Statistics trace
01	0001	Subsystem statistics
	0002	Queue manager statistics
		Accounting trace
01	0003	The CPU time spent processing MQI calls and a count of MQPUT and MQGET calls

IFCID

Reserved for IBM service.

RMID

Introduces a list of specific resource managers for which trace information is gathered. You cannot use this option for STAT or ACCTG traces.

(*) Starts a trace for all resource managers. This is the default.

(*integer*)

The identifying number of any resource manager in Table 7 on page 244. You can use up to 8 of the allowed resource manager identifiers; do not use the same one twice.

If the list of RMIDs includes 231, the tracing for this resource manager is not started if one of the following is true:
- TRACE(STAT) or TRACE(ACCTG) is specified
- The list of destinations does not include RES
- This list of classes does not include 01 or 04

Also, comments will be truncated to 120 characters.

If tracing for RMID 231 is started, it stops if the channel initiator is stopped.

Table 7. Resource Manager identifiers that are allowed

RMID	Resource manager
1	Initialization procedures
2	Agent services management
3	Recovery management
4	Recovery log management
6	Storage management
7	Subsystem support for allied memories
8	Subsystem support for subsystem interface (SSI) functions
12	System parameter management
16	Instrumentation commands, trace, and dump services
23	General command processing
24	Message generator
26	Instrumentation accounting and statistics
148	Connection manager
199	Functional recovery
200	Security management
201	Data management
211	Lock management
212	Message management
213	Command server
215	Buffer management
231	Channel Initiator
242	MQSeries-IMS bridge

TDATA
Reserved for IBM service.

USERID
Introduces a list of specific user IDs for which trace information is gathered. You cannot use this option for STAT or ACCTG traces.

(*) Starts a trace for all user IDs. This is the default.

(*userid***)**
Names a user ID. You can use up to 8 user IDs; a separate trace is started for each.

STOP CHANNEL

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
✓	✓	✓	✓	✓	✓	✓

Use STOP CHANNEL to stop a channel.

Notes:

1. On OS/390, this is valid only for channels used for distributed queuing without CICS. If you are using CICS for distributed queuing, see Note 2 on page 13.
2. On OS/390, the command fails if the channel initiator has not been started.
3. You need to issue a START CHANNEL command to restart the channel, it will not restart automatically. See the *MQSeries Intercommunication* manual for information about restarting stopped channels.
4. This command can be issued to a channel of any type except CLNTCONN channels (including those that have been defined automatically).
5. Where there is both a locally defined channel and an auto-defined cluster-sender channel of the same name, the command applies to the locally defined channel. If there is no locally defined channel but more than one auto-defined cluster-sender channel, the command applies to the channel that was last added to the local queue manager's repository.

Synonym: STOP CHL

STOP CHANNEL

```
                                   ┌─MODE(QUIESCE)─┐
►►──STOP CHANNEL(channel-name)─────┴─MODE(FORCE)───┴──────────────────────────────►◄
```

Keyword and parameter descriptions

(channel-name)
: The name of the channel to be stopped. This is required.

MODE
: Specifies whether the current batch is allowed to finish in a controlled manner. This parameter is optional.

QUIESCE
: Allows the current batch to finish processing, except on OS/390 where the channel stops after the current message has finished processing. (The batch is then ended and no more messages are sent, even if there are messages waiting on the transmission queue.)

For a receiving channel, if there is no batch in progress, the channel waits for either:
- The next batch to start
- The next heartbeat (if heartbeats are being used)

before it stops.

For server-connection channels, allows the current connection to end.

This is the default.

FORCE	Terminates transmission of any current batch. This is likely to result in in-doubt situations. For server-connection channels, breaks the current connection, returning MQRC_CONNECTION_BROKEN.

STOP CHINIT

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

Use STOP CHINIT to stop a channel initiator.

Note: This command is valid only for channels used for distributed queuing without CICS.

Synonym: STOP CHI

STOP CHINIT

```
►►──STOP CHINIT──────────────────────────────────────────────────────────────►◄
```

Usage notes

1. When you issue the STOP CHINIT command, MQSeries stops any channels that are running in the following way:
   - Sender and server channels are stopped using STOP CHANNEL MODE(QUIESCE)
   - All other channels are stopped using STOP CHANNEL MODE(FORCE)

   See “STOP CHANNEL” on page 245 for information about what this involves.
2. You might receive communications-error messages as a result of issuing the STOP CHINIT command.

STOP CMDSERV

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

Use STOP CMDSERV to stop the command server.

Synonym: STOP CS

STOP CMDSERV

```
►►──STOP CMDSERV──────────────────────────────────────────────────────────────►◄
```

Usage notes

1. STOP CMDSERV stops the command server from processing commands in the system-command input queue (SYSTEM.COMMAND.INPUT).
2. If this command is issued through the initialization files or through the operator console before work is released to the queue manager (that is, before the command server is started automatically), it prevents the command server from starting automatically and puts it into a DISABLED state. It overrides an earlier START CMDSERV command.
3. If this command is issued through the operator console or the command server while the command server is in a RUNNING state, it stops the command server when it has finished processing its current command. When this happens, the command server enters the STOPPED state.
4. If this command is issued through the operator console while the command server is in a WAITING state, it stops the command server immediately. When this happens, the command server enters the STOPPED state.
5. If this command is issued while the command server is in a DISABLED or STOPPED state, no action is taken, the command server remains in its current state, and an error message is returned to the command originator.

STOP LISTENER

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

Use STOP LISTENER to stop a channel listener.

Notes:

1. This is valid only for channels used for distributed queuing without CICS.
2. The command fails if the channel initiator has not been started.

Synonym: STOP LSTR

STOP LISTENER

```
                 ┌─TRPTYPE(TCP)──┐
►►──STOP LISTENER─┤               ├──────────────────────────────────────────►◄
                 └─TRPTYPE(LU62)─┘
```

Keyword and parameter descriptions

TRPTYPE
Transmission protocol used. This is optional.

TCP	TCP. This is the default if TRPTYPE is not specified.
LU62	SNA LU 6.2.

On OS/390, only one listener for each protocol is allowed for a given queue manager, and therefore no further parameters are needed to identify which listener is to be stopped.

The listener stops in quiesce mode (it disregards any further requests).

STOP QMGR

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

Use STOP QMGR to stop the queue manager.

Synonym: There is no synonym for this command.

STOP QMGR

```
            ┌─MODE(QUIESCE)─┐
►►──STOP QMGR──┼───────────────┼──────────────────────────────────────────►◄
            ├─MODE(FORCE)───┤
            └─MODE(RESTART)─┘
```

Keyword and parameter descriptions

The parameters are optional.

MODE
Specifies whether programs currently being executed are allowed to finish.

QUIESCE
Allows programs currently being executed to finish processing. No new program is allowed to start. This is the default.

This option means that all connections to other address spaces must terminate before the queue manager stops. The system operator can determine whether any connections remain by using the DISPLAY THREAD command, and can cancel remaining connections using OS/390 commands.

This option deregisters MQSeries from the MVS automatic restart manager (ARM).

FORCE
Terminates programs currently being executed, including utilities. No new program is allowed to start. This option might cause in-doubt situations.

This option might not work if all the active logs are full, and log archiving has not occurred. In this situation it will be necessary to issue the OS/390 CANCEL command to terminate.

This option deregisters MQSeries from the MVS automatic restart manager (ARM).

RESTART
Terminates programs currently being executed, including utilities. No new program is allowed to start. This option might cause in-doubt situations.

This option might not work if all the active logs are full, and log archiving has not occurred. In this situation it will be necessary to issue the MVS CANCEL command to terminate.

This option does not deregister MQSeries from ARM, so the queue manager is eligible for immediate automatic restart.

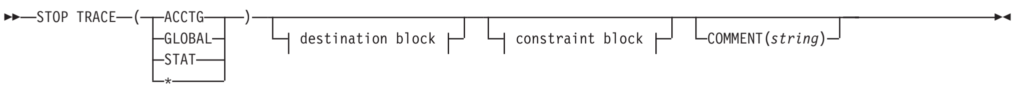
STOP TRACE

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓					

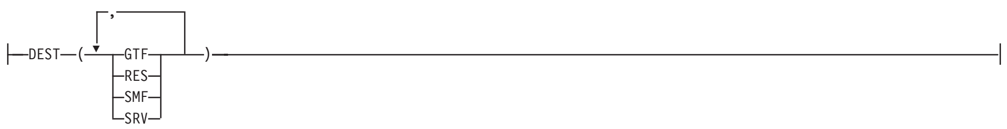
Use STOP TRACE to stop tracing.

Synonym: There is no synonym for this command.

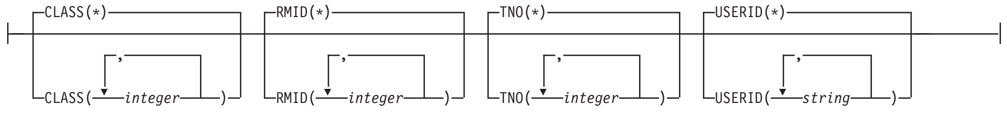
STOP TRACE



Destination block:



Constraint block:



Keyword and parameter descriptions

Each option that you use limits the effect of the command to active traces that were started using the same option, either explicitly or by default, with exactly the same parameter values.

You must specify a trace type or an asterisk. STOP TRACE(*) stops all active traces.

The trace types are:

ACCTG
Accounting data (the synonym is A)

Note: Accounting data can be lost if the accounting trace is started or stopped while applications are running. See the *MQSeries for OS/390 System Management Guide* for information about the conditions that must be satisfied for successful collection of accounting data.

GLOBAL
Service data from the entire MQSeries subsystem (the synonym is G)

STAT Statistical data (the synonym is S)

***** All active traces

For further descriptions of each type, see "START TRACE" on page 241.

COMMENT(*string*)
Specifies a comment that is reproduced in the trace output record (except in the resident trace tables), and can be used to record why the command was issued.

string is any character string. It must be enclosed in single quotation marks if it includes a blank, comma, or special character.

Destination block

DEST
Limits the action of the STOP TRACE to traces started for particular destinations. More than one value can be specified, but do not use the same value twice. If no value is specified, the list is not limited.

Possible values and their meanings are:

GTF	The Generalized Trace Facility
RES	A wrap-around table residing in the ECSA
SMF	The System Management Facility
SRV	A serviceability routine designed for problem diagnosis

See "START TRACE" on page 241 for a list of allowed destinations for each trace type.

Constraint block

CLASS(*integer*)
Limits the action of the STOP TRACE to traces started for particular classes. See the START TRACE command for a list of allowed classes. A range of classes can be specified as m:n (for example, CLASS(01:03)). You cannot specify a class if you did not specify a trace type.

The default is CLASS(*), which does not limit the command.

RMID(*integer*)
Limits the action of the STOP TRACE to traces started for particular resource managers. See the START TRACE command for a list of allowed resource manager identifiers.

Do not use this option with the STAT or ACCTG trace type.

If the list of RMIDs includes 231, the tracing for this resource manager is left unchanged if one of the following is true:
- TRACE(GLOBAL) or TRACE(*) is not specified
- The list of destinations does not include RES
- This list of classes does not include 01 or 04

Also, comments will be truncated to 120 characters.

The default is RMID(*), which does not limit the command.

TNO(*integer*)
Limits the action of the STOP TRACE to particular traces, identified by their trace numbers (1 to 32). Up to 8 trace numbers can be used. If more than one number is used, only one value for USERID can be used.

The default is TNO(*), which does not limit the command.

USERID(*string*)
Limits the action of the STOP TRACE to traces started for particular user ID. Up to 8 user IDs can be used. If more than one user ID is used, only one value can be used for TNO. Do not use this option with STAT.

The default is USERID(*), which does not limit the command.

SUSPEND QMGR

Digital OpenVMS	OS/390	OS/400	OS/2 Warp	Tandem NSK	UNIX systems	Windows NT
	✓	✓	✓		✓	✓

Use SUSPEND QMGR to inform other queue mangers in a cluster that the local queue manager is not available for processing and cannot be sent messages. Its action can be reversed by the RESUME QMGR command.

Notes:

1. On UNIX systems, the command is valid only on AIX, HP-UX, and Sun Solaris.
2. On OS/390, the command fails if the channel initiator has not been started.

Synonym: None

RESUME QMGR

```
                                             ┌─MODE(QUIESCE)─┐
►►──SUSPEND QMGR──┬─CLUSTER(clustername)─┬───┴─MODE(FORCE)───┴──────────────────────────►◄
                  └─CLUSNL(nlname)───────┘
```

Keyword and parameter descriptions

CLUSTER*(clustername)*
: The name of the cluster to suspend availability for.

CLUSNL*(nlname)*
: The name of the namelist specifying a list of clusters to suspend availability for.

MODE
: Specifies how the suspension of availability is to take effect:

QUIESCE	Other queue managers in the cluster are advised that the local queue manager should not be sent further messages.
FORCE	All inbound channels to other queue managers in the cluster are stopped forcibly. This occurs only if the queue manager has also been forcibly suspended from all other clusters to which the channel belongs.

Appendix A. Command summary

The following tables show how the various command formats in MQSeries relate to each other. The command formats available are:

- Programmable command format (PCF) commands

  PCF commands are not supported on OS/390 or VSE/ESA.
- MQSeries commands (MQSC)

  MQSC are not supported on VSE/ESA.
- CL commands

  CL commands are supported on OS/400 only.
- Control commands

  Control commands are supported on Compaq (DIGITAL) OpenVMS, OS/2 Warp, Tandem NonStop Kernel, UNIX systems, and Windows NT.

In the following tables, an empty cell indicates that there is no equivalent command in the specified format.

Table 8. Commands for queue manager administration

Operation	**PCF**	**MQSC**	**OS/400 CL**	**Control command**
Change Queue Manager attributes	Change Queue Manager	ALTER QMGR DEFINE MAXSMSGS (1)	CHGMQM	
Connect a Queue Manager			CCTMQM	
Create a Queue Manager			CRTMQM	crtmqm
Delete a Queue Manager			DLTMQM	dltmqm
Disconnect from a Queue Manager			DSCMQM	
Display Queue Manager attributes	Inquire Queue Manager	DISPLAY QMGR DISPLAY MAXSMSGS (1)	DSPMQM	
Install MQSeries for Tandem NonStop Kernel				instmqm (2)
Ping a Queue Manager	Ping Queue Manager	PING QMGR (3)		
Start a Queue Manager		START QMGR (1)	STRMQM	strmqm
Stop a Queue Manager		STOP QMGR (1)	ENDMQM	endmqm
Upgrade MQSeries for Tandem NonStop Kernel				upgmqm (2)
Work with a Queue Manager			WRKMQM	
Notes: 1. Applies on OS/390 only 2. Applies on Tandem NSK only 3. Does not apply on OS/390				

Table 9. Commands for queue administration

Operation	**PCF**	**MQSC**	**OS/400 CL**	**Control command**
Alter queue file attributes				altmqfls (1)

Table 9. Commands for queue administration (continued)

Operation	PCF	MQSC	OS/400 CL	Control command
Change queue attributes	Change Queue	ALTER QALIAS ALTER QLOCAL ALTER QMODEL ALTER QREMOTE	CHGMQMQ	
Clear a queue	Clear Queue	CLEAR QLOCAL (2) The following sequence: DELETE QLOCAL(x), DEFINE QLOCAL(x) or the following sequence: DEFINE QLOCAL(y) LIKE(x), DELETE QLOCAL(x), DEFINE QLOCAL(x) LIKE(y), DELETE QLOCAL(y)	CLRMQMQ	
Copy a queue definition	Copy Queue	DEFINE QALIAS(x) LIKE(y) DEFINE QLOCAL(x) LIKE(y) DEFINE QMODEL(x) LIKE(y) DEFINE QREMOTE(x) LIKE(y)	CPYMQMQ	
Create a queue	Create Queue	DEFINE QALIAS DEFINE QLOCAL DEFINE QMODEL DEFINE QREMOTE	CRTMQMQ	
Delete a queue	Delete Queue	DELETE QALIAS DELETE QLOCAL DELETE QMODEL DELETE QREMOTE	DLTMQMQ	
Display queue attributes	Inquire Queue	DISPLAY QUEUE DISPLAY QALIAS (3) DISPLAY QCLUSTER (3) DISPLAY QLOCAL (3) DISPLAY QMODEL (3) DISPLAY QREMOTE (3)	DSPMQMQ	
Display queue names	Inquire Queue Names	DISPLAY QUEUE	WRKMQMQ	
Reset queue statistics	Reset Queue Statistics			
Work with a queue			WRKMQMQ	
Work with messages			WRKMQMMSG	

Notes:

| 1. Applies on Tandem NSK only
2. Does not apply on OS/390
| 3. Applies on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT only

Table 10. Commands for process definition administration. (See note 1.)

Operation	PCF	MQSC	OS/400 CL
Change process attributes	Change Process	ALTER PROCESS	CHGMQMPRC
Copy a process	Copy Process	DEFINE PROCESS(x) LIKE(y)	CPYMQMPRC
Create a process	Create Process	DEFINE PROCESS	CRTMQMPRC
Delete a process	Delete Process	DELETE PROCESS	DLTMQMPRC
Display process attributes	Inquire Process	DISPLAY PROCESS	DSPMQMPRC
Display process names	Inquire Process Names	DISPLAY PROCESS	WRKMQMPRC

Table 10. Commands for process definition administration (continued). (See note 1.)

Operation	PCF	MQSC	OS/400 CL
Work with a process			WRKMQMPRC
Note: 1. There are no control-command equivalents of these commands.			

Table 11. Commands for namelist administration. (See notes 1 and 2.)

Operation	PCF (3)	MQSC	OS/400 CL
Change a namelist	Change Namelist	ALTER NAMELIST	CHGMQMNL
Copy a namelist	Copy Namelist	DEFINE NAMELIST(x) LIKE(y)	CPYMQMNL
Define a namelist	Create Namelist	DEFINE NAMELIST	CRTMQMNL
Delete a namelist	Delete Namelist	DELETE NAMELIST	DLTMQMNL
Display a namelist	Inquire Namelist	DISPLAY NAMELIST	DSPMQMNL
Display namelist names	Inquire Namelist Names	DISPLAY NAMELIST	WRKMQMNL
Work with a namelist			WRKMQMNL
Notes: 1. Namelist functions are supported on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT only. 2. There are no control-command equivalents of these commands. 3. Does not apply on OS/390.			

Table 12. Commands for channel administration

Operation	PCF	MQSC (1)	OS/400 CL	Control command
Change channel attributes	Change Channel	ALTER CHANNEL	CHGMQMCHL	
Convert client channel definitions				cnvclchl (2)
Copy channel attributes	Copy Channel	DEFINE CHANNEL (x) LIKE (y)	CPYMQMCHL	
Create a channel	Create Channel	DEFINE CHANNEL	CRTMQMCHL	
Delete a channel	Delete Channel	DELETE CHANNEL	DLTMQMCHL	
Display a channel	Inquire Channel	DISPLAY CHANNEL	DSPMQMCHL	
Display channel names	Inquire Channel Names	DISPLAY CHANNEL	WRKMQMCHL	
Display channel status	Inquire Channel Status	DISPLAY CHSTATUS		
Display distributed queuing		DISPLAY DQM (3)		
Ping a channel	Ping Channel	PING CHANNEL	PNGMQMCHL	
Reset a channel	Reset Channel	RESET CHANNEL	RSTMQMCHL	
Resolve a channel	Resolve Channel	RESOLVE CHANNEL	RSVMQMCHL	
Start a channel	Start Channel	START CHANNEL	STRMQMCHL	runmqchl
Start a channel initiator (4)	Start Channel Initiator	START CHINIT (5)	STRMQMCHLI	runmqchi
Start a channel listener (4)	Start Channel Listener (6)	START LISTENER (7)	STRMQMLSR	runmqlsr (8)
Stop a channel	Stop Channel	STOP CHANNEL	ENDMQMCHL	
Stop a channel initiator (4)		STOP CHINIT (3)		
Stop a channel listener (4)		STOP LISTENER (3)	ENDMQMLSR	endmqlsr (9)
Work with channel status			WRKMQMCHST	

Table 12. Commands for channel administration (continued)

Operation	PCF	MQSC (1)	OS/400 CL	Control command

Notes:
1. Does not apply on OS/390 if you are using CICS for distributed queuing.
2. Applies on Tandem NSK only.
3. Applies on OS/390 only.
4. In MQSeries for Tandem NonStop Kernel, the preferred method of starting and stopping TCP/IP listeners and channel initiators is using PATHWAY (TS/MP), as described in the *MQSeries for Tandem NonStop Kernel System Management Guide*.
5. Does not apply on Tandem NSK.
6. Applies on OS/2 Warp, OS/400, and Windows NT only.
7. Applies on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT only.
8. Does not apply on AT&T GIS UNIX, DIGITAL UNIX, or SINIX and DC/OSx.
9. Applies on AIX, HP-UX, OS/2 Warp, Sun Solaris, and Windows NT only.

Table 13. Commands for cluster administration. (See notes 1 and 2.)

Operation	PCF (3)	MQSC	OS/400 CL
Display cluster queue manager	Inquire Cluster Queue Manager	DISPLAY CLUSQMGR	
Refresh cluster information	Refresh Cluster	REFRESH CLUSTER	RFRMQMCL
Reset cluster	Reset Cluster	RESET CLUSTER	RSTMQMCL
Resume cluster processing	Resume Queue Manager Cluster	RESUME QMGR	RSMMQMCLQM
Suspend cluster processing	Suspend Queue Manager Cluster	SUSPEND QMGR	SPDMQMCLQM
Work with a cluster			WRKMQMCL

Notes:
1. Queue Manager Cluster functions are supported on AIX, HP-UX, OS/2 Warp, OS/390, OS/400, Sun Solaris, and Windows NT only.
2. There are no control-command equivalents of these commands.
3. Does not apply on OS/390.

Table 14. Commands for security administration. (See note 1.)

Operation	MQSC (2)	OS/400 CL	Control command
Alter security options	ALTER SECURITY		
Display mapping of MQSeries principal to Tandem NSK user ID			dspmqusr (3)
Display object authority		DSPMQMAUT	dspmqaut
Display security settings	DISPLAY SECURITY		dspmqaut
Grant object authority		GRTMQMAUT	setmqaut
Map MQSeries principal to Tandem NSK user ID or group			altmqusr (3)
Refresh security	REFRESH SECURITY		
Revoke object authority		RVKMQMAUT	setmqaut
Set a reverification flag	RVERIFY SECURITY		

Notes:
1. There are no PCF equivalents of these commands.
2. Applies on OS/390 only.
3. Applies on Tandem NSK only.

Table 15. Miscellaneous commands. (See note 1.)

Operation	MQSC (2)	OS/400 CL	Control command
Alter a storage class	ALTER STGCLASS		
Alter trace parameters	ALTER TRACE		
Archive a log	ARCHIVE LOG		
Convert V1.5.1 messages to V2.2.0.1 format			cnvmsgs (3)
Convert V1.5.1 queue and channel definitions to V2.2.0.1 format			cnv1520 (3)
Create data conversion code		CVTMQMDTA	crtmqcvx
Define a buffer pool	DEFINE BUFFPOOL		
Define a page set	DEFINE PSID		
Define a storage class	DEFINE STGCLASS		
Delete a storage class	DELETE STGCLASS		
Display the command server	DISPLAY CMDSERV	DSPMQMCSVR	dspmqcsv (4)
Display MQSeries files			dspmqfls
Display MQSeries formatted trace output			dspmqtrc (5)
Display MQSeries transactions		WRKMQMTRN	dspmqtrn (6)
Display an object name		DSPMQMOBJN	
Display page set information	DISPLAY USAGE		
Display storage class information	DISPLAY STGCLASS		
Display a thread	DISPLAY THREAD		
Display trace activity	DISPLAY TRACE		
Dump contents of MQSeries log			dmpmqlog (7)
Perform RDF housekeeping			cleanrdf (3)
Record an object image		RCDMQMIMG	rcdmqimg (8)
Recover a bootstrap data set	RECOVER BSDS		
Recreate an object		RCRMQMOBJ	rcrmqobj (8)
Reset an IMS transaction pipe	RESET TPIPE		
Resolve in-doubt threads	RESOLVE INDOUBT		
Resolve MQSeries transactions		RSVMQMTRN	rsvmqtrn (6)
Run dead-letter queue handler		STRMQMDLQ	runmqdlq
Run MQSeries commands		STRMQMMQSC	runmqsc
Start client trigger monitor			runmqtmc (9)
Start the command server	START CMDSERV	STRMQMCSVR	strmqcsv (4)
Start a trace	START TRACE	TRCMQM	strmqtrc (10)
Start trigger monitor		STRMQMTRM	runmqtrm
Stop the command server	STOP CMDSERV	ENDMQMCSVR	endmqcsv (4)
Stop a trace	STOP TRACE	TRCMQM	endmqtrc (10)

Command summary

Table 15. Miscellaneous commands (continued). (See note 1.)

Operation	MQSC (2)	OS/400 CL	Control command

Notes:

1. There are no PCF equivalents of these commands.
2. Applies on OS/390 only.
3. Applies on Tandem NSK only.
4. In MQSeries for Tandem NonStop Kernel, as an alternative to the control commands **dspmqcsv**,**strmqcsv**, and**endmqcsv**, you can use PATHCOM commands to stop, start, and monitor the command server.
5. Does not apply on AIX, OS/2 Warp, or Windows NT.
6. Does not apply on DIGITAL UNIX or Tandem NSK.
7. Applies on AIX, HP-UX, OS/2 Warp, Sun Solaris, and Windows NT.
8. Does not apply on Tandem NSK.
9. Applies on AIX, Compaq (DIGITAL) OpenVMS, and OS/2 Warp clients only.
10. Does not apply on AIX.

Appendix B. How to issue MQSC commands on Digital OpenVMS

This appendix tells you how to issue MQSC commands from a Digital OpenVMS system in which MQSeries is installed. Specifically, it tells you how to issue MQSC commands locally, that is, the commands are processed by a queue manager on the machine on which you issue them. Remote administration, where you issue commands to be processed by a queue manager on a different machine, is described in the *MQSeries for Digital OpenVMS System Management Guide*.

Using the runmqsc command

To issue MQSC commands, use the **runmqsc** command from the DCL prompt. This command takes its input from the system input device (SYS$INPUT) and sends its output to the system output device (SYS$OUTPUT). For more information about the **runmqsc** command, see the *MQSeries for Digital OpenVMS System Management Guide*.

Issuing MQSC commands interactively

Provided that SYS$INPUT is the keyboard and the SYS$OUTPUT is the display, you can type in MQSC commands, one at a time, at the prompt. The results from the commands are then displayed on your screen.

For example, if you have a queue manager called QMAN1, you type:

```
   runmqsc QMAN1
```

If you omit the queue manager name, the default queue manager is used. The queue manager responds with output similar to the following:

```
5697-270 (C) Copyright IBM Corp. 1997. ALL RIGHTS RESERVED
Starting MQSeries Commands.
```

You can then type in your commands, as required, for example:

```
  DEFINE QLOCAL(TEST) +
         REPLACE +
         DESCR('This is a test queue') +
         TRIGGER +
         INITQ(SYSTEM.SAMPLE.TRIGGER)
```

The plus sign indicates that the command is continued on the next line. When you press Enter, the queue manager confirms that the command has been carried out:

```
      1:  DEFINE QLOCAL(TEST) +
       :       REPLACE +
       :       DESCR('This is a test queue') +
       :       TRIGGER +
       :       INITQ(SYSTEM.SAMPLE.TRIGGER)
AMQ8006: MQSeries queue created.
```

You can then continue to enter additional commands, as required. When you have finished, type the end-of-file character, which in Digital OpenVMS is CTRL+Z. The queue manager then displays a summary report, for example:

```
3 MQSC commands read.
0 commands have a syntax error.
0 commands cannot be processed.
```

Issuing MQSC commands from a command file

You can put a sequence of MQSC commands in an ASCII text file, called a command file, using a standard editor. The following **runmqsc** command redirects both SYS$INPUT and SYS$OUTPUT. It takes input from the command file `commnds.in`, processes the commands contained in the file, and sends a report to the file `report.out`. The commands are processed by the default queue manager.

```
runmqsc < commnds.in > report.out
```

The command file commnds.in contains the following:

```
* This is a sample MQSC command file

* Step 1 - Create the queue
 DEFINE  QLOCAL(TEST) +
         REPLACE +
         DESCR('This is a test queue') +
         TRIGGER +
         INITQ(SYSTEM.SAMPLE.TRIGGER)

* Step 2 -  Display selected queue attributes
 DISPLAY Q(TEST) +
         DESCR +
         TRIGGER +
         INITQ +
         GET +
         PUT

* Step 3 - Delete the queue
 DELETE  QLOCAL (TEST)
```

Figure 1. Example command input file for Digital OpenVMS

The following report is sent to report.out, the output file:

```
5697-270 (C) Copyright IBM Corp. 1997. ALL RIGHTS RESERVED
Starting MQSeries Commands.
       : * This is a sample MQSC command file
       :
       : * Step 1 - Create the queue
     1 :  DEFINE  QLOCAL(TEST) +
       :          REPLACE +
       :          DESCR('This is a test queue') +
       :          TRIGGER +
       :          INITQ(SYSTEM.SAMPLE.TRIGGER)
AMQ8006 MQSeries queue created.
       :
       : *   Step 2 - Display selected queue attributes
     2 :  DISPLAY Q(TEST) +
       :          DESCR +
       :          TRIGGER +
       :          INITQ +
       :          GET +
       :          PUT
       :
AMQ8409 Display Queue details.
   DESCR(This is a test queue)
   INITQ(SYSTEM.SAMPLE.TRIGGER)
   QUEUE(TEST)
   GET(ENABLED)
   PUT(ENABLED)
   TRIGGER
       :
       : *   Step 3 - Delete the test queue
     3 :   DELETE QL(TEST)
AMQ8007 MQSeries queue deleted.
       :
       : *  End of this sample
3 MQSC commands read.
0 commands have a syntax error.
0 commands cannot be processed.
```

Figure 2. Example report file from Digital OpenVMS

Error messages

If the command fails, there might be additional information about the problem in the error log.

Verifying MQSC commands

To verify the commands in an input file, use the **runmqsc** command with the v flag:

```
 runmqsc -v < commnds.in > report.out
```

This command verifies the MQSC commands in the input file and writes a report to the report file. The report contains the same information as is obtained when the commands are actually run, except that it does not contain any messages indicating the outcome of each command.

Appendix C. How to issue MQSC commands on OS/2 Warp

This appendix tells you how to issue MQSC commands from an OS/2 Warp system in which MQSeries is installed. Specifically, it tells you how to issue MQSC commands locally, that is, the commands are processed by a queue manager on the machine on which you issue them. Remote administration, where you issue commands to be processed by a queue manager on a different machine, is described in the *MQSeries System Administration* manual.

Using the runmqsc command

To issue MQSC commands from an OS/2 Warp system, use the **runmqsc** command from an OS/2 window. This command takes its input from standard in and sends its output to standard out. For more information about the **runmqsc** command, see the *MQSeries System Administration* manual.

Issuing MQSC commands interactively

Provided that standard in is the keyboard and standard out is an OS/2 window, you can type in MQSC commands, one at a time, in an OS/2 shell window. The results from the commands are then displayed in the window.

For example, if you have a queue manager called QMAN1, you type:

```
runmqsc QMAN1
```

The queue manager QMAN1 responds with:

```
5621-390 (C) Copyright IBM Corp. 1995, 1999. ALL RIGHTS RESERVED
Starting MQSeries Commands.
```

You can then type in your commands, as required, for example:

```
DEFINE QLOCAL(TEST) +
       REPLACE +
       DESCR('This is a test queue') +
       TRIGGER +
       INITQ(SYSTEM.SAMPLE.TRIGGER)
```

The plus sign indicates that the command is continued on the next line. When you press Enter, the queue manager confirms that the command has been carried out:

```
      1:  DEFINE QLOCAL(TEST) +
       :       REPLACE +
       :       DESCR('This is a test queue') +
       :       TRIGGER +
       :       INITQ(SYSTEM.SAMPLE.TRIGGER)
AMQ8006: MQSeries queue created.
```

If you accidentally add a + to the end of a line when you want to end a command, use the ; character to end the command.

You can then continue to enter additional commands, as required. When you have finished, type END, then press Enter. (Alternatively, you can type the end-of-file character, which in OS/2 Warp is Ctrl+Z, then press Enter.) The queue manager then displays a summary report, for example:

```
3 MQSC commands read.
No commands have a syntax error.
All valid MQSC commands were processed.
```

Getting help

When you are issuing commands interactively on OS/2 Warp, you can get help by entering `command ?` (where `command` is the name of the command you are interested in). MQSeries displays the syntax of the command.

If you enter an invalid command, MQSeries displays the syntax of the command if it can determine what the command was or, alternatively, displays a list of commands for you to select from.

Issuing MQSC commands from a command file

You can put a sequence of MQSC commands in an ASCII text file, called a command file, using a standard editor. The following **runmqsc** command redirects both standard in and standard out. It takes input from the command file `commnds.in`, processes the commands contained in the file, and sends a report to the file `report.out`. The commands are processed by the default queue manager.

```
runmqsc < commnds.in > report.out
```

The command file commnds.in contains the following:

```
* This is a sample MQSC command file

* Step 1 - Create the queue
 DEFINE  QLOCAL(TEST) +
         REPLACE +
         DESCR('This is a test queue') +
         TRIGGER +
         INITQ(SYSTEM.SAMPLE.TRIGGER)

* Step 2 -  Display selected queue attributes
 DISPLAY Q(TEST) +
         DESCR +
         TRIGGER +
         INITQ +
         GET +
         PUT

* Step 3 - Delete the queue
 DELETE  QLOCAL (TEST)
```

Figure 3. Example command input file for OS/2 Warp

The following report is sent to report.out, the output file:

```
5621-390 (C) Copyright IBM Corp. 1995, 1999. ALL RIGHTS RESERVED
Starting MQSeries Commands.
       : * This is a sample MQSC command file
       :
       : * Step 1 - Create the queue
     1 :  DEFINE  QLOCAL(TEST) +
       :          REPLACE +
       :          DESCR('This is a test queue') +
       :          TRIGGER +
       :          INITQ(SYSTEM.SAMPLE.TRIGGER)
AMQ8006 MQSeries queue created.
       :
       : *   Step 2 - Display selected queue attributes
     2 :  DISPLAY Q(TEST) +
       :          DESCR +
       :          TRIGGER +
       :          INITQ +
       :          GET +
       :          PUT
       :
AMQ8409 Display Queue details.
   DESCR(This is a test queue)    INITQ(SYSTEM.SAMPLE.TRIGGER)
   QUEUE(TEST)                    GET(ENABLED)
   PUT(ENABLED)                   TRIGGER
       :
       : *   Step 3 - Delete the test queue
     3 :   DELETE QL(TEST)
AMQ8007 MQSeries queue deleted.
       :
       : *  End of this sample
3 MQSC commands read.
No commands have a syntax error.
All valid MQSC commands were processed.
```

Figure 4. Example report file from OS/2 Warp

Error messages

If the command fails, there might be additional information about the problem in the error log.

Verifying MQSC commands

To verify the commands in an input file, use the **runmqsc** command with the v flag:

```
runmqsc /v < commnds.in > report.out
```

This command verifies the MQSC commands in the input file and writes a report to the report file. The report contains the same information as is obtained when the commands are actually run, except that it does not contain any messages indicating the outcome of each command.

Appendix D. How to issue MQSC commands on OS/390

The MQSeries for OS/390 commands in this book can be issued from the following sources (except where specifically indicated otherwise):

- The OS/390 console (or equivalent, such as SDSF).

  Note: Some commands, such as the DEFINE CHANNEL command for sender, server, and requester channels, might require too many mandatory parameters to be issued using SDSF. This command has to be issued by one of the other methods shown below.
- The initialization input data set, CSQINP1, to be processed before the restart phase of queue manager initialization.
- The initialization input data set, CSQINP2, to be processed after the restart phase of queue manager initialization.
- The initialization input data set, CSQINPX, to be processed after the restart phase of channel initiator initialization.
- The supplied batch utility (CSQUTIL) processing a list of commands in a sequential data set or member of a partitioned data set.
- The OS/390 Master Get Console Routine, MGCR or MGCRE (SVC34).
- A suitably authorized application, by sending a command as a message to the system-command input queue. This can be either:
  - A batch region program
  - A CICS application
  - An IMS application
  - A TSO application

When entering commands from the OS/390 console, use the command prefix string (CPF) defined for your queue manager. When entering commands by any other means, the CPF must not be present.

Much of the functionality of these commands is available in a user-friendly way from the operations and control panels, described in the *MQSeries for OS/390 System Management Guide*.

Changes made to the resource definitions of a queue manager using the commands (directly or indirectly) are preserved across restarts of the queue manager.

See the *MQSeries for OS/390 System Management Guide* for more information about issuing commands on MQSeries for OS/390.

Directing the command to the correct queue manager

The method you use to enter a command determines how you indicate the destination queue manager for it.

- If you issue the command through the console, use the CPF of the destination queue manager.
- If you issue the command through the utility program, (CSQUTIL), specify the destination queue manager with the TGTQMGR keyword; you also need to specify the queue manager to which you will connect via the EXEC PARM parameter of your JCL.

- If you issue the command through an administration program, the command is directed to the queue manager that owns the system-command input queue onto which the command message is put.

Appendix E. How to issue MQSC commands on OS/400

To issue MQSC commands on OS/400, create a list of MQSC commands in a text file. The default maximum line length of the source physical file member is 80 characters. You have the option of running or verifying the commands in this file.

To run commands, use the STRMQMMQSC command in the default mode. This processes the commands in the file, and writes a report to the printer spool file. STRMQMMQSC can also be run in verify mode. This confirms the accuracy of the MQSC syntax in the file.

Example OS/400 MQSeries command file and report

This example creates a local queue, called TEST, displays its attributes, and then deletes it:

```
*   This is a sample MQSeries file to show report format

*   Step 1 - Create a queue
    DEFINE QLOCAL (TEST) REPLACE DESCR('A test queue')    +
    TRIGGER INITQ(system.sample.trigger)

*   Step 2 - Display selected queue attributes
    DISPLAY Q(TEST) DESCR  +
    TRIGGER TRIGTYPE TRIGDPTH GET PUT INITQ

*   Step 3 - Delete the test queue
    DELETE QLOCAL(TEST)

*   End of this sample
```

Figure 5. Example command input file for OS/400

The report generated contains the following elements:
- A header identifying MQSC as the source of the report
- A numbered listing of the input MQSC commands
- A syntax error message for any commands in error
- A message indicating the outcome of running each correct command
- Other messages for general errors running MQSC, as needed
- A summary report at the end

For example, the report generated by running the commands in this example is as follows:

```
MQM/400      STRMQMMQSC: HHLIB/MQSC(SAMPLE)
Starting MQSeries Commands.
       : * This is a sample MQSeries file to show report format
       :
       : *   Step 1 - Create a queue
     1 :   DEF QL(TEST) REPLACE DESCR('A test queue') +
       :         TRIGGER INITQ(system.sample.trigger)
AMQ8006 MQM queue created.
       :
       : *   Step 2 - Display selected queue attributes
     2 :   DIS Q(TEST) DESCR  +
       :      TRIGGER TRIGTYPE TRIGDPTH GET PUT INITQ
AMQ8409 Display Queue details.
   DESCR(This is a test queue)
   INITQ(SYSTEM.SAMPLE.TRIGGER)
   QUEUE(TEST)
   GET(ENABLED)
   PUT(ENABLED)
   TRIGGER
   TRIGTYPE(FIRST)
   TRIGDPTH(1)
       :
       : *   Step 3 - Delete the test queue
     3 :   DELETE QL(TEST)
AMQ8007 MQM queue deleted.
       :
       : *  End of this sample
3 MQSC commands read.
0 commands have a syntax error.
0 commands cannot be processed.
```

Figure 6. Example report file from OS/400

Verifying MQSC commands

To verify the commands in an input file, use the STRMQMMQSC command with the OPTION keyword set to (*VERIFY). This command verifies the MQSC commands in the input file and writes a report to the printer spool file. The report contains the same information that is obtained when the commands are actually run, except that it does not contain any messages indicating the outcome of each command.

Appendix F. How to issue MQSC commands on Tandem NSK

This appendix tells you how to issue MQSC commands from a Tandem NSK system in which MQSeries is installed. Specifically, it tells you how to issue MQSC commands locally, that is, the commands are processed by a queue manager on the machine on which you issue them. Remote administration, where you issue commands to be processed by a queue manager on a different machine, is described in the *MQSeries for Tandem NonStop Kernel System Management Guide*.

Using the runmqsc command

To issue MQSC commands, use the **runmqsc** command from the command prompt. This command takes its input from the system input device and sends its output to the system output device. For more information about the **runmqsc** command, see the *MQSeries for Tandem NonStop Kernel System Management Guide*.

Issuing MQSC commands interactively

Open a TACL session and enter `runmqsc`. You can enter MQSC commands, one at a time, at the prompt. The results from the commands are then displayed on your screen.

For example, if you have a queue manager called `my.queue.manager`, you type:

```
runmqsc my.queue.manager
```

If you omit the queue manager name, the default queue manager is used. The queue manager responds with output similar to the following:

```
5697-A17 (C) Copyright IBM Corp. 1997. ALL RIGHTS RESERVED
Starting MQSeries Commands.
```

You can then type in your commands, as required, for example:

```
  DEFINE QLOCAL(TEST) +
         REPLACE +
         DESCR('This is a test queue') +
         TRIGGER +
         INITQ(SYSTEM.SAMPLE.TRIGGER)
```

The plus sign indicates that the command is continued on the next line. When you press Enter, the queue manager confirms that the command has been carried out:

```
     1:  DEFINE QLOCAL(TEST) +
      :       REPLACE +
      :       DESCR('This is a test queue') +
      :       TRIGGER +
      :       INITQ(SYSTEM.SAMPLE.TRIGGER)
AMQ8006: MQSeries queue created.
```

You can then continue to enter additional commands, as required. When you have finished, type the end-of-file character, which in Tandem NSK is CTRL+Y, or exit. The queue manager then displays a summary report, for example:

```
3 MQSC commands read.
0 commands have a syntax error.
0 commands cannot be processed.
```

Issuing MQSC commands from a command file

You can put a sequence of MQSC commands in an ASCII text file, called a command file, using a standard editor. When you use the **runmqsc** command, use the TACL IN and OUT redirection operators, or the flags -i and -o on **runmqsc**. For example, the following command runs a sequence of commands contained in a text file called commndin and redirects the output to a report file called commndou:

```
 runmqsc -i commndin -o commndou
```

The command file commndin contains the following:

```
  * This is a sample MQSC command file

  * Step 1 - Create the queue
   DEFINE  QLOCAL(TEST) +
           REPLACE +
           DESCR('This is a test queue') +
           TRIGGER +
           INITQ(SYSTEM.SAMPLE.TRIGGER)

  * Step 2 -  Display selected queue attributes
   DISPLAY Q(TEST) +
           DESCR +
           TRIGGER +
           INITQ +
           GET +
           PUT

  * Step 3 - Delete the queue
   DELETE  QLOCAL (TEST)
```

Figure 7. Example command input file for Tandem NSK

The following report is sent to commndou, the output file:

```
5697-A17 (C) Copyright IBM Corp. 1997. ALL RIGHTS RESERVED
Starting MQSeries Commands.
       : * This is a sample MQSC command file
       :
       : * Step 1 - Create the queue
     1 :  DEFINE  QLOCAL(TEST) +
       :          REPLACE +
       :          DESCR('This is a test queue') +
       :          TRIGGER +
       :          INITQ(SYSTEM.SAMPLE.TRIGGER)
AMQ8006 MQSeries queue created.
       :
       : *   Step 2 - Display selected queue attributes
     2 :  DISPLAY Q(TEST) +
       :          DESCR +
       :          TRIGGER +
       :          INITQ +
       :          GET +
       :          PUT
       :
AMQ8409 Display Queue details.
   DESCR(This is a test queue)
   INITQ(SYSTEM.SAMPLE.TRIGGER)
   QUEUE(TEST)
   GET(ENABLED)
   PUT(ENABLED)
   TRIGGER
       :
       : *   Step 3 - Delete the test queue
     3 :   DELETE QL(TEST)
AMQ8007 MQSeries queue deleted.
       :
       : *  End of this sample
3 MQSC commands read.
0 commands have a syntax error.
0 commands cannot be processed.
```

Figure 8. Example report file from Tandem NSK

Error messages

If the command fails, there might be additional information about the problem in the error log.

Verifying MQSC commands

To verify the commands in an input file, use the **runmqsc** command with the -v flag:

```
runmqsc -i commndin -o commndou -v
```

This command verifies the MQSC commands in the input file and writes a report to the report file. The report contains the same information as is obtained when the commands are actually run, except that it does not contain any messages indicating the outcome of each command.

Appendix G. How to issue MQSC commands on UNIX systems

This appendix tells you how to issue MQSC commands from a UNIX system in which MQSeries is installed. Specifically, it tells you how to issue MQSC commands locally, that is, the commands are processed by a queue manager on the machine on which you issue them. Remote administration, where you issue commands to be processed by a queue manager on a different machine, is described in the *MQSeries System Administration* manual for AIX, HP-UX, and Sun Solaris, or the *System Management Guide* for your platform.

Using the runmqsc command

To issue MQSC commands, use the **runmqsc** command from the UNIX system shell. This command takes its input from stdin and sends its output to stdout. For more information about the **runmqsc** command, see the *MQSeries System Administration* manual for AIX, HP-UX, and Sun Solaris, or the *System Management Guide* for your platform.

Issuing MQSC commands interactively

Provided that stdin is the keyboard and stdout is the shell window, you can type in MQSC commands, one at a time, in a shell window. The results from the commands are then displayed in the window.

For example, if you have a queue manager called QMAN1, you type:

```
   runmqsc QMAN1
```

If you omit the queue manager name, the default queue manager is used. The queue manager responds with output similar to the following:

```
5765-514 (C) Copyright IBM Corp. 1993,1999. ALL RIGHTS RESERVED
Starting MQSeries Commands.
```

You can then type in your commands, as required, for example:

```
  DEFINE QLOCAL(TEST) +
         REPLACE +
         DESCR('This is a test queue') +
         TRIGGER +
         INITQ(SYSTEM.SAMPLE.TRIGGER)
```

The plus sign indicates that the command is continued on the next line. When you press Enter, the queue manager confirms that the command has been carried out:

```
      1:  DEFINE QLOCAL(TEST) +
       :       REPLACE +
       :       DESCR('This is a test queue') +
       :       TRIGGER +
       :       INITQ(SYSTEM.SAMPLE.TRIGGER)
AMQ8006: MQSeries queue created.
```

If you accidentally add a + to the end of a line on AIX, HP-UX, or Sun Solaris when you want to end a command, use the ; character to end the command.

You can then continue to enter additional commands, as required. When you have finished, type END, then press Enter (on AIX, HP-UX, and Sun Solaris), or type the end-of-file character, which in UNIX systems is CTRL+D. The queue manager then displays a summary report, for example:

```
3 MQSC commands read.
No commands have a syntax error.
All valid MQSC commands were processed.
```

Getting help

Man pages are provided for all the MQSC commands.

In addition, when you are issuing commands interactively on AIX, HP-UX, or Sun Solaris, you can get help by entering `command ?` (where `command` is the name of the command you are interested in). MQSeries displays the syntax of the command.

If you enter an invalid command, MQSeries displays the syntax of the command if it can determine what the command was or, alternatively displays a list of commands for you to select from.

Issuing MQSC commands from a command file

You can put a sequence of MQSC commands in an ASCII text file, called a command file, using a standard editor. The following **runmqsc** command redirects both stdin and stdout. It takes input from the command file `commnds.in`, processes the commands contained in the file, and sends a report to the file `report.out`. The commands are processed by the default queue manager.

```
runmqsc < commnds.in > report.out
```

The command file commnds.in contains the following:

```
* This is a sample MQSC command file

* Step 1 - Create the queue
 DEFINE  QLOCAL(TEST) +
         REPLACE +
         DESCR('This is a test queue') +
         TRIGGER +
         INITQ(SYSTEM.SAMPLE.TRIGGER)

* Step 2 -  Display selected queue attributes
 DISPLAY Q(TEST) +
         DESCR +
         TRIGGER +
         INITQ +
         GET +
         PUT

* Step 3 - Delete the queue
 DELETE  QLOCAL (TEST)
```

Figure 9. Example command input file for UNIX systems

The following report is sent to report.out, the output file:

```
5765-115 (C) Copyright IBM Corp. 1993,1999. ALL RIGHTS RESERVED
Starting MQSeries Commands.
       : * This is a sample MQSC command file
       :
       : * Step 1 - Create the queue
     1 :  DEFINE  QLOCAL(TEST) +
       :          REPLACE +
       :          DESCR('This is a test queue') +
       :          TRIGGER +
       :          INITQ(SYSTEM.SAMPLE.TRIGGER)
AMQ8006 MQSeries queue created.
       :
       : *   Step 2 - Display selected queue attributes
     2 :  DISPLAY Q(TEST) +
       :          DESCR +
       :          TRIGGER +
       :          INITQ +
       :          GET +
       :          PUT
       :
AMQ8409 Display Queue details.
   DESCR(This is a test queue)     INITQ(SYSTEM.SAMPLE.TRIGGER)
   QUEUE(TEST)                     GET(ENABLED)
   PUT(ENABLED)                    TRIGGER
       :
       : *   Step 3 - Delete the test queue
     3 :   DELETE QL(TEST)
AMQ8007 MQSeries queue deleted.
       :
       : *  End of this sample
3 MQSC commands read.
No commands have a syntax error.
All valid MQSC commands were processed.
```

Figure 10. Example report file from UNIX systems

Error messages

If the command fails, there might be additional information about the problem in the error log.

Verifying MQSC commands

To verify the commands in an input file, use the **runmqsc** command with the v flag:

```
 runmqsc -v < commnds.in > report.out
```

This command verifies the MQSC commands in the input file and writes a report to the report file. The report contains the same information as is obtained when the commands are actually run, except that it does not contain any messages indicating the outcome of each command.

Appendix H. How to issue MQSC commands on Windows NT

This appendix tells you how to issue MQSC commands from a Windows NT system in which MQSeries is installed. Specifically, it tells you how to issue MQSC commands locally, that is, the commands are processed by a queue manager on the machine on which you issue them. Remote administration, where you issue commands to be processed by a queue manager on a different machine, is described in the *MQSeries System Administration* manual.

Many of these functions can also be invoked from the Microsoft management console (MMC) using the MQSeries snap-in applications, or from the Windows NT workstation using the Web administration application supplied with MQSeries. For more information, see the *MQSeries Planning Guide*.

Using the runmqsc command

To issue MQSC commands from a Windows NT system, use the **runmqsc** command from a Windows NT window. This command takes its input from standard in and sends its output to standard out. For more information about the **runmqsc** command, see the *MQSeries System Administration* manual.

Issuing MQSC commands interactively

Provided that standard in is the keyboard and standard out is a Windows NT window, you can type in MQSC commands, one at a time, in a Windows NT window. The results from the commands are then displayed in the window.

For example, if you have a queue manager called QMAN1, you type:

```
runmqsc QMAN1
```

The queue manager QMAN1 responds with:

```
5697-177 (C) Copyright IBM Corp. 1996, 1999. ALL RIGHTS RESERVED
Starting MQSeries Commands.
```

You can then type in your commands, as required, for example:

```
DEFINE QLOCAL(TEST) +
       REPLACE +
       DESCR('This is a test queue') +
       TRIGGER +
       INITQ(SYSTEM.SAMPLE.TRIGGER)
```

The plus sign indicates that the command is continued on the next line. When you press Enter, the queue manager confirms that the command has been carried out:

```
     1:  DEFINE QLOCAL(TEST) +
      :       REPLACE +
      :       DESCR('This is a test queue') +
      :       TRIGGER +
      :       INITQ(SYSTEM.SAMPLE.TRIGGER)
AMQ8006: MQSeries queue created.
```

If you accidentally add a + to the end of a line when you want to end a command, use the ; character to end the command.

You can then continue to enter additional commands, as required. When you have finished, type END, then press Enter. (Alternatively, you can type the end-of-file character, which in Windows NT is Ctrl+Z, then press Enter.) The queue manager then displays a summary report, for example:

```
3 MQSC commands read.
No commands have a syntax error.
All valid MQSC commands were processed.
```

Getting help

When you are issuing commands interactively on Windows NT, you can get help by entering `command ?` (where `command` is the name of the command you are interested in). MQSeries displays the syntax of the command.

If you enter an invalid command, MQSeries displays the syntax of the command if it can determine what the command was or, alternatively, displays a list of commands for you to select from.

Issuing MQSC commands from a command file

You can put a sequence of MQSC commands in an ASCII text file, called a command file, using a standard editor. The following **runmqsc** command redirects both stdin and stdout. It takes input from the command file `commnds.in`, processes the commands contained in the file, and sends a report to the file `report.out`. The commands are processed by the default queue manager.

```
runmqsc < commnds.in > report.out
```

The command file commnds.in contains the following:

```
* This is a sample MQSC command file

* Step 1 - Create the queue
 DEFINE  QLOCAL(TEST) +
         REPLACE +
         DESCR('This is a test queue') +
         TRIGGER +
         INITQ(SYSTEM.SAMPLE.TRIGGER)

* Step 2 -  Display selected queue attributes
 DISPLAY Q(TEST) +
         DESCR +
         TRIGGER +
         INITQ +
         GET +
         PUT

* Step 3 - Delete the queue
 DELETE  QLOCAL (TEST)
```

Figure 11. Example command input file for Windows NT

The following report is sent to report.out, the output file:

```
5697-177 (C) Copyright IBM Corp. 1996, 1999. ALL RIGHTS RESERVED
Starting MQSeries Commands.
       : * This is a sample MQSC command file
       :
       : * Step 1 - Create the queue
     1 :  DEFINE  QLOCAL(TEST) +
       :          REPLACE +
       :          DESCR('This is a test queue') +
       :          TRIGGER +
       :          INITQ(SYSTEM.SAMPLE.TRIGGER)
AMQ8006 MQSeries queue created.
       :
       : *   Step 2 - Display selected queue attributes
     2 :  DISPLAY Q(TEST) +
       :          DESCR +
       :          TRIGGER +
       :          INITQ +
       :          GET +
       :          PUT
       :
AMQ8409 Display Queue details.
   DESCR(This is a test queue)     INITQ(SYSTEM.SAMPLE.TRIGGER)
   QUEUE(TEST)                     GET(ENABLED)
   PUT(ENABLED)                    TRIGGER
       :
       : *   Step 3 - Delete the test queue
     3 :   DELETE QL(TEST)
AMQ8007 MQSeries queue deleted.
       :
       : *  End of this sample
3 MQSC commands read.
 No commands have a syntax error.
 All valid MQSC commands were processed.
```

Figure 12. Example report file from Windows NT

Error messages

If the command fails, there might be additional information about the problem in the error log and system event log.

Verifying MQSC commands

To verify the commands in an input file, use the **runmqsc** command with the v flag:

```
runmqsc /v < commnds.in > report.out
```

This command verifies the MQSC commands in the input file and writes a report to the report file. The report contains the same information as is obtained when the commands are actually run, except that it does not contain any messages indicating the outcome of each command.

Appendix I. Notices

This information was developed for products and services offered in the United States. IBM may not offer the products, services, or features discussed in this information in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this information. The furnishing of this information does not give you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

IBM World Trade Asia Corporation
Licensing
2-31 Roppongi 3-chome, Minato-ku
Tokyo 106, Japan

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law: INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the information. IBM may make improvements and / or changes in the product(s) and / or the program(s) described in this information at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Trademarks

Glossary of terms and abbreviations

This glossary defines MQSeries terms and abbreviations used in this book. If you do not find the term you are looking for, see the Index or the *IBM Dictionary of Computing*, New York: McGraw-Hill, 1994.

This glossary includes terms and definitions from the *American National Dictionary for Information Systems*, ANSI X3.172-1990, copyright 1990 by the American National Standards Institute (ANSI). Copies may be purchased from the American National Standards Institute, 11 West 42 Street, New York, New York 10036. Definitions are identified by the symbol (A) after the definition.

A

abend reason code. A 4-byte hexadecimal code that uniquely identifies a problem with MQSeries for OS/390. A complete list of MQSeries for OS/390 abend reason codes and their explanations is contained in the *MQSeries for OS/390 Messages and Codes* manual.

active log. See *recovery log*.

adapter. An interface between MQSeries for OS/390 and TSO, IMS, CICS, or batch address spaces. An adapter is an attachment facility that enables applications to access MQSeries services.

address space. The area of virtual storage available for a particular job.

address space identifier (ASID). A unique, system-assigned identifier for an address space.

administrator commands. MQSeries commands used to manage MQSeries objects, such as queues, processes, and namelists.

alert. A message sent to a management services focal point in a network to identify a problem or an impending problem.

alert monitor. In MQSeries for OS/390, a component of the CICS adapter that handles unscheduled events occurring as a result of connection requests to MQSeries for OS/390.

alias queue object. An MQSeries object, the name of which is an alias for a base queue defined to the local queue manager. When an application or a queue manager uses an alias queue, the alias name is resolved and the requested operation is performed on the associated base queue.

allied address space. See *ally*.

ally. An OS/390 address space that is connected to MQSeries for OS/390.

alternate user security. A security feature in which the authority of one user ID can be used by another user ID; for example, to open an MQSeries object.

APAR. Authorized program analysis report.

application environment. The software facilities that are accessible by an application program. On the OS/390 platform, CICS and IMS are examples of application environments.

application log. In Windows NT, a log that records significant application events.

application queue. A queue used by an application.

archive log. See *recovery log*.

ASID. Address space identifier.

asynchronous messaging. A method of communication between programs in which programs place messages on message queues. With asynchronous messaging, the sending program proceeds with its own processing without waiting for a reply to its message. Contrast with *synchronous messaging*.

attribute. One of a set of properties that defines the characteristics of an MQSeries object.

authorization checks. Security checks that are performed when a user tries to issue administration commands against an object, for example to open a queue or connect to a queue manager.

authorization file. In MQSeries on UNIX systems, a file that provides security definitions for an object, a class of objects, or all classes of objects.

authorization service. In MQSeries on UNIX systems, MQSeries for OS/2 Warp, and MQSeries for Windows NT, a service that provides authority checking of commands and MQI calls for the user identifier associated with the command or call.

authorized program analysis report (APAR). A report of a problem caused by a suspected defect in a current, unaltered release of a program.

B

backout. An operation that reverses all the changes made during the current unit of recovery or unit of work. After the operation is complete, a new unit of recovery or unit of work begins. Contrast with *commit*.

basic mapping support (BMS). An interface between CICS and application programs that formats input and output display data and routes multiple-page output messages without regard for control characters used by various terminals.

BMS. Basic mapping support.

bootstrap data set (BSDS). A VSAM data set that contains:

- An inventory of all active and archived log data sets known to MQSeries for OS/390
- A wrap-around inventory of all recent MQSeries for OS/390 activity

The BSDS is required if the MQSeries for OS/390 subsystem has to be restarted.

browse. In message queuing, to use the MQGET call to copy a message without removing it from the queue. See also *get*.

browse cursor. In message queuing, an indicator used when browsing a queue to identify the message that is next in sequence.

BSDS. Bootstrap data set.

buffer pool. An area of main storage used for MQSeries for OS/390 queues, messages, and object definitions. See also *page set*.

C

call back. In MQSeries, a requester message channel initiates a transfer from a sender channel by first calling the sender, then closing down and awaiting a call back.

CCF. Channel control function.

CCSID. Coded character set identifier.

CDF. Channel definition file.

channel. See *message channel*.

channel control function (CCF). In MQSeries, a program to move messages from a transmission queue to a communication link, and from a communication link to a local queue, together with an operator panel interface to allow the setup and control of channels.

channel definition file (CDF). In MQSeries, a file containing communication channel definitions that associate transmission queues with communication links.

channel event. An event indicating that a channel instance has become available or unavailable. Channel events are generated on the queue managers at both ends of the channel.

checkpoint. A time when significant information is written on the log. Contrast with *syncpoint*. In MQSeries on UNIX systems, the point in time when a data record described in the log is the same as the data record in the queue. Checkpoints are generated automatically and are used during the system restart process.

CI. Control interval.

circular logging. In MQSeries on UNIX systems, MQSeries for OS/2 Warp, and MQSeries for Windows NT, the process of keeping all restart data in a ring of log files. Logging fills the first file in the ring and then moves on to the next, until all the files are full. At this point, logging goes back to the first file in the ring and starts again, if the space has been freed or is no longer needed. Circular logging is used during restart recovery, using the log to roll back transactions that were in progress when the system stopped. Contrast with *linear logging*.

CL. Control Language.

client. A run-time component that provides access to queuing services on a server for local user applications. The queues used by the applications reside on the server. See also *MQSeries client*.

client application. An application, running on a workstation and linked to a client, that gives the application access to queuing services on a server.

client connection channel type. The type of MQI channel definition associated with an MQSeries client. See also *server connection channel type*.

cluster. A network of queue managers that are logically associated in some way.

coded character set identifier (CCSID). The name of a coded set of characters and their code point assignments.

command. In MQSeries, an administration instruction that can be carried out by the queue manager.

command prefix (CPF). In MQSeries for OS/390, a character string that identifies the queue manager to which MQSeries for OS/390 commands are directed, and from which MQSeries for OS/390 operator messages are received.

command processor. The MQSeries component that processes commands.

command server. The MQSeries component that reads commands from the system-command input queue, verifies them, and passes valid commands to the command processor.

commit. An operation that applies all the changes made during the current unit of recovery or unit of work. After the operation is complete, a new unit of recovery or unit of work begins. Contrast with *backout*.

completion code. A return code indicating how an MQI call has ended.

configuration file. In MQSeries on UNIX systems, MQSeries for OS/2 Warp, and MQSeries for Windows NT, a file that contains configuration information related to, for example, logs, communications, or installable services. Synonymous with *.ini file*. See also *stanza*.

connect. To provide a queue manager connection handle, which an application uses on subsequent MQI calls. The connection is made either by the MQCONN call, or automatically by the MQOPEN call.

connection handle. The identifier or token by which a program accesses the queue manager to which it is connected.

context. Information about the origin of a message.

context security. In MQSeries, a method of allowing security to be handled such that messages are obliged to carry details of their origins in the message descriptor.

control command. In MQSeries on UNIX systems, MQSeries for OS/2 Warp, and MQSeries for Windows NT, a command that can be entered interactively from the operating system command line. Such a command requires only that the MQSeries product be installed; it does not require a special utility or program to run it.

control interval (CI). A fixed-length area of direct access storage in which VSAM stores records and creates distributed free spaces. The control interval is the unit of information that VSAM transmits to or from direct access storage.

Control Language (CL). In MQSeries for AS/400, a language that can be used to issue commands, either at the command line or by writing a CL program.

controlled shutdown. See *quiesced shutdown*.

CPF. Command prefix.

D

DAE. Dump analysis and elimination.

data conversion interface (DCI). The MQSeries interface to which customer- or vendor-written programs that convert application data between different machine encodings and CCSIDs must conform. A part of the MQSeries Framework.

datagram. The simplest message that MQSeries supports. This type of message does not require a reply.

DCE. Distributed Computing Environment.

DCI. Data conversion interface.

dead-letter queue (DLQ). A queue to which a queue manager or application sends messages that it cannot deliver to their correct destination.

dead-letter queue handler. An MQSeries-supplied utility that monitors a dead-letter queue (DLQ) and processes messages on the queue in accordance with a user-written rules table.

default object. A definition of an object (for example, a queue) with all attributes defined. If a user defines an object but does not specify all possible attributes for that object, the queue manager uses default attributes in place of any that were not specified.

deferred connection. A pending event that is activated when a CICS subsystem tries to connect to MQSeries for OS/390 before MQSeries for OS/390 has been started.

distributed application. In message queuing, a set of application programs that can each be connected to a different queue manager, but that collectively constitute a single application.

Distributed Computing Environment (DCE). Middleware that provides some basic services, making the development of distributed applications easier. DCE is defined by the Open Software Foundation (OSF).

distributed queue management (DQM). In message queuing, the setup and control of message channels to queue managers on other systems.

DLQ. Dead-letter queue.

DQM. Distributed queue management.

dual logging. A method of recording MQSeries for OS/390 activity, where each change is recorded on two data sets, so that if a restart is necessary and one data set is unreadable, the other can be used. Contrast with *single logging*.

dual mode. See *dual logging*.

dump analysis and elimination (DAE). An OS/390 service that enables an installation to suppress SVC dumps and ABEND SYSUDUMP dumps that are not needed because they duplicate previously written dumps.

dynamic queue. A local queue created when a program opens a model queue object. See also *permanent dynamic queue* and *temporary dynamic queue*.

E

environment. See *application environment*.

ESM. External security manager.

ESTAE. Extended specify task abnormal exit.

event. See *channel event*, *instrumentation event*, *performance event*, and *queue manager event*.

event data. In an event message, the part of the message data that contains information about the event (such as the queue manager name, and the application that gave rise to the event). See also *event header*.

event header. In an event message, the part of the message data that identifies the event type of the reason code for the event.

event log. See *application log*.

event message. Contains information (such as the category of event, the name of the application that caused the event, and queue manager statistics) relating to the origin of an instrumentation event in a network of MQSeries systems.

event queue. The queue onto which the queue manager puts an event message after it detects an event. Each category of event (queue manager, performance, or channel event) has its own event queue.

Event Viewer. A tool provided by Windows NT to examine and manage log files.

extended specify task abnormal exit (ESTAE). An OS/390 macro that provides recovery capability and gives control to the specified exit routine for processing, diagnosing an abend, or specifying a retry address.

external security manager (ESM). A security product that is invoked by the OS/390 System Authorization Facility. RACF is an example of an ESM.

F

FFST. First Failure Support Technology.

FIFO. First-in-first-out.

First Failure Support Technology (FFST). Used by MQSeries on UNIX systems, MQSeries for OS/2 Warp, MQSeries for Windows NT, and MQSeries for AS/400 to detect and report software problems.

first-in-first-out (FIFO). A queuing technique in which the next item to be retrieved is the item that has been in the queue for the longest time. (A)

forced shutdown. A type of shutdown of the CICS adapter where the adapter immediately disconnects from MQSeries for OS/390, regardless of the state of any currently active tasks. Contrast with *quiesced shutdown*.

Framework. In MQSeries, a collection of programming interfaces that allow customers or vendors to write programs that extend or replace certain functions provided in MQSeries products. The interfaces are:

- MQSeries data conversion interface (DCI)
- MQSeries message channel interface (MCI)
- MQSeries name service interface (NSI)
- MQSeries security enabling interface (SEI)
- MQSeries trigger monitor interface (TMI)

FRR. Functional recovery routine.

functional recovery routine (FRR). An OS/390 recovery/termination manager facility that enables a recovery routine to gain control in the event of a program interrupt.

G

GCPC. Generalized command preprocessor.

generalized command preprocessor (GCPC). An MQSeries for OS/390 component that processes MQSeries commands and runs them.

Generalized Trace Facility (GTF). An OS/390 service program that records significant system events, such as supervisor calls and start I/O operations, for the purpose of problem determination.

get. In message queuing, to use the MQGET call to remove a message from a queue. See also *browse*.

global trace. An MQSeries for OS/390 trace option where the trace data comes from the entire MQSeries for OS/390 subsystem.

GTF. Generalized Trace Facility.

H

handle. See *connection handle* and *object handle*.

hardened message. A message that is written to auxiliary (disk) storage so that the message will not be lost in the event of a system failure. See also *persistent message*.

I

ILE. Integrated Language Environment.

immediate shutdown. In MQSeries, a shutdown of a queue manager that does not wait for applications to disconnect. Current MQI calls are allowed to complete, but new MQI calls fail after an immediate shutdown has been requested. Contrast with *quiesced shutdown* and *preemptive shutdown*.

in-doubt unit of recovery. In MQSeries, the status of a unit of recovery for which a syncpoint has been requested but not yet confirmed.

Integrated Language Environment (ILE). The AS/400 Integrated Language Environment. This replaces the AS/400 Original Program Model (OPM).

.ini file. See *configuration file*.

initialization input data sets. Data sets used by MQSeries for OS/390 when it starts up.

initiation queue. A local queue on which the queue manager puts trigger messages.

input/output parameter. A parameter of an MQI call in which you supply information when you make the call, and in which the queue manager changes the information when the call completes or fails.

input parameter. A parameter of an MQI call in which you supply information when you make the call.

installable services. In MQSeries on UNIX systems, MQSeries for OS/2 Warp, and MQSeries for Windows NT, additional functionality provided as independent components. The installation of each component is optional: in-house or third-party components can be used instead. See also *authorization service*, *name service*, and *user identifier service*.

instrumentation event. A facility that can be used to monitor the operation of queue managers in a network of MQSeries systems. MQSeries provides instrumentation events for monitoring queue manager resource definitions, performance conditions, and channel conditions. Instrumentation events can be used by a user-written reporting mechanism in an administration application that displays the events to a system operator. They also allow applications acting as agents for other administration networks to monitor reports and create the appropriate alerts.

Interactive Problem Control System (IPCS). A component of OS/390 that permits online problem management, interactive problem diagnosis, online debugging for disk-resident abend dumps, problem tracking, and problem reporting.

Interactive System Productivity Facility (ISPF). An IBM licensed program that serves as a full-screen editor and dialog manager. It is used for writing application programs, and provides a means of generating standard screen panels and interactive dialogues between the application programmer and terminal user.

IPCS. Interactive Problem Control System.

ISPF. Interactive System Productivity Facility.

L

linear logging. In MQSeries on UNIX systems, MQSeries for OS/2 Warp, and MQSeries for Windows NT, the process of keeping restart data in a sequence of files. New files are added to the sequence as necessary. The space in which the data is written is not reused until the queue manager is restarted. Contrast with *circular logging*.

listener. In MQSeries distributed queuing, a program that monitors for incoming network connections.

local definition. An MQSeries object belonging to a local queue manager.

local definition of a remote queue. An MQSeries object belonging to a local queue manager. This object defines the attributes of a queue that is owned by another queue manager. In addition, it is used for queue-manager aliasing and reply-to-queue aliasing.

locale. On UNIX systems, a subset of a user’s environment that defines conventions for a specific culture (such as time, numeric, or monetary formatting and character classification, collation, or conversion). The queue manager CCSID is derived from the locale of the user ID that created the queue manager.

local queue. A queue that belongs to the local queue manager. A local queue can contain a list of messages waiting to be processed. Contrast with *remote queue*.

local queue manager. The queue manager to which a program is connected and that provides message queuing services to the program. Queue managers to which a program is not connected are called *remote queue managers*, even if they are running on the same system as the program.

log. In MQSeries, a file recording the work done by queue managers while they receive, transmit, and deliver messages, to enable them to recover in the event of failure.

log control file. In MQSeries on UNIX systems, MQSeries for OS/2 Warp, and MQSeries for Windows NT, the file containing information needed to monitor the use of log files (for example, their size and location, and the name of the next available file).

log file. In MQSeries on UNIX systems, MQSeries for OS/2 Warp, and MQSeries for Windows NT, a file in which all significant changes to the data controlled by a queue manager are recorded. If the primary log files become full, MQSeries allocates secondary log files.

logical unit of work (LUW). See *unit of work*.

M

machine check interrupt. An interruption that occurs as a result of an equipment malfunction or error. A machine check interrupt can be either hardware recoverable, software recoverable, or nonrecoverable.

MCA. Message channel agent.

MCI. Message channel interface.

media image. In MQSeries on UNIX systems, MQSeries for OS/2 Warp, and MQSeries for Windows NT, the sequence of log records that contain an image of an object. The object can be recreated from this image.

message. In message queuing applications, a communication sent between programs. See also *persistent message* and *nonpersistent message*. In system programming, information intended for the terminal operator or system administrator.

message channel. In distributed message queuing, a mechanism for moving messages from one queue manager to another. A message channel comprises two message channel agents (a sender at one end and a receiver at the other end) and a communication link. Contrast with *MQI channel*.

message channel agent (MCA). A program that transmits prepared messages from a transmission queue to a communication link, or from a communication link to a destination queue. See also *message queue interface*.

message channel interface (MCI). The MQSeries interface to which customer- or vendor-written programs that transmit messages between an MQSeries queue manager and another messaging system must conform. A part of the MQSeries Framework.

message descriptor. Control information describing the message format and presentation that is carried as part of an MQSeries message. The format of the message descriptor is defined by the MQMD structure.

message priority. In MQSeries, an attribute of a message that can affect the order in which messages on a queue are retrieved, and whether a trigger event is generated.

message queue. Synonym for *queue*.

message queue interface (MQI). The programming interface provided by the MQSeries queue managers. This programming interface allows application programs to access message queuing services.

message queuing. A programming technique in which each program within an application communicates with the other programs by putting messages on queues.

message sequence numbering. A programming technique in which messages are given unique numbers during transmission over a communication link. This enables the receiving process to check whether all messages are received, to place them in a queue in the original order, and to discard duplicate messages.

messaging. See *synchronous messaging* and *asynchronous messaging*.

model queue object. A set of queue attributes that act as a template when a program creates a dynamic queue.

MQAI. MQSeries Administration Interface.

MQI. Message queue interface.

MQI channel. Connects an MQSeries client to a queue manager on a server system, and transfers only MQI calls and responses in a bidirectional manner. Contrast with *message channel*.

MQSC. MQSeries commands.

MQSeries. A family of IBM licensed programs that provides message queuing services.

MQSeries Administration Interface (MQAI). A programming interface to MQSeries.

MQSeries client. Part of an MQSeries product that can be installed on a system without installing the full queue manager. The MQSeries client accepts MQI calls from applications and communicates with a queue manager on a server system.

MQSeries commands (MQSC). Human readable commands, uniform across all platforms, that are used to manipulate MQSeries objects. Contrast with *programmable command format (PCF)*.

N

namelist. An MQSeries object that contains a list of names, for example, queue names.

name service. In MQSeries on UNIX systems, MQSeries for OS/2 Warp, and MQSeries for Windows NT, the facility that determines which queue manager owns a specified queue.

name service interface (NSI). The MQSeries interface to which customer- or vendor-written programs that resolve queue-name ownership must conform. A part of the MQSeries Framework.

name transformation. In MQSeries on UNIX systems, MQSeries for OS/2 Warp, and MQSeries for Windows

NT, an internal process that changes a queue manager name so that it is unique and valid for the system being used. Externally, the queue manager name remains unchanged.

New Technology File System (NTFS). A Windows NT recoverable file system that provides security for files.

nonpersistent message. A message that does not survive a restart of the queue manager. Contrast with *persistent message*.

NSI. Name service interface.

NTFS. New Technology File System.

null character. The character that is represented by X'00'.

O

OAM. Object authority manager.

object. In MQSeries, an object is a queue manager, a queue, a process definition, a channel, a namelist, or a storage class (OS/390 only).

| **object authority manager (OAM).** In MQSeries on UNIX systems, MQSeries for AS/400, and MQSeries for Windows NT, the default authorization service for command and object management. The OAM can be replaced by, or run in combination with, a customer-supplied security service.

object descriptor. A data structure that identifies a particular MQSeries object. Included in the descriptor are the name of the object and the object type.

object handle. The identifier or token by which a program accesses the MQSeries object with which it is working.

off-loading. In MQSeries for OS/390, an automatic process whereby a queue manager's active log is transferred to its archive log.

OPM. Original Program Model.

Original Program Model (OPM). The AS/400 Original Program Model. This is no longer supported on MQSeries. It is replaced by the Integrated Language Environment (ILE).

OTMA. Open Transaction Manager Access.

output log-buffer. In MQSeries for OS/390, a buffer that holds recovery log records before they are written to the archive log.

output parameter. A parameter of an MQI call in which the queue manager returns information when the call completes or fails.

P

page set. A VSAM data set used when MQSeries for OS/390 moves data (for example, queues and messages) from buffers in main storage to permanent backing storage (DASD).

PCF. Programmable command format.

PCF command. See *programmable command format*.

pending event. An unscheduled event that occurs as a result of a connect request from a CICS adapter.

percolation. In error recovery, the passing along a preestablished path of control from a recovery routine to a higher-level recovery routine.

performance event. A category of event indicating that a limit condition has occurred.

performance trace. An MQSeries trace option where the trace data is to be used for performance analysis and tuning.

permanent dynamic queue. A dynamic queue that is deleted when it is closed only if deletion is explicitly requested. Permanent dynamic queues are recovered if the queue manager fails, so they can contain persistent messages. Contrast with *temporary dynamic queue*.

persistent message. A message that survives a restart of the queue manager. Contrast with *nonpersistent message*.

ping. In distributed queuing, a diagnostic aid that uses the exchange of a test message to confirm that a message channel or a TCP/IP connection is functioning.

platform. In MQSeries, the operating system under which a queue manager is running.

point of recovery. In MQSeries for OS/390, the term used to describe a set of backup copies of MQSeries for OS/390 page sets and the corresponding log data sets required to recover these page sets. These backup copies provide a potential restart point in the event of page set loss (for example, page set I/O error).

preemptive shutdown. In MQSeries, a shutdown of a queue manager that does not wait for connected applications to disconnect, nor for current MQI calls to complete. Contrast with *immediate shutdown* and *quiesced shutdown*.

principal. In MQSeries on UNIX systems, MQSeries for OS/2 Warp, and MQSeries for Windows NT, a term used for a user identifier. Used by the object authority manager for checking authorizations to system resources.

process definition object. An MQSeries object that contains the definition of an MQSeries application. For example, a queue manager uses the definition when it works with trigger messages.

programmable command format (PCF). A type of MQSeries message used by:

- User administration applications, to put PCF commands onto the system command input queue of a specified queue manager
- User administration applications, to get the results of a PCF command from a specified queue manager
- A queue manager, as a notification that an event has occurred

Contrast with *MQSC*.

program temporary fix (PTF). A solution or by-pass of a problem diagnosed by IBM field engineering as the result of a defect in a current, unaltered release of a program.

PTF. Program temporary fix.

Q

queue. An MQSeries object. Message queuing applications can put messages on, and get messages from, a queue. A queue is owned and maintained by a queue manager. Local queues can contain a list of messages waiting to be processed. Queues of other types cannot contain messages—they point to other queues, or can be used as models for dynamic queues.

queue manager. A system program that provides queuing services to applications. It provides an application programming interface so that programs can access messages on the queues that the queue manager owns. See also *local queue manager* and *remote queue manager*. An MQSeries object that defines the attributes of a particular queue manager.

queue manager event. An event that indicates:

- An error condition has occurred in relation to the resources used by a queue manager. For example, a queue is unavailable.
- A significant change has occurred in the queue manager. For example, a queue manager has stopped or started.

queuing. See *message queuing*.

quiesced shutdown. In MQSeries, a shutdown of a queue manager that allows all connected applications to disconnect. Contrast with *immediate shutdown* and *preemptive shutdown*. A type of shutdown of the CICS adapter where the adapter disconnects from MQSeries, but only after all the currently active tasks have been completed. Contrast with *forced shutdown*.

quiescing. In MQSeries, the state of a queue manager prior to it being stopped. In this state, programs are allowed to finish processing, but no new programs are allowed to start.

R

RBA. Relative byte address.

reason code. A return code that describes the reason for the failure or partial success of an MQI call.

receiver channel. In message queuing, a channel that responds to a sender channel, takes messages from a communication link, and puts them on a local queue.

recovery log. In MQSeries for OS/390, data sets containing information needed to recover messages, queues, and the MQSeries subsystem. MQSeries for OS/390 writes each record to a data set called the *active log*. When the active log is full, its contents are off-loaded to a DASD or tape data set called the *archive log*. Synonymous with *log*.

recovery termination manager (RTM). A program that handles all normal and abnormal termination of tasks by passing control to a recovery routine associated with the terminating function.

Registry. In Windows NT, a secure database that provides a single source for system and application configuration data.

Registry Editor. In Windows NT, the program item that allows the user to edit the Registry.

Registry Hive. In Windows NT, the structure of the data stored in the Registry.

relative byte address (RBA). The displacement in bytes of a stored record or control interval from the beginning of the storage space allocated to the data set to which it belongs.

remote queue. A queue belonging to a remote queue manager. Programs can put messages on remote queues, but they cannot get messages from remote queues. Contrast with *local queue*.

remote queue manager. To a program, a queue manager that is not the one to which the program is connected.

remote queue object. See *local definition of a remote queue*.

remote queuing. In message queuing, the provision of services to enable applications to put messages on queues belonging to other queue managers.

reply message. A type of message used for replies to request messages. Contrast with *request message* and *report message*.

reply-to queue. The name of a queue to which the program that issued an MQPUT call wants a reply message or report message sent.

report message. A type of message that gives information about another message. A report message can indicate that a message has been delivered, has arrived at its destination, has expired, or could not be processed for some reason. Contrast with *reply message* and *request message*.

requester channel. In message queuing, a channel that may be started remotely by a sender channel. The requester channel accepts messages from the sender channel over a communication link and puts the messages on the local queue designated in the message. See also *server channel*.

request message. A type of message used to request a reply from another program. Contrast with *reply message* and *report message*.

RESLEVEL. In MQSeries for OS/390, an option that controls the number of CICS user IDs checked for API-resource security in MQSeries for OS/390.

resolution path. The set of queues that are opened when an application specifies an alias or a remote queue on input to an MQOPEN call.

resource. Any facility of the computing system or operating system required by a job or task. In MQSeries for OS/390, examples of resources are buffer pools, page sets, log data sets, queues, and messages.

resource manager. An application, program, or transaction that manages and controls access to shared resources such as memory buffers and data sets. MQSeries, CICS, and IMS are resource managers.

Resource Recovery Services (RRS). An OS/390 facility that provides 2-phase syncpoint support across participating resource managers.

responder. In distributed queuing, a program that replies to network connection requests from another system.

resynch. In MQSeries, an option to direct a channel to start up and resolve any in-doubt status messages, but without restarting message transfer.

return codes. The collective name for completion codes and reason codes.

rollback. Synonym for *back out*.

RRS. Resource Recovery Services.

RTM. Recovery termination manager.

rules table. A control file containing one or more rules that the dead-letter queue handler applies to messages on the DLQ.

S

SAF. System Authorization Facility.

SDWA. System diagnostic work area.

security enabling interface (SEI). The MQSeries interface to which customer- or vendor-written programs that check authorization, supply a user identifier, or perform authentication must conform. A part of the MQSeries Framework.

SEI. Security enabling interface.

sender channel. In message queuing, a channel that initiates transfers, removes messages from a transmission queue, and moves them over a communication link to a receiver or requester channel.

sequential delivery. In MQSeries, a method of transmitting messages with a sequence number so that the receiving channel can reestablish the message sequence when storing the messages. This is required where messages must be delivered only once, and in the correct order.

sequential number wrap value. In MQSeries, a method of ensuring that both ends of a communication link reset their current message sequence numbers at the same time. Transmitting messages with a sequence number ensures that the receiving channel can reestablish the message sequence when storing the messages.

server. (1) In MQSeries, a queue manager that provides queue services to client applications running on a remote workstation. (2) The program that responds to requests for information in the particular two-program, information-flow model of client/server. See also *client*.

server channel. In message queuing, a channel that responds to a requester channel, removes messages from a transmission queue, and moves them over a communication link to the requester channel.

server connection channel type. The type of MQI channel definition associated with the server that runs a queue manager. See also *client connection channel type*.

service interval. A time interval, against which the elapsed time between a put or a get and a subsequent get is compared by the queue manager in deciding whether the conditions for a service interval event have been met. The service interval for a queue is specified by a queue attribute.

service interval event. An event related to the service interval.

session ID. In MQSeries for OS/390, the CICS-unique identifier that defines the communication link to be used by a message channel agent when moving messages from a transmission queue to a link.

shutdown. See *immediate shutdown*, *preemptive shutdown*, and *quiesced shutdown*.

signaling. In MQSeries for OS/390 and MQSeries for Windows 2.1, a feature that allows the operating system to notify a program when an expected message arrives on a queue.

single logging. A method of recording MQSeries for OS/390 activity where each change is recorded on one data set only. Contrast with *dual logging*.

single-phase backout. A method in which an action in progress must not be allowed to finish, and all changes that are part of that action must be undone.

single-phase commit. A method in which a program can commit updates to a queue without coordinating those updates with updates the program has made to resources controlled by another resource manager. Contrast with *two-phase commit*.

SIT. System initialization table.

stanza. A group of lines in a configuration file that assigns a value to a parameter modifying the behavior of a queue manager, client, or channel. In MQSeries on UNIX systems, MQSeries for OS/2 Warp, and MQSeries for Windows NT, a configuration (.ini) file may contain a number of stanzas.

storage class. In MQSeries for OS/390, a storage class defines the page set that is to hold the messages for a particular queue. The storage class is specified when the queue is defined.

store and forward. The temporary storing of packets, messages, or frames in a data network before they are retransmitted toward their destination.

subsystem. In OS/390, a group of modules that provides function that is dependent on OS/390. For example, MQSeries for OS/390 is an OS/390 subsystem.

supervisor call (SVC). An OS/390 instruction that interrupts a running program and passes control to the supervisor so that it can perform the specific service indicated by the instruction.

SVC. Supervisor call.

switch profile. In MQSeries for OS/390, a RACF profile used when MQSeries starts up or when a refresh security command is issued. Each switch profile that MQSeries detects turns off checking for the specified resource.

symptom string. Diagnostic information displayed in a structured format designed for searching the IBM software support database.

synchronous messaging. A method of communication between programs in which programs place messages on message queues. With synchronous messaging, the sending program waits for a reply to its message before resuming its own processing. Contrast with *asynchronous messaging*.

syncpoint. An intermediate or end point during processing of a transaction at which the transaction's protected resources are consistent. At a syncpoint, changes to the resources can safely be committed, or they can be backed out to the previous syncpoint.

System Authorization Facility (SAF). An OS/390 facility through which MQSeries for OS/390 communicates with an external security manager such as RACF.

system.command.input queue. A local queue on which application programs can put MQSeries commands. The commands are retrieved from the queue by the command server, which validates them and passes them to the command processor to be run.

system control commands. Commands used to manipulate platform-specific entities such as buffer pools, storage classes, and page sets.

system diagnostic work area (SDWA). Data recorded in a SYS1.LOGREC entry, which describes a program or hardware error.

system initialization table (SIT). A table containing parameters used by CICS on start up.

SYS1.LOGREC. A service aid containing information about program and hardware errors.

T

TACL. Tandem Advanced Command Language.

target library high-level qualifier (thlqual). High-level qualifier for OS/390 target data set names.

task control block (TCB). An OS/390 control block used to communicate information about tasks within an address space that are connected to an OS/390 subsystem such as MQSeries for OS/390 or CICS.

task switching. The overlapping of I/O operations and processing between several tasks. In MQSeries for OS/390, the task switcher optimizes performance by allowing some MQI calls to be executed under subtasks rather than under the main CICS TCB.

TCB. Task control block.

temporary dynamic queue. A dynamic queue that is deleted when it is closed. Temporary dynamic queues are not recovered if the queue manager fails, so they can contain nonpersistent messages only. Contrast with *permanent dynamic queue*.

termination notification. A pending event that is activated when a CICS subsystem successfully connects to MQSeries for OS/390.

thlqual. Target library high-level qualifier.

thread. In MQSeries, the lowest level of parallel execution available on an operating system platform.

time-independent messaging. See *asynchronous messaging*.

TMI. Trigger monitor interface.

trace. In MQSeries, a facility for recording MQSeries activity. The destinations for trace entries can include GTF and the system management facility (SMF). See also *global trace* and *performance trace*.

tranid. See *transaction identifier*.

transaction identifier. In CICS, a name that is specified when the transaction is defined, and that is used to invoke the transaction.

transmission program. See *message channel agent*.

transmission queue. A local queue on which prepared messages destined for a remote queue manager are temporarily stored.

trigger event. An event (such as a message arriving on a queue) that causes a queue manager to create a trigger message on an initiation queue.

triggering. In MQSeries, a facility allowing a queue manager to start an application automatically when predetermined conditions on a queue are satisfied.

trigger message. A message containing information about the program that a trigger monitor is to start.

trigger monitor. A continuously-running application serving one or more initiation queues. When a trigger message arrives on an initiation queue, the trigger monitor retrieves the message. It uses the information in the trigger message to start a process that serves the queue on which a trigger event occurred.

trigger monitor interface (TMI). The MQSeries interface to which customer- or vendor-written trigger monitor programs must conform. A part of the MQSeries Framework.

two-phase commit. A protocol for the coordination of changes to recoverable resources when more than one resource manager is used by a single transaction. Contrast with *single-phase commit*.

U

UIS. User identifier service.

undelivered-message queue. See *dead-letter queue*.

undo/redo record. A log record used in recovery. The redo part of the record describes a change to be made to an MQSeries object. The undo part describes how to back out the change if the work is not committed.

unit of recovery. A recoverable sequence of operations within a single resource manager. Contrast with *unit of work*.

unit of work. A recoverable sequence of operations performed by an application between two points of consistency. A unit of work begins when a transaction starts or after a user-requested syncpoint. It ends either at a user-requested syncpoint or at the end of a transaction. Contrast with *unit of recovery*.

user identifier service (UIS). In MQSeries for OS/2 Warp, the facility that allows MQI applications to associate a user ID, other than the default user ID, with MQSeries messages.

utility. In MQSeries, a supplied set of programs that provide the system operator or system administrator with facilities in addition to those provided by the MQSeries commands. Some utilities invoke more than one function.

Bibliography

This section describes the documentation available for all current MQSeries products.

MQSeries cross-platform publications

Most of these publications, which are sometimes referred to as the MQSeries “family” books, apply to all MQSeries Level 2 products. The latest MQSeries Level 2 products are:

- MQSeries for AIX, V5.1
- | MQSeries for AS/400, V5.1
- MQSeries for AT&T GIS UNIX V2.2
- | MQSeries for Compaq (DIGITAL) OpenVMS, V2.2.1.1
- | MQSeries for DIGITAL UNIX (Compaq Tru64 UNIX), V2.2.1
- MQSeries for HP-UX, V5.1
- MQSeries for OS/2 Warp, V5.1
- MQSeries for OS/390, V2.1
- MQSeries for SINIX and DC/OSx, V2.2
- MQSeries for Sun Solaris, V5.1
- | MQSeries for Tandem NonStop Kernel, V2.2.0.1
- MQSeries for VSE/ESA V2.1
- MQSeries for Windows V2.0
- MQSeries for Windows V2.1
- MQSeries for Windows NT, V5.1

Any exceptions to this general rule are indicated.

MQSeries Brochure
The *MQSeries Brochure*, G511-1908, gives a brief introduction to the benefits of MQSeries. It is intended to support the purchasing decision, and describes some authentic customer use of MQSeries.

MQSeries: An Introduction to Messaging and Queuing
An Introduction to Messaging and Queuing, GC33-0805, describes briefly what MQSeries is, how it works, and how it can solve some classic interoperability problems. This book is intended for a more technical audience than the *MQSeries Brochure*.

MQSeries Planning Guide
The *MQSeries Planning Guide*, GC33-1349, describes some key MQSeries concepts, identifies items that need to be considered before MQSeries is installed, including storage requirements, backup and recovery, security, and migration from earlier releases, and specifies hardware and software requirements for every MQSeries platform.

MQSeries Intercommunication
The *MQSeries Intercommunication* book, SC33-1872, defines the concepts of distributed queuing and explains how to set up a distributed queuing network in a variety of MQSeries environments. In particular, it demonstrates how to (1) configure communications to and from a representative sample of MQSeries products, (2) create required MQSeries objects, and (3) create and configure MQSeries channels. The use of channel exits is also described.

MQSeries Queue Manager Clusters
MQSeries Queue Manager Clusters, SC34-5349, describes MQSeries clustering. It explains the concepts and terminology and shows how you can benefit by taking advantage of clustering. It details changes to the MQI, and summarizes the syntax of new and changed MQSeries commands. It shows a number of examples of tasks you can perform to set up and maintain clusters of queue managers.

This book applies to the following MQSeries products only:
- MQSeries for AIX V5.1
- | MQSeries for AS/400 V5.1
- MQSeries for HP-UX V5.1
- MQSeries for OS/2 Warp V5.1
- MQSeries for OS/390 V2.1
- MQSeries for Sun Solaris V5.1
- MQSeries for Windows NT V5.1

MQSeries Clients
The *MQSeries Clients* book, GC33-1632, describes how to install, configure, use, and manage MQSeries client systems.

MQSeries System Administration
The *MQSeries System Administration* book, SC33-1873, supports day-to-day management of local and remote MQSeries objects. It includes topics such as security, recovery and restart, transactional support, problem

determination, and the dead-letter queue handler. It also includes the syntax of the MQSeries control commands.

This book applies to the following MQSeries products only:
- MQSeries for AIX, V5.1
- MQSeries for HP-UX, V5.1
- MQSeries for OS/2 Warp, V5.1
- MQSeries for Sun Solaris, V5.1
- MQSeries for Windows NT, V5.1

MQSeries Command Reference
The *MQSeries Command Reference*, SC33-1369, contains the syntax of the MQSC commands, which are used by MQSeries system operators and administrators to manage MQSeries objects.

MQSeries Programmable System Management
The *MQSeries Programmable System Management* book, SC33-1482, provides both reference and guidance information for users of MQSeries events, Programmable Command Format (PCF) messages, and installable services.

MQSeries Administration Interface Programming Guide and Reference
The *MQSeries Administration Interface Programming Guide and Reference*, SC34-5390, provides information for users of the MQAI. The MQAI is a programming interface that simplifies the way in which applications manipulate Programmable Command Format (PCF) messages and their associated data structures.

This book applies to the following MQSeries products only:
- MQSeries for AIX V5.1
- | MQSeries for AS/400 V5.1
- MQSeries for HP-UX V5.1
- MQSeries for OS/2 Warp V5.1
- MQSeries for Sun Solaris V5.1
- MQSeries for Windows NT V5.1

MQSeries Messages
The *MQSeries Messages* book, GC33-1876, which describes "AMQ" messages issued by MQSeries, applies to these MQSeries products only:
- MQSeries for AIX, V5.1
- MQSeries for HP-UX, V5.1
- MQSeries for OS/2 Warp, V5.1
- MQSeries for Sun Solaris, V5.1
- MQSeries for Windows NT, V5.1
- MQSeries for Windows V2.0
- MQSeries for Windows V2.1

This book is available in softcopy only.

For other MQSeries platforms, the messages are supplied with the system. They do not appear in softcopy manual form.

MQSeries Application Programming Guide
The *MQSeries Application Programming Guide*, SC33-0807, provides guidance information for users of the message queue interface (MQI). It describes how to design, write, and build an MQSeries application. It also includes full descriptions of the sample programs supplied with MQSeries.

MQSeries Application Programming Reference
The *MQSeries Application Programming Reference*, SC33-1673, provides comprehensive reference information for users of the MQI. It includes: data-type descriptions; MQI call syntax; attributes of MQSeries objects; return codes; constants; and code-page conversion tables.

MQSeries Application Programming Reference Summary
The *MQSeries Application Programming Reference Summary*, SX33-6095, summarizes the information in the *MQSeries Application Programming Reference* manual.

MQSeries Using C++
MQSeries Using C++, SC33-1877, provides both guidance and reference information for users of the MQSeries C++ programming-language binding to the MQI. MQSeries C++ is supported by these MQSeries products:
- MQSeries for AIX, V5.1
- MQSeries for HP-UX, V5.1
- MQSeries for OS/2 Warp, V5.1
- | MQSeries for AS/400, V5.1
- MQSeries for OS/390, V2.1
- MQSeries for Sun Solaris, V5.1
- MQSeries for Windows NT, V5.1

MQSeries C++ is also supported by MQSeries clients supplied with these products and installed in the following environments:
- AIX
- HP-UX

- OS/2
- Sun Solaris
- Windows NT
- Windows 3.1
- Windows 95 and Windows 98

MQSeries Using Java
MQSeries Using Java, SC34-5456, provides both guidance and reference information for users of the MQSeries Bindings for Java and the MQSeries Client for Java. MQSeries classes for Java are supported by these MQSeries products:
- MQSeries for AIX, V5.1
- MQSeries for AS/400, V5.1
- MQSeries for HP-UX, V5.1
- MQSeries for MVS/ESA V1.2
- MQSeries for OS/2 Warp, V5.1
- MQSeries for Sun Solaris, V5.1
- MQSeries for Windows NT, V5.1

This book is available in softcopy only.

MQSeries platform-specific publications

Each MQSeries product is documented in at least one platform-specific publication, in addition to the MQSeries family books.

MQSeries for AIX
MQSeries for AIX, V5.1 Quick Beginnings, GC33-1867

MQSeries for AS/400
MQSeries for AS/400 V5.1 Quick Beginnings, GC34-5557

MQSeries for AS/400 V5.1 System Administration, SC34-5558

MQSeries for AS/400 V5.1 Application Programming Reference (ILE RPG), SC34-5559

MQSeries for AT&T GIS UNIX
MQSeries for AT&T GIS UNIX System Management Guide, SC33-1642

MQSeries for Compaq (DIGITAL) OpenVMS
MQSeries for Digital OpenVMS System Management Guide, GC33-1791

MQSeries for Digital UNIX (Compaq Tru64 UNIX)
MQSeries for Digital UNIX System Management Guide, GC34-5483

MQSeries for HP-UX
MQSeries for HP-UX, V5.1 Quick Beginnings, GC33-1869

MQSeries for OS/2 Warp
MQSeries for OS/2 Warp, V5.1 Quick Beginnings, GC33-1868

MQSeries for OS/390
MQSeries for OS/390 Version 2 Release 1 Licensed Program Specifications, GC34-5377

MQSeries for OS/390 Version 2 Release 1 Program Directory

MQSeries for OS/390 System Management Guide, SC34-5374

MQSeries for OS/390 Messages and Codes, GC34-5375

MQSeries for OS/390 Problem Determination Guide, GC34-5376

MQSeries link for R/3
MQSeries link for R/3 Version 1.2 User's Guide, GC33-1934

MQSeries for SINIX and DC/OSx
MQSeries for SINIX and DC/OSx System Management Guide, GC33-1768

MQSeries for Sun Solaris
MQSeries for Sun Solaris, V5.1 Quick Beginnings, GC33-1870

MQSeries for Tandem NonStop Kernel
MQSeries for Tandem NonStop Kernel System Management Guide, GC33-1893

MQSeries for VSE/ESA
MQSeries for VSE/ESA Version 2 Release 1 Licensed Program Specifications, GC34-5365

MQSeries for VSE/ESA System Management Guide, GC34-5364

MQSeries for Windows
MQSeries for Windows V2.0 User's Guide, GC33-1822

MQSeries for Windows V2.1 User's Guide, GC33-1965

MQSeries for Windows NT
MQSeries for Windows NT, V5.1 Quick Beginnings, GC34-5389

MQSeries for Windows NT Using the Component Object Model Interface, SC34-5387

MQSeries LotusScript Extension, SC34-5404

Softcopy books

Most of the MQSeries books are supplied in both hardcopy and softcopy formats.

BookManager format

The MQSeries library is supplied in IBM BookManager format on a variety of online library collection kits, including the *Transaction Processing and Data* collection kit, SK2T-0730. You can view the softcopy books in IBM BookManager format using the following IBM licensed programs:

BookManager READ/2
BookManager READ/6000
BookManager READ/DOS
BookManager READ/MVS
BookManager READ/VM
BookManager READ for Windows

HTML format

Relevant MQSeries documentation is provided in HTML format with these MQSeries products:

- MQSeries for AIX, V5.1
- | MQSeries for AS/400, V5.1
- MQSeries for HP-UX, V5.1
- MQSeries for OS/2 Warp, V5.1
- MQSeries for Sun Solaris, V5.1
- MQSeries for Windows NT, V5.1 (compiled HTML)
- MQSeries link for R/3 V1.2

The MQSeries books are also available in HTML format from the MQSeries product family Web site at:

```
http://www.ibm.com/software/ts/mqseries/
```

Portable Document Format (PDF)

PDF files can be viewed and printed using the Adobe Acrobat Reader.

If you need to obtain the Adobe Acrobat Reader, or would like up-to-date information about the platforms on which the Acrobat Reader is supported, visit the Adobe Systems Inc. Web site at:

```
http://www.adobe.com/
```

PDF versions of relevant MQSeries books are supplied with these MQSeries products:

- MQSeries for AIX, V5.1
- | MQSeries for AS/400, V5.1
- MQSeries for HP-UX, V5.1
- MQSeries for OS/2 Warp, V5.1
- MQSeries for Sun Solaris, V5.1
- MQSeries for Windows NT, V5.1
- MQSeries link for R/3 V1.2

PDF versions of all current MQSeries books are also available from the MQSeries product family Web site at:

```
http://www.ibm.com/software/ts/mqseries/
```

PostScript format

The MQSeries library is provided in PostScript (.PS) format with many MQSeries Version 2 products. Books in PostScript format can be printed on a PostScript printer or viewed with a suitable viewer.

Windows Help format

The *MQSeries for Windows User's Guide* is provided in Windows Help format with MQSeries for Windows Version 2.0 and MQSeries for Windows Version 2.1.

MQSeries information available on the Internet

The MQSeries product family Web site is at:

```
http://www.ibm.com/software/ts/mqseries/
```

By following links from this Web site you can:

- Obtain latest information about the MQSeries product family.
- Access the MQSeries books in HTML and PDF formats.
- Download MQSeries SupportPacs.

Index

Sending your comments to IBM

If you especially like or dislike anything about this book, please use one of the methods listed below to send your comments to IBM.

Feel free to comment on what you regard as specific errors or omissions, and on the accuracy, organization, subject matter, or completeness of this book.

Please limit your comments to the information in this book and the way in which the information is presented.

To request additional publications, or to ask questions or make comments about the functions of IBM products or systems, you should talk to your IBM representative or to your IBM authorized remarketer.

When you send comments to IBM, you grant IBM a nonexclusive right to use or distribute your comments in any way it believes appropriate, without incurring any obligation to you.

You can send your comments to IBM in any of the following ways:

- By mail, to this address:

  Information Development Department (MP095)
  IBM United Kingdom Laboratories
  Hursley Park
  WINCHESTER,
  Hampshire
  United Kingdom

- By fax:
  - From outside the U.K., after your international access code use 44–1962–870229
  - From within the U.K., use 01962–870229
- Electronically, use the appropriate network ID:
  - IBM Mail Exchange: GBIBM2Q9 at IBMMAIL
  - IBMLink™: HURSLEY(IDRCF)
  - Internet: idrcf@hursley.ibm.com

Whichever you use, ensure that you include:

- The publication number and title
- The topic to which your comment applies
- Your name and address / telephone number / fax number / network ID.

Printed in the United States of America
on recycled paper containing 10%
recovered post-consumer fiber.

SC33-1369-11

Spine information:

MQSeries®

MQSeries Command Reference