Version 1 Release 3

IBM Tape Manager for z/VM User's Guide

SC18-9349-26

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Contents

Figures vii

Tables ix

About this information xi
Service updates and support information xi

Summary of Changes xiii

Chapter 1. Introduction to Tape Manager 1
What does Tape Manager do? 1
Benefits of using Tape Manager 1
Accessing Help 2
Prerequisites 2
Alternative processing using an RMM catalog . . . 2
Using the RMM command interface 2
Supported commands for Tape Manager and RMM catalogs 2

Chapter 2. Tape commands 5
TAPCMD 6
Authorization 6
Syntax 6
Options 6
Usage notes 7
Messages 7
User Interface return codes 8
TAPEADD 9
Authorization 9
Syntax 9
Operands 11
Usage notes 14
Messages 14
Return codes 17
TAPEDEL 18
Authorization 18
Syntax 19
Operands 20
Usage notes 21
Messages 22
Return codes 26
TAPEDEV 26
Authorization 26
Syntax 26
Operands 27
Usage notes 28
Messages 28
Return codes 31
TAPEDSN 31
Authorization 31
Syntax 32
Operands 33
Usage notes 34
Messages 34
Return Codes 37
TAPEEOV 38
Authorization 39
Syntax 39
Operands 39
Usage notes 40
Messages 40
Return Codes 41
TAPELBL 42
Authorization 42
Syntax 43
Operands 43
Usage notes 46
Messages 46
Return codes 48
TAPELIB 48
Authorization 48
Syntax 49
Operands 49
Usage notes 50
Messages 50
Return codes 51
TAPEMNT 52
Authorization 52
Syntax 52
Operands 55
Usage notes for Tape Manager catalog operations 57
Usage notes for RMM catalog operations . . . 58
Messages 58
Return codes 67
TAPEMOD 68
Authorization 68
Syntax 69
Operands 70
Usage notes 75
Messages 76
Return codes 81
TAPEMOV 81
Authorization 81
Syntax 82
Operands 83
Usage notes 84
Messages 85
Return codes 87
TAPEQRY 88
Authorization 88
Syntax 89
Operands 91
Usage notes 93
Examples 96
Messages 97
Return codes 99
TAPEREQ 99
Authorization 100
Syntax. 100
Operands. 101

Usage notes 101
Messages 104
Return codes 106

Chapter 3. Pool commands 107
Pool access privileges. 107
POOLACC 107
Authorization 108
Syntax. 108
Operands. 109
Usage notes 110
Messages 111
Return Codes 112
POOLDEF 113
Authorization 113
Syntax. 113
Operands. 115
Usage notes 116
Messages 117
Return Codes 119
POOLDEL 120
Authorization 120
Syntax. 120
Operands. 121
Usage notes 121
Messages 121
Return Codes 124
POOLMOD 125
Authorization 125
Syntax. 125
Operands. 126
Usage notes 127
Messages 127
Return Codes 130
POOLQRY 130
Authorization 130
Syntax. 131
Operands. 131
Usage notes 132
Messages 132
Return Codes 133
POOLXFR 134
Authorization 134
Syntax. 135
Operands. 135
Usage notes 135
Messages 135
Return Codes 137

Chapter 4. Administrative commands 139
CMDAUTH 139
Authorization 139
Syntax. 139
Operands. 140
Usage notes 141
Messages 141
Return codes 143
CMDEXIT 144
Authorization 144
Syntax. 144
Operands. 144
Usage notes 145
Messages 145
Return codes 146
CNFGSET 146
Authorization 147
Syntax. 147
ESM operands 148
MEDIA operands 149
EXPSTART operands 151
Usage notes 152
Messages 152
Return codes 154
EXPSTART 154
Authorization 155
Syntax. 155
Usage notes 155
Messages 155
Return codes 156
NODECMD 156
Authorization 157
Syntax. 158
Operands. 159
Usage notes 161
Messages 162
Return codes 163
QUIT/EXIT/STOP 164
Authorization 164
Syntax. 164
Operands. 164
Usage notes 164
Messages 165
Return codes 165
STATUS 166
Authorization 166
Syntax. 166
Operands. 167
Usage notes 167
Messages 167
Return codes 168
TAPESUM 168
Authorization 168
Syntax. 169
Usage notes 169
Messages 169
Return codes 170

Chapter 5. Syntax for RMM commands 171
Commands supported for Tape Manager and RMM catalogs 171
RMM 171
Authorization 171
Syntax. 172
Operands. 172
Usage notes 172
Messages 172
Return Codes 173

Chapter 6. Tape Manager Utilities . . . 175
TMSYNCH 175

Authorization 175
Syntax. 176
Modifying configuration file 176
TMDSE 179
Authorization 180
Syntax. 180
Modifying configuration file 181
TMVERIFY 183
Authorization 183
Syntax. 183
Modifying configuration file 184

Appendix. How to read syntax diagrams 187

Notices 189
Trademarks 191
Terms and conditions for product documentation 191
Privacy policy considerations 191

Index 193

Figures

1. Syntax diagram for TAPEADD command 11
2. Syntax diagram for TAPEDEL command 20
3. Syntax diagram for TAPEDEV command 27
4. Syntax diagram for TAPEDSN command 33
5. Syntax diagram for TAPEEOV command 39
6. Syntax diagram for TAPELBL command 43
7. Syntax diagram for TAPELIB command 49
8. Syntax diagram for TAPEMNT command 54
9. Syntax diagram for TAPEMOD command 70
10. Syntax diagram for TAPEMOV command 83
11. Syntax diagram for TAPEQRY command 91
12. Syntax diagram for TAPEREQ command 101
13. Syntax diagram for POOLACC command 109
14. Syntax diagram for POOLDEF command 115
15. Syntax diagram for POOLDEL command 121
16. Syntax diagram for POOLMOD command 126
17. Syntax diagram for POOLQRY command 131
18. CMDAUTH Syntax 140
19. CMDEXIT Syntax 144
20. Syntax for EXPSTART commands 155
21. Syntax diagram for NODECMD command 159
22. Syntax for QUIT, EXIT, and STOP commands 164
23. Syntax for STATUS command 166
24. Syntax diagram for TAPESUM command 169
25. Syntax for RMM command 172

Tables

1. List of supported commands for Tape Manager and RMM catalogs 3
2. List of options for TAPCMD command. 7
3. User interface/TAPCMD messages 7
4. User interface/TAPCMD return codes 8
5. List of operands for TAPEADD command 11
6. TAPEADD messages 14
7. Return codes 17
8. List of operands for TAPEDEL command 20
9. TAPEDEL messages. 22
10. TAPEDEL Return codes 26
11. List of operands for TAPEDEV command 27
12. TAPEDEV messages. 29
13. TAPEDEV Return codes 31
14. List of operands for TAPEDSN command 33
15. TAPEDSN messages 34
16. TAPEDSN Return codes 37
17. List of operands for TAPEEOV command 40
18. TAPEEOV messages 40
19. TAPEEOV Return codes 41
20. List of operands for TAPELBL command 43
21. TAPELBL messages 46
22. TAPELBL Return codes 48
23. List of operands for TAPELIB command 49
24. TAPELIB messages 50
25. TAPELIB Return codes. 51
26. List of operands for TAPEMNT command 55
27. TAPEMNT messages 59
28. TAPEMNT Return codes 67
29. List of operands for TAPEMOD command 70
30. TAPEMOD messages 76
31. TAPEMOD Return codes 81
32. List of operands for TAPEMOV 83
33. TAPEMOV messages 85
34. TAPEMOV Return codes 87
35. List of operands for TAPEQRY command 91
36. Description of FLAGS 93
37. Examples of special characters 95
38. Examples of special characters 96
39. TAPEQRY messages. 97
40. TAPEQRY Return codes 99
41. List of operands for TAPEREQ command 101
42. List of information returned from a default query response 102
43. List of information returned from a status request. 102
44. List of information returned from a long query response 102
45. TAPEREQ messages 104
46. TAPEREQ Return codes 106
47. Tape pool access privileges 107
48. List of operands for POOLACC command 109
49. POOLACC messages 111
50. POOLACC Return codes. 112
51. List of operands for POOLDEF command 115
52. POOLDEF messages 117
53. POOLDEF Return codes 119
54. List of operands for POOLDEL command 121
55. POOLDEL messages 121
56. POOLDEL Return codes 124
57. List of operands for POOLMOD command 126
58. POOLMOD messages. 128
59. POOLMOD Return codes 130
60. List of operands for POOLQRY command 131
61. POOLQRY messages 133
62. POOLQRY Return codes. 133
63. List of operands for POOLXFR command 135
64. POOLXFR messages 135
65. POOLXFR Return codes 137
66. List of operands for CMDAUTH command 140
67. CMDAUTH messages. 142
68. Return codes. 143
69. List of operands for CMDEXIT command 144
70. CMDEXIT messages 145
71. Return codes. 146
72. List of operands for CNFGSET ESM command 148
73. List of operands for CNFGSET MEDIA command 149
74. List of operands for CNFGSET EXPSTART command 151
75. CNFGSET messages 153
76. CNFGSET ESM return codes 154
77. EXPSTART messages 156
78. Return codes. 156
79. List of operands for NODECMD command 159
80. NODECMD messages. 162
81. Return codes. 163
82. List of operands for QUIT, EXIT, and STOP commands 164
83. QUIT, EXIT, and STOP messages 165
84. Return codes. 165
85. Operand for STATUS command 167
86. STATUS message 167
87. Return codes. 168
88. TAPESUM messages 170
89. TAPESUM Return codes 170
90. List of operands for RMM command 172
91. RMM messages 172
92. RMM return codes. 173
93. TMSYNCH syntax variables 176
94. Parameters in TMSYNCH.CONFIG 177
95. TMDSE syntax variables 181
96. Parameters in TMDSE.CONFIG 181
97. TMDSE syntax variables 183
98. Parameters in TMVERIFY.CONFIG 184
99. More parameters in TMVERIFY.CONFIG 186

About this information

This book provides instructions for using IBM Tape Manager for z/VM. It is designed to help operators perform these tasks:

- Use commands to perform tape management tasks, such as adding tapes to or deleting tapes from system or private pools.
- Define which tape drives to use by specifying either an address or an address range.
- Control retention by specifying an expiration date or a maximum retention period.
- Receive notification when a tape is encountered with either no label or an incorrect label.
- Obtain information on all of the tapes in the system.

Always check the VM Tools Library page for the most current version of this publication:

http://www.ibm.com/software/products/en/tape-manager-for-zvm

Service updates and support information

To find service updates and support information, including software FixPaks, PTFs, Frequently Asked Questions (FAQs), technical notes, troubleshooting information, and downloads, refer to the following Web page:

http://www.ibm.com/software/stormgmt/zvm/tape/

Summary of Changes

This section summarizes the significant improvements or enhancements for IBM® Tape Manager for z/VM® V1.3 and refers you to relevant sections of this book for more information. Minor changes to the text are not listed.

SC18-9349-26 March, 2018, for PTF UI54509

The following changes were made to the documentation in this release:

- *New TAPESUM command*. A new administrative command, TAPESUM, generates an inventory summary report by media type. See "TAPESUM" on page 168 for more information.
- *Changes to TAPEADD command*. Several changes have been made to the TAPEADD command. For example, a new group of parameters, SCRCAT, has been added to specify different types of library category processing for scratch volumes. See "TAPEADD" on page 9 for more information.
- *Changes to TAPEMOD and TAPEQRY commands*. The SSTAT parameter specifies whether a system status is returned only for tapes that have a system hold status of HOLD or NOHOLD. This parameter now additionally provides two-letter abbreviations for a more specific hold flag value. A numeric value is no longer supported. See "TAPEMOD" on page 68 or "TAPEQRY" on page 88 for more information.
- *Changes to tape commands*. Several changes have been made to Syntax diagrams, Usage Notes, and Operand descriptions of various tape commands. Refer to the TAPEADD, TAPEDEL, TAPEDSN, TAPEMNT, TAPEMOD, and TAPEQRY commands for more information.
- *Changes to CNFGSET command*. Two new groups of category parameters, SCRCAT and VOLCAT, for scratch and volume categories have been added to the Syntax diagram and to the Operand descriptions. See the "CNFGSET" on page 146 for more information.
- *New messages*. Several new messages have been added to the TAPEADD, TAPEDEL, TAPEDSN, TAPEMNT, TAPEMOD, TAPEQRY, and POOLDEL commands. Refer to those commands to review the list of new messages.

SC18-9349-25 July, 2017, for PTF UI48913

The following changes were made to the documentation in this release:

- *Changes to MAN and ALT parameters*. The TAPEADD command allows the use of manual (MAN) and automated tape library (ATL) parameters. If neither is specified, a new set of rules determines what default will be used. See "TAPEADD" on page 9 for more information.
- *Changes to TAPEQRY*. This command now supports the use of regular expressions for volumes, such as using `VOL *` to specify all volumes. Also two new parameters, POWNER and PNAME, have been added to the volume attribute list. See "TAPEQRY" on page 88 for more information.
- *New exclusion operator*. A minus sign (-) can be used between two volume specifications to exclude volumes from a list. This operator can be used in the TAPEADD, TAPEDEL, TAPEMOD, TAPEMOV, and the TAPEQRY commands. See any of the listed commands for more information on the exclusion operator.

- *TAPEQRY as subcommand*. New function has been added to the TAPEDEL, TAPEMOD, and TAPEMOV commands to use TAPEQRY as a subcommand to generate a list of volumes to be processed by the primary commands. A list of TAPEQRY parameters can be specified between two new delimiter parameters, QRY and QEND. See any of the listed commands for more information on the QRY and QEND parameters.
- *Additional LABEL parameter*. The TAPEMNT command now has a LABEL NEW parameter to indicate that an I/O error should be tolerated and that the specified volume should be given to the requestor even if there is an I/O error.

SC18-9349-24 September, 2015

The following changes were made to the documentation in this release:

- *New EXPSTART command and operand.* A new administrative command, EXPSTART, can be used to initiate expiration processing. Also an EXPSTART operand has been added to the configuration command. For more information, see "EXPSTART" on page 154 and also "CNFGSET" on page 146.
- *Changes to NODECMD*. The FORCE and ALTADDR parameters were added to the NODECMD. The `LOCAL` *`nodename`* and `REMOTE` *`nodename`* parameters were replaced with simply *nodename*. Additional changes were made to operand descriptions and to syntax notes to clarify their functions. For more information, see "NODECMD" on page 156.
- *Changes to POOLDEF syntax*. The syntax diagram has been enhanced to include "Defspec" and "Likespec" segments to clarify when various operands are required or optional. See "TAPELIB" on page 48 for more information.
- *Changes to Authorizations*. A few changes have been made to the terminology used in the "Authorization" section for most of the commands.
  - The term "system administrator" has been replaced with "Tape Manager Admins" where appropriate.
  - The term "Operations" has been replaced with "Tape Manager Operations" where appropriate.

SC18-9349-23 April, 2015

The following changes were made to the documentation in this release:

- *Change to TAPELIB*. A new parameter, ALTLIB, has been created for the TAPELIB command to specify an alternate library name, which provides access to a volume from multiple libraries. For more information, refer to "TAPELIB" on page 48.
- *New messages.* Three new messages have been created: EUM0884E, EUM0885E, and EUM0888W. Refer to the TAPELBL, TAPELIB, TAPEMOD, and CMDAUTH messages for details.

SC18-9349-22 December, 2014

The following changes were made to the documentation in this release:

- *Changes in scratch tape selection process.* Prior to PTF UI17942, scratch tapes were selected based on the last volume in a chain of eligible scratch volumes. Next, PTF UI17942 caused scratch tapes to be randomly selected from the list of eligible scratch volumes in the system pool. Now with PTF UI24163, the SCRSEL operand on the CNFGSET MEDIA command enables you to designate how you want a scratch tape to be selected. The SCRSEL RANDOM operand randomly selects a scratch tape from a pool of eligible scratch volumes. The SCRSEL

LASTVOL operand chooses the last volume in a chain of eligible scratch volumes. Refer to “MEDIA operands” on page 149 for more information.

- *Changes to TAPEDEV*. The number of address specifications that are allowed for this command has been changed. A syntax footnote, message EUM0378E, and message EUM0738E have been updated to reflect this change. Refer to “TAPEDEV” on page 26 for more information.
- *Change to TAPEMOD*. The description of the EXPDAYS parameter for the TAPEMOD command has been modified to allow the specification of "EXPDAYS -1". Refer to “Operands” on page 70 for more information.

SC18-9349-21 April, 2013

The following changes were made to the documentation in this release:

- *Standard Mode and RMM Mode*. To clarify which commands are supported in both modes, the term "Standard Mode" has been replaced with "Tape Manager catalog" and the term "RMM Mode" has been replaced with "RMM catalog." Some commands work with the a Tape Manager catalog only, others work with an RMM catalog only, and some commands are supported by both.
- *Syntax changes*. All of the syntax diagrams have been reviewed and changes have been made where appropriate. Refer to the "Syntax" section of any command to verify how to type the command and its operands.

SC18-9349-20 October, 2012

The following changes were made to the documentation in this release:

- *More on TAPCMD.* The TAPCMD has been added to the list of tape commands. TAPCMD is used by all of the commands in this book, so it is now fully described at the beginning of the Chapter 2, “Tape commands,” on page 5 chapter.
- *Organizational change for TAPCMD options.* The syntax and operands for the TAPCMD options have been removed from the individual Tape Manager commands. This "Options" information is now included in the new TAPCMD section.
- *More on using tape commands with the SMSG interface.* The CP SMSG command sends commands to the Tape Manager TMTMM service machine whenever the TAPCMD command is not available. For more information, refer to Chapter 2, “Tape commands,” on page 5
- Other changes have been made to the syntax diagrams to ensure accuracy and consistency between the documentation and the help panels for the commands. Please review the syntax diagrams for any commands you use to check for changes in the syntax.

SC18-9349-19 November, 2011

New messages were added to the TAPEMNT and TAPEMOD commands. Refer to the command's "Message" section for details on the EUM0872E, EUM0873E, and EUM0874I messages.

SC18-9349-18 February, 2011

More information was added to the "CRPW password" operand for the NODECMD command. For details, refer to “NODECMD” on page 156.

SC18-9349-17 November, 2010

A new message, EUM0871E, has been added for the NODECMD command. Also the text was changed for message EUM0072I for the TAPEMNT command.

SC18-9349-16 September, 2010

The changes made for this release are:

- *New CNFGSET command*. A new administrative command allows you to modify configuration settings. For more information, refer to “CNFGSET” on page 146.
- *New NODECMD command*. This is a new administrative command that allows you to perform different functions, such as QRY, START, and STOP, on nodes. For more information, refer to “NODECMD” on page 156.
- *Shared Catalog execution*. A new section has been added to many of the commands explaining how the command functions on a catalog node, request node, or local node. For an example, refer to “TAPEADD” on page 9.
- *Authorities revised.* Many of the "Authorization" sections have been improved to provide more detailed explanations of the authorities required to use the commands.
- *New messages*. Several new messages have been added. Messages are listed under each command.

Chapter 1. Introduction to Tape Manager

IBM Tape Manager for z/VM is designed to efficiently manage, monitor, and protect your tape resources. It provides many useful features to help you obtain the most value from your tape resources. This chapter provides an overview of the Tape Manager product.

What does Tape Manager do?

Tape Manager provides several commands that allow you to perform many tape management tasks, such as adding tapes to or deleting tapes from system or private pools. With flexible retention control, you can specify an expiration date or a maximum retention period. You can even query important information about all of the tapes in the system.

Operations, such as backup and recovery, are facilitated by Tape Manager through dynamic creation and deletion of private tape pools. This enables the creation of a collection of tapes that are related to a specific job or function. Tape Manager facilitates tape operations by:

- Providing commands to dynamically create new private pools that can be defined to use scratch tapes from either another private pool or the system pool.
- Supporting dynamic definition of pools using LIKE and LIKEU options. The LIKE option allows a pool to be created with the same attributes of an existing pool. The LIKEU option performs the same operation as LIKE, but also replicates the user permissions of the existing pool.
- Allowing you to easily return all tapes from a failed backup to "scratch" status. Once a pool has been dynamically defined to contain the tapes related to a specific job, the tapes can be returned to "scratch" status by simply deleting the pool.

Tape Manager helps protect tape resources by:

- Verifying internal tape labels and appropriate access authority for tape requests.
- Providing authorizations to pool resources, attributes, and defaults.
- Notifying you when tape resources are in danger of running low or when tape catalog disks are approaching capacity.

Benefits of using Tape Manager

Tape Manager provides several benefits:

- Offers comprehensive features that help you to manage tapes and tape resources, including the ability to:
  - Perform tape management tasks, such as adding tapes to or deleting tapes from system or private pools, using simple line commands.
  - Provide flexible retention control using an expiration date or a maximum retention period.
  - Query important information on all tapes in the system.
- Facilitates backup and recovery operations by:
  - Providing commands to dynamically create new private pools that can be defined to use scratch tapes from either another private pool or the system pool.

  - Supporting dynamic definition of pools using LIKE and LIKEU options.
  - Allowing you to easily return all tapes from a failed backup to "scratch" status. Once a pool has been dynamically defined to contain the tapes related to a specific job, the tapes can be returned to "scratch" status by simply deleting the pool.
- Protects tape resources by providing functions to verify internal tape labels and notify personnel when catalog disks are approaching capacity. You can also verify the appropriate access authority for tape requests.

Accessing Help

About this task

Access Tape Manager help in the following ways:

- To access the help menu, type:

  ```
  HELP AEUM
  ```

- To access help for a specific command, type "HELP AEUM" followed by the command name. For example:

  ```
  HELP AEUM TAPEQRY
  ```

Prerequisites

Tape Manager runs on all supported versions of z/VM and is compatible with VM/ESA. Tape Manager supports all VM-supported tape media types and their hardware, including 3590's that utilize robotics.

Alternative processing using an RMM catalog

Tape Manager for z/VM provides support for customers that may wish to use the z/OS® RMM catalog to manage tapes that are used on VM. The RMM interface uses a TCP/IP socket connection to communicate with the RMM agent code, provided by Tape Manager, running on the z/OS system. The z/OS RMM agent is compatible with RACF® tape management constructs and provides an authorization exit as well.

Note: A limited set of the Tape Manager commands is available for the RMM catalog and no volume catalog information is kept on the z/VM system.

Additional information regarding using RMM with Tape Manager can be found in Chapter 5, “Syntax for RMM commands,” on page 171 and in this product's *Installation and Administration Guide* (Publication # SC18-9344).

Using the RMM command interface

Tape Manager allows RMM commands to be issued from VM and for the output of the command to be returned to the requestor on the VM system. The output can be returned either as message output (queued or displayed) or in a reader file. The message output is equivalent to the output that would result from issuing the RMM command in the TSO environment.

Supported commands for Tape Manager and RMM catalogs

The table below shows the commands that are supported for the Tape Manager catalog and the RMM Catalog. The commands may have different syntax for each type of catalog.

Table 1. List of supported commands for Tape Manager and RMM catalogs

Command	Tape Manager Catalog	RMM Catalog
CMDAUTH	Supported	Supported
CMDEXIT	Supported	Supported
CNFGSET	Supported	Supported
NODECMD	Supported with some operands	Supported with some operands
POOLACC	Supported	
POOLDEF	Supported	
POOLDEL	Supported	
POOLMOD	Supported	
POOLQRY	Supported	
POOLXFR	Supported	
QUIT/EXIT/STOP	Supported	Supported
RMM		Supported
STATUS	Supported	Supported
TAPEADD	Supported	
TAPEDEL	Supported	
TAPEDEV	Supported	Supported
TAPEDSN	Supported	
TAPEEOV	Supported	Supported
TAPELBL	Supported	Supported
TAPELIB	Supported	Supported
TAPEMNT	Supported	Supported
TAPEMOD	Supported	
TAPEMOV	Supported	
TAPEQRY	Supported	
TAPEREQ	Supported	Supported

Chapter 2. Tape commands

This chapter describes the tape management commands and their syntax. Tape Manager provides two methods for issuing Tape Manager commands:

- TAPCMD for virtual machines running in a CMS environment.
- SMSG for virtual machines for which the TAPCMD command is not available. This can include CMS users where the TAPCMD module is not available or non-CMS users, such as Linux guests.

The TAPCMD program runs in the user's virtual machine and performs a variety of processes, such as translating a file mode (i.e., file mode A) to a virtual address, before sending the command to Tape Manager. An example of using the TAPCMD program to execute the TAPEADD command is shown below:

```
TAPCMD TAPEADD tape_add_parms (tapcmd_options
```

The CP SMSG command can also be used to send commands to the Tape Manager TMTMM service machine whenever the TAPCMD command is not available. The SMSG interface accepts only the WAIT option of the valid TAPCMD options and the TAPCMD DEFAULTS file is ignored.

When WAIT is specified with either TAPCMD or SMSG, Tape Manager will attempt to return the command output via SMSG. If Tape Manager is unable to reply to the virtual machine that issued the command using the SMSG interface, messages will be returned using the standard CP message interface.

For example, the SMSG output from the command `'CP SMSG TMTMM STATUS (WAIT'` is shown below:

```
****008744EUMTAP0010I STATUS message 008744 received from USERX.
****008744TMM: TMTMM AT RS54
****008744TMM: Start date 28 Jun 2012, time 16:41:48
****008744TMM: Running with REXX runtime library support.
****008744TMM: 5697-J08 V1R3 TM compiled on 18 Aug 2011 at 17:40:55
****008744TMM: Main control loop iterations = 151640
****008744TMM: DMM TMDMM, LMM  TMLM1, CMM TMCMM
****008744TMM: Command processing is active.
****008744TMM: External Security is inactive.
0000008744EUMTAP0083I STATUS request 008744 complete — RC 0.
```

Each message is preceded by a prefix area when the WAIT option is used. The prefix area is subject to change and the description below is provided only to clarify the output in the example:

Bytes 1 - 4

**** - when the message is not the last output message for the request

nnnn - the return code for the command when the message is the last output message for the request

Bytes 6 - 10

nnnnnn - the six-digit request number assigned to the request by Tape Manager

TAPCMD

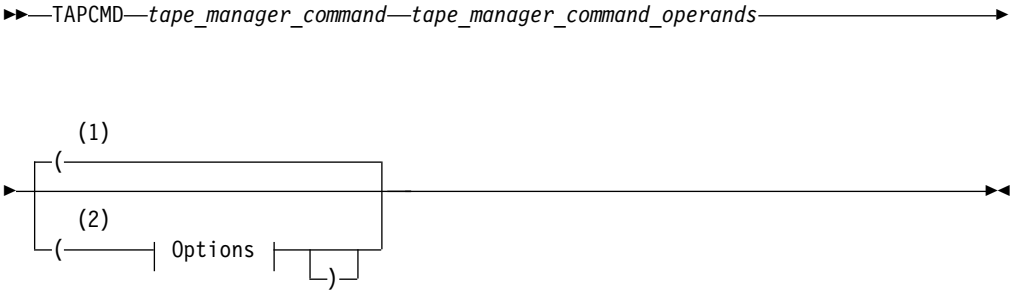
The TAPCMD command provides an interface to issue Tape Manager commands. The TAPCMD DEFAULTS file provides defaults for the TMMID and WAIT options. Refer to "The TAPCMD User Interface" in the *Tape Manager Installation and Administration Guide* for additional information.

Authorization

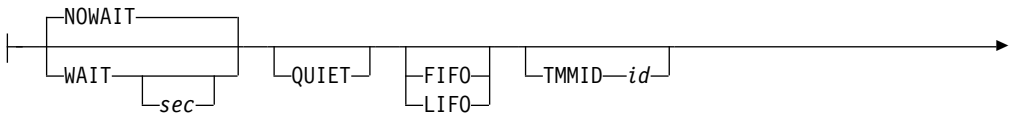
To use TAPCMD, no authorization is required unless site security policies restrict the use of the command. Additional authorization checking is performed on any Tape Manager subcommand issued using TAPCMD.

Syntax

The following diagram shows the TAPCMD syntax:



Options:



Notes:

1 The default options are shown above the line in the Options group.

2 The options can be in any order.

3 The VADDR and FM options are only valid when the FILE operand is specified on a Tape Manager command.

Options

This section lists the options available for this command. Refer to the following table.

Table 2. List of options for TAPCMD command

Option	Description
WAIT *sec*	Specifies synchronous processing and the wait time in seconds. If *sec* is not specified, the value in the TAPCMD DEFAULTS will be used if a value is supplied there; otherwise, the default is 300 seconds when WAIT is specified.
NOWAIT	Specifies asynchronous processing.
QUIET	Specifies that the interface program will not write any messages to the CMS console (i.e., errors will be reported only by return codes). To ensure all messages are suppressed, QUIET must be the first option after the option separator (left parenthesis). Otherwise, any messages generated before the QUIET option is processed will be written to the console.
FIFO	Specifies that the interface program will write any messages to the program stack with FIFO (first in, first out) queuing, rather than to the CMS console. To ensure that all messages are stacked, FIFO must be the first option after the option separator (left parenthesis). Otherwise, any messages generated before the FIFO option is processed will not be stacked. The FIFO option is mutually exclusive with LIFO.
LIFO	Specifies that the interface program will write any messages to the program stack with LIFO (last in, first out) queuing, rather than to the CMS console. To ensure that all messages are stacked, LIFO must be the first option after the option separator (left parenthesis). Otherwise, any messages generated before the LIFO option is processed will not be stacked. The LIFO option is mutually exclusive with FIFO.
TMMID *id*	Specifies the name of the Tape Manager machine.
VADDR *vaddr*	When FILE is used, the VADDR option identifies the virtual address of the disk on which the file resides. The default is 191. The disk must be a CMS minidisk defined with *vaddr* in the requestor's directory entry. **Note:** The file must not be private, which means it must *not* have a file mode number of 0.
FM *filemode*	This option can be used, instead of the VADDR option, to reference a CMS minidisk accessed as *filemode* by the requestor. The minidisk must be a CMS minidisk accessed by the requestor when the Tape Manager command is submitted. **Note:** The file must not be private, which means it must *not* have a file mode number of 0.

Usage notes

When using TAPCMD, consider the following:

1. Refer to the individual Tape Manager commands for usage notes.
2. Errors from the interface result in return codes in the range 4000-4999. See the individual Tape Manager commands for command-specific error codes.

Messages

The following table lists the messages generated by issues that occur when making entries through the user interface with the TAPCMD command.

Table 3. User interface/TAPCMD messages

Message text	Return code
Invalid option <value>.	4000
Incorrect operand <value>.	4004

Table 3. User interface/TAPCMD messages (continued)

Message text	Return code
Required operand is missing.	4008
Conflict detected at option <value>.	4012
Command exceeds available buffer length.	4016
Maximum WAIT value is (2**31)-1 seconds.	4020
HNDEXT return code was <value>.	4024
VMCF authorize return code was <value>.	4028
CP SMSG return code was <value>.	4032
Tape Manager ID <value> is not logged on.	4036
Tape Manager ID <value> is not accepting requests.	4040
No response from server in specified time.	4044
Invalid filemode <value>.	4048
Filemode <value> is not accessed.	4052
Disk <value> is not owned by your user ID.	4056
Invalid virtual address <value>.	4060
Option <value> was specified more than once.	4064
Files for batch processing cannot be on DOS or OS disks or in SFS directories.	4068

User Interface return codes

The following table describes the return codes associated with user interface messages when using the TAPCMD command:

Table 4. User interface/TAPCMD return codes

Return code	Description
0	Finished correctly
4000	Invalid user interface option.
4004	Incorrect operand on a user interface option.
4008	A required operand for a user interface option was not supplied.
4012	A conflict exists in the specified user interface options.
4016	The command exceeds the user interface buffer capacity.
4020	The WAIT time exceeded the maximum allowed.
4024	The required HNDEXT could not be established.
4028	Unable to authorize for VMCF.
4032	Unable to issue an SMSG command to the TMM.
4036	The TMM user ID is not logged on.
4040	The TMM user ID is not accepting requests.
4044	The WAIT time expired with no reply from the TMM.
4048	An invalid file mode was specified for the FMODE option.
4052	The specified file mode (FMODE option) is not accessed.
4056	The VADDR specified is not in this user's directory entry.
4060	The VADDR is not valid (not hex, or larger than x'FFFF').

Table 4. User interface/TAPCMD return codes (continued)

Return code	Description
4064	Duplicate VADDR or FMODE option specified.
4068	The file mode (FMODE option) specified is not an EDF disk.

TAPEADD

Use the TAPEADD command to add tapes to the inventory. The command is valid for a Tape Manager catalog, but not for an RMM catalog.

Shared Catalog Execution

The TAPEADD command can be entered on the catalog node or a request node. The command executes on the catalog node in all cases.

Authorization

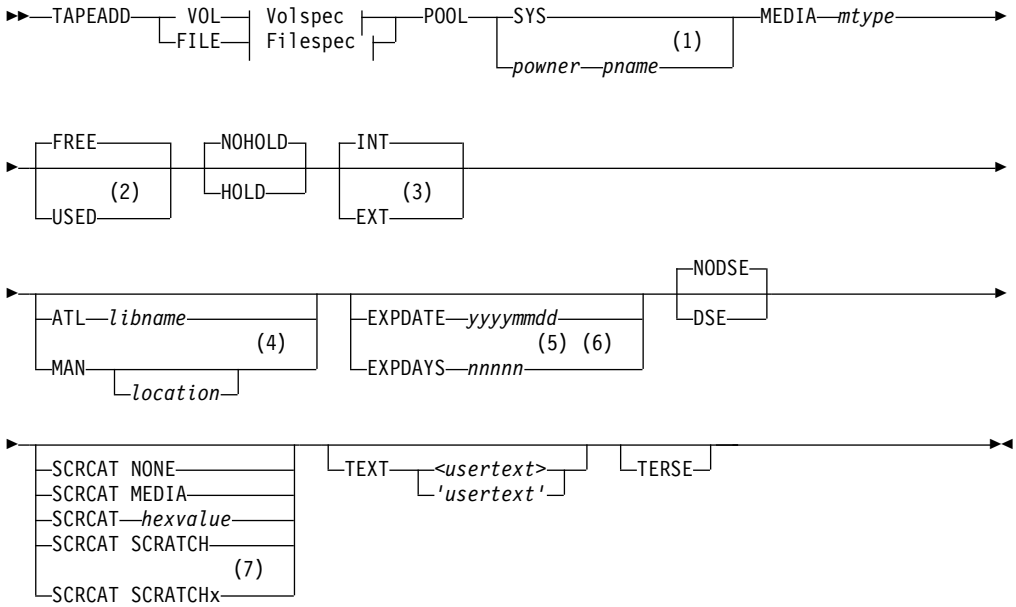
To use the TAPEADD command, you must have Tape Manager Admins authority.

When an External Security Manager (ESM) is active, the authorization requirements may be controlled by ESM profiles. When `Privileged_User_Authority` is YES, Tape Manager Admins authority requires READ access to the administrator profile.

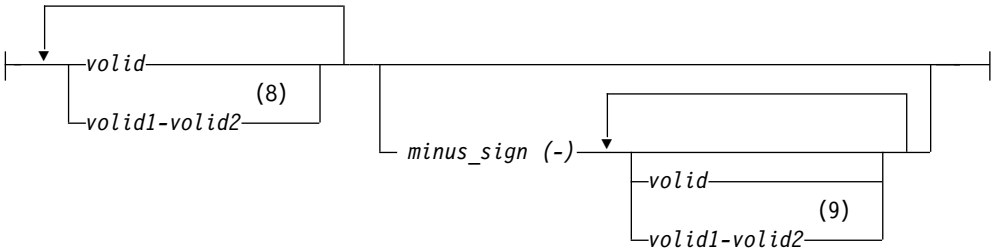
For more details, refer to the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344).

Syntax

The following diagram shows the TAPEADD syntax:



Volspec:



Filespec:

Notes:

1 SYS is not valid for powner.

2 Type USED is not valid for POOL SYS. The default will be USED if an expiration date is not specified.

3 EXT is not valid for POOL SYS.

4 As of PTF UI48913, if ATL or MAN is not specified, the following rules apply: **(A)** If only one automated library is defined, ATL will be the default and the library name will be used for 'libname'. **(B)** If no automated libraries are defined, MAN will be the default. **(C)** If multiple libraries are defined, message EUM0922E will be issued and the command will fail.

5 Expiration date is not valid when FREE is specified.

6 When a private pool is specified and an expiration is not specified, the default expiration value for the pool will be used.

7 The SCRCAT NONE parameter is always valid. Other values for the SCRCAT parameter are valid only when each of the follow is true: **(A)** The library type is ATL. **(B)** The volumes being added are eligible scratch volumes; that is, FREE, NOHOLD, and INT are specified or defaulted. **(C)** The Media Type is associated with a Scratch Category (SCRCAT Media parameter). The SCRCAT parameter is required when the Media Scratch Category specifies a non-zero Expiration Hold period. Important information is contained in the description for the SCRCAT parameter (See "Operands" below). Please refer to this detailed information when using this parameter.

8 When the *volid1-volid2* range is specified, the names must follow a clearly defined format: **(A)** At least the right-most position of *volid1* and *volid2* must be numeric. **(B)** If there is a non-numeric character in *volid1*, the fixed portion of *volid1* is position 1 through the right-most, non-numeric character of the identifier. The numeric portion of the identifier contains the remaining digits. **(C)** The fixed portion of *volid2* must be the same as the fixed portion of *volid1*. The length of the numeric portion of *volid2* must be the same length as the numeric portion of *volid1*, and must be greater than the numeric portion of *volid1*.

9 The minus sign is an exclusion operator. See the information below.

10 The default virtual address of the MDISK for the file is 191. See the help for

TAPCMD for additional information pertaining to the virtual address or file mode when the FILE operand is specified.

Figure 1. Syntax diagram for TAPEADD command

Operands

The table below describes the TAPEADD operands.

Table 5. List of operands for TAPEADD command

Operand	Description
VOL *volspec*	The *volspec* is a space-delimited list of one or more volume specifications. A volume specification can be a single volume identifier or a volume range.
volid	The *volid* is a volume identifier. A volume identifier can be one to six characters. No edit checking is performed on the characters within the *volid*, but embedded blanks are not valid.
volid1-volid2	The *volid1-volid2* is a volume identifier range. A range specification is only valid for numeric values in the right-most part of the volume identifier. If the left-most part contains non-numeric data, all of the following conditions must be met: • The non-numeric data must be identical for *volid1* and *volid2*. • The identifiers must be of equal length. • The numeric portion of *volid1* must be less than the numeric portion of *volid2*. For example, `RA0001-RA0050` and `000001-000050` are valid ranges, but `RA0001-RX0050` ("RA" and "RX") and `00001-000050` (one has five digits, the other has six) are not valid ranges.
Minus_sign (-)	As of PTF UI48913, the minus sign with at least one space on both sides (-) is an exclusion operator. Volumes following the minus sign will be excluded from the list of volumes to be processed. A minus sign cannot be the first operator in a volume specification and only a single occurrence is permitted. For example, `VOL V00000-V00005 - V00003-V00004` is equivalent to volumes `V10001 V10002 V10005`. Note that a minus sign connected to a VOLSER on one side with a space on the other side is never valid.
FILE *filespec*	Specifies a file, *filespec*, that contains one or more volume serial numbers. The *filespec* includes *fname* and *ftype*, where *fname* is the name of the file and *ftype* is the type of file to be processed. When the FILE operand is specified, the file can contain multiple records. Each record can contain multiple, space-delimited volume specifications. You can use the FM or VADDR option of the TAPCMD command to specify the location of the file.
POOL SYS	Adds tapes to the system inventory as free tapes.
POOL *powner pname*	Identifies an existing pool name. The tapes are added to the system inventory and assigned as free tapes to the pool.

Table 5. List of operands for TAPEADD command (continued)

Operand	Description
MEDIA *mtype*	Identifies the media type that will be used for device compatibility checking. An entry corresponding to *mtype* must be in the System Media Type file.
FREE	Sets the use status of a volume to FREE. See "Understanding volume attributes and hold conditions" in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for additional information.
USED	Sets the use status of a volume to USED. See "Understanding volume attributes and hold conditions" in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for additional information.
HOLD	Sets the user hold value to HOLD. See "Understanding volume attributes and hold conditions" in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for additional information.
NOHOLD	Sets the user hold value to NOHOLD. See "Understanding volume attributes and hold conditions" in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for additional information.
INT	Designates a volume as an INTERNAL volume. This is the default. See "Understanding volume attributes and hold conditions" in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for additional information.
EXT	Designates a volume as an EXTERNAL or foreign volume. An external tape must be added directly to a private pool. At that point, it can be mounted for READ/WRITE, but it will never be used as a free (i.e. scratch) tape for the pool. See "Understanding volume attributes and hold conditions" in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for additional information. **Note:** EXT is not valid with POOL SYS.
EXPDATE *yyyymmdd*	Sets the year, month, and day after which a tape will become a free tape if there are no conditions (such as a user hold) that will cause the expiration process to be bypassed. See "Understanding Expiration Processing and Scratch Tapes" in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for additional information.
EXPDAYS *nnnnn*	Specifies the number of days, from one to five digits, after which a tape will become a free tape if there are no conditions (such as a user hold) that will cause the expiration process to be bypassed. See "Understanding Expiration Processing and Scratch Tapes" in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for additional information.
MAN *location*	Specifies that this is a manually mounted tape and, optionally, a location tag with one to sixteen (16) non-blank characters to be displayed with mount requests. The location parameter will be translated to uppercase.
ATL *libname*	Specifies that this volume resides in an automated tape library (ATL) and indicates the name of that library. The library name can be one to sixteen (16) non-blank characters and will be translated to uppercase.

Table 5. List of operands for TAPEADD command (continued)

Operand	Description
NODSE	Specifies that DSE (data security erase) processing is not required after the volume expires and before the volume is returned to scratch status. NODSE is the default even when the pool setting is DSE.
DSE	Specifies that DSE (data security erase) processing is required after the volume expires and before the volume is returned to scratch status. It is the responsibility of the site to ensure that the DSE processing occurs and that the DSE flag is cleared once the DSE is completed. The TMDSE utility provided in Tape Manager can be used to perform this processing and clear the flag. For more information on TMDSE, refer to the "TMDSE" on page 179.
SCRCAT NONE	Specifies that the category in the automated tape library will not be changed when scratch volumes are added to Tape Manager. If the Tape Manager media type specified on TAPEADD is not associated with a Scratch Category, SCRCAT NONE is the default. **Note:** A volume that is within a Scratch Category Expire Hold period in the library may not be available for scratch mounts until the library hold period has elapsed.
SCRCAT MEDIA	Specifies that the category in the automated tape library will be set to the Scratch Category associated with the Media Type when scratch volumes are added to Tape Manager. This is the default when the Scratch Category does not have an Expiration Hold period defined. **Important:** When SCRCAT MEDIA is specified and the Media Scratch Category has a non-zero Expiration Hold period, the Expire Hold Flag (STAT XH) flag will be set, and the Expire Hold date will be set to the date the volume was added. The volume will be available as a scratch volume once the Expire Hold period associated with the Media Scratch Category has elapsed. To avoid an Expiration Hold, use SCRCAT with a category value, rather than MEDIA.
SCRCAT *hexvalue*	Specifies that the category in the automated tape library will be set to the four-character hexadecimal value specified when scratch volumes are added to Tape Manager. No Tape Manager hold is placed on the volume regardless of whether a Media Scratch Category Expire Hold was specified. See the "Define_Media" statement in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for additional information. **Note:** If the library has an Expire Hold period associated with the volume, the volume may not be available for scratch mounts until the library hold period has elapsed.
SCRCAT SCRATCH	Specifies that the category in the automated tape library will be set to SCRATCH (which the library may convert to SCRATCH0) when scratch volumes are added to Tape Manager. No Tape Manager hold is placed on the volume regardless of whether a Media Scratch Category Expire Hold was specified. See the "Define_Media" statement in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for additional information. **Note:** If the library has an Expire Hold period associated with the volume, the volume may not be available for scratch mounts until the library hold period has elapsed.

Table 5. List of operands for TAPEADD command (continued)

Operand	Description
SCRCAT SCRATCH*x*	Specifies that the category in the automated tape library will be set to SCRATCH*x*, where "*x*" is a single hexadecimal value, when scratch volumes are added to Tape Manager. No Tape Manager hold is placed on the volume regardless of whether a Media Scratch Category Expire Hold was specified. See the "Define_Media" statement in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for additional information. **Note:** If the library has an Expire Hold period associated with the volume, the volume may not be available for scratch mounts until the library hold period has elapsed.
TEXT <*usertext*> or TEST 'usertest'	Defines up to 32 bytes of user data in the volume catalog entry. The field must be delimited by the less-than (<) and greater-than (>) characters or by single quotes (' '). The text field will be cleared if a TAPEMOD command is used to change the volume use-status from USED to FREE. If a used volume expires, the text field will be retained until the expired volume is next mounted with WRITE access.
TERSE	Suppresses the informational messages EUM0010I, EUM0074I, EUM0083I, EUM0084I, EUM0288I, and EUM0291I for the requestor.

Usage notes

When using the TAPEADD command, consider the following:

1. External tapes must be added to a private pool.
2. Automated library volumes that are not eligible scratch volumes, and have media type that is category managed, will have the library category set to the VOLCAT value associated with the media type.

Messages

The following table lists the messages generated by TAPEADD.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 6. TAPEADD messages

Message number	Message text	Return code
EUM0002E	Unauthorized <text> from <reqID>.	20
EUM0005E	Invalid value - <value> - for <parm>.	24
EUM0007E	Error returned from <routine> -- RC <return code>.	30
EUM0010I	<cmnd> message <reqnum> required from <userID>.	N/A
EUM0011E	Unknown command <req> in request <req#> from <reqID>.	16
EUM0022E	Pool ID <pool> is not a valid pool name.	24
EUM0024E	Pool ID <pool> does not exist.	
EUM0030E	Parameter <parm> exceeds the <desc> maximum.	24
EUM0031E	Required parameter <parm> not specified.	24
EUM0032E	Invalid parameter <parm>.	24

Table 6. TAPEADD messages (continued)

Message number	Message text	Return code
EUM0034E	Error <return code> linking <mdsk>.	34
EUM0035E	Authorization error <return code> linking <mdsk>.	34
EUM0036E	Error <return code> accessing <vaddr>.	34
EUM0037E	Error <return code> locating file <file name>.	26
EUM0038E	Error <return code> reading file <file name>.	26
EUM0039E	File <file name> cannot be processed due to a version mismatch.	26
EUM0040E	File <file name> cannot be processed due to a record type error.	26
EUM0041E	Invalid delimiter for <parm>.	24
EUM0042E	No values found in file <file name>.	24
EUM0043E	Invalid value <value> found in <file name>.	24
EUM0044E	Length of <value> is less than the system minimum <min>.	24
EUM0045E	Length of <value> exceeds the system maximum <val>.	24
EUM0046E	The length of <parm> exceeds the maximum of <max>.	24
EUM0048E	Volume <volid> is a duplicate volume ID.	28
EUM0050E	File <file name> cannot be processed due to an invalid record.	26
EUM0051E	User <user id> is not authorized to alter the system inventory.	20
EUM0052E	<parm1> is not valid with <parm2>	24
EUM0059E	Media type <mtype1> does not match pool type <mtype2>.	24
EUM0061E	The <parm> value <value> is not configured.	24
EUM0075E	Unexpected return code from <cmd> - RC <return code>.	30
EUM0077E	Volume index error: INV=<invvol> VOL=<indxvol> IND=<indxval>.	30
EUM0080E	Invalid value <val> detected for <var>.	30
EUM0081E	Parameter <parm> is less than current date.	24
EUM0083I	<cmnd> request <reqnum> complete – RC <rc>.	N/A
EUM0084I	<cmnd> request <reqnum> error – RC <rc>.	N/A
EUM0172E	Error <return code> writing file <file name>.	26
EUM0187E	Invalid file info passed for pool <pool name>.	30
EUM0188I	File info is <text>.	N/A
EUM0214E	Library <library name> is not defined to the tape system.	24
EUM0215E	Invalid value <parm> for the VOL parameter.	24
EUM0218E	Library server <server name> is not defined.	24
EUM0221E	<type> request <req#> from <rqstID> was rejected by the installation exit processing.	20
EUM0329E	<msg>	N/A
EUM0349E	Request <req#> could not be processed by the installation command exit.	20
EUM0352E	<req> request <reqnum> from <rqstID> was rejected because the response from the installation command exit timed out.	20

Table 6. TAPEADD messages (continued)

Message number	Message text	Return code
EUM0373E	The <cmnd> command requires system operator or admin authority.	20
EUM0392W	The used tape percentage in pool <powner pname> has reached <pct> percent of the tape <maximum/total>.	N/A
EUM0393W	The free count exceeds the tape count for pool <powner pname>.	N/A
EUM0395W	The tape count exceeds the tape maximum for pool <powner pname>.	N/A
EUM0396W	The <value> for pool <powner pname> is invalid.	N/A
EUM0402I	Tape pool <powner pname> has no tapes and no free pool.	N/A
EUM0403I	Tape pool <powner pname> has a maximum tape value of zero.	N/A
EUM0472W	Mount message ID <ID> for pool <pool name> is not valid. The system mount message ID will be used if it is defined.	24
EUM0496W	Exception ID <ID> for pool <pool name> is not defined to the system.	
EUM0517E	The system maximum for <parm> is <value> days.	24
EUM0518E	The pool maximum for <parm> is <value> days.	24
EUM0601E	The FILE parameter requires a file name and file type.	24
EUM0707E	The <parm> value must be a non-negative integer.	24
EUM0722E	<req> request <req#> could not be sent to node <name>.	26
EUM0734E	The <req> command was not accepted because catalog node <name> is quiesced.	20
EUM0735E	The <req> command was not accepted because local node <name> is quiesced.	20
EUM0736E	The <req> command was not accepted because Tape Manager is quiesced.	20
EUM0812E	The <req> command was not accepted because External Security Manager authorizations cannot be performed – RC <rc>.	20
EUM0817E	User <reqID> failed the External Security Manager check for the <req> command.	N/A
EUM0831E	Unable to authorize user <reqID> for <req> request <req#> – the details were logged.	20
EUM0875E	An invalid value -<val>- was specified for a volume range.	24
EUM0913E	Only one space-delimited minus sign (-) can be specified in the volume parameter.	24
EUM0914E	The volume parameter cannot contain a hyphen that is preceded by a character and followed by a space.	24
EUM0915E	The volume parameter cannot contain a hyphen that is preceded by a space and followed by a character.	24
EUM0916E	The volume parameter cannot contain a hyphen prior to the first volume operand.	24
EUM0922E	Multiple tape libraries are defined. Specify ATL and a library name or MAN.	24
EUM0923I	Library <name> was selected as the default location.	N/A

Table 6. TAPEADD messages (continued)

Message number	Message text	Return code
EUM0924I	Location defaulted to MAN because no tape library is defined.	N/A
EUM0935E	Event <event#> failed to set the category code for volume <vol> in library <libname> to <category> for request <req#>.	N/A
EUM0937E	Unable to verify that event <event#> set the category code for volume <vol> in library <libname> to <category> for request <req#>.	N/A
EUM0938E	Event <event#> failed to set the category code for volume <vol> in library <libname> to <cateogry> for <req#> because the volume was not in the library.	N/A
EUM0939E	An attempt to set the library category for volume <vol> to <category> failed when a message could not be sent to library server <server>.	N/A
EUM0940E	An attempt to set the library category for volume <vol> to <category> failed when a message could not be sent to library server <server> at node <name>.	N/A
EUM0941W	This is a severe error that should be reported to a Tape Manager Administrator immediately!	N/A
EUM0942E	An attempt to set the library category for volume <vol> to <category> failed because no library server was defined for library <libname>.	N/A
EUM0943E	An attempt to set the library category for volume <vol> to <value> failed because there is no local server for library <libname> and no remote server is on a node where a connection is available.	N/A
EUM0949E	VOLSTAT returned <return code> for an attempt to set the <field> to <value> for volume <vol>.	30
EUM0950E	<volid> is not a valid <parm>.	28
EUM0958E	The SCRCAT parameter must be specified because media type <media> specifies a non-zero Scratch Category Expiration Hold period.	24
EUM0959E	The SCRCAT parameter is not valid with <attribute>,	24
EUM0960E	The SCRCAT parameter is not valid because media type <media> is not associated with a Scratch Category.	24
EUM0961W	The volume library category was set to the Media Scratch Category but an Expire Hold period not set in Tape Manager because POOL SYS was specified. Volumes subject to an Expire Hold in the library may not be available for scratch mounts.	
EUM0962I	The Expiration Hold flag (SSTAT XH) was set to Hold because the Media Scratch Category specified an Expiration Hold period. The hold will expire in <number> days.	

Return codes

The following table contains the return codes for TAPEADD.

Table 7. Return codes

Return code	Description
0	Finished correctly

Table 7. Return codes (continued)

Return code	Description
20	Unauthorized request
24	Bad PLIST
26	I/O Error
28	Volume error
30	Unexpected error
1000	I/O error
2000	Logic error
3000	Syntax error
4xxx	User interface error (See help for TAPCMD.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

TAPEDEL

Use the TAPEDEL command with the POOL SYS command to delete tapes from the system inventory or with a private pool ID to delete an external volume from the private pool. Use the TAPEDEL command with a private pool name to delete EXTERNAL tapes from the system inventory. The command is valid for a Tape Manager catalog, but it is not valid for an RMM catalog.

Shared Catalog Execution

The TAPEDEL command can be entered on the catalog node or a request node. The command executes on the catalog node in all cases.

Authorization

Tape Manager Admins authority is required for the SYS parameter. For private pools, either Tape Manager Admins authority or, at minimum, TAPE authority for the pool is required to delete external volumes from the pool.

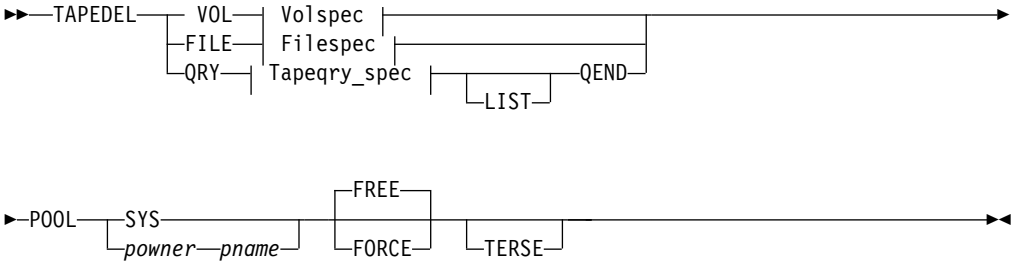
When an External Security Manager (ESM) is active, the authorization requirements may be controlled by ESM profiles:

- When `Pool_Authority` is YES, pool administrator authority requires READ access to the pool administrator profile for the pool being deleted.
- When `Pool_Authority` is YES, TAPE authority for the target pool requires ALTER access to the pool volume profile of the target pool. If a pool volume profile is not defined, the user ID that corresponds to the pool owner has TAPE authority by default.
- When `Privileged_User_Authority` is YES, Tape Manager Admins authority requires READ access to the administrator profile.

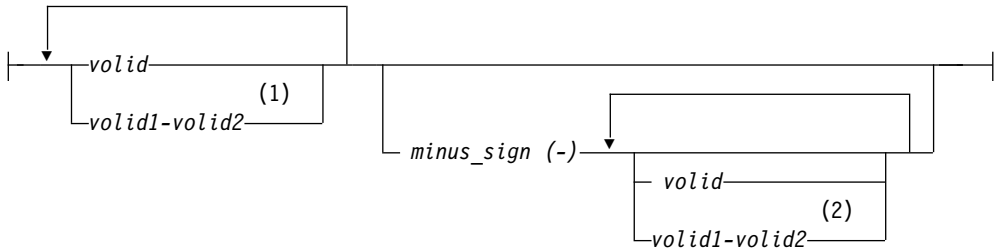
For more details, refer to the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344).

Syntax

The next diagram shows the TAPEDEL syntax.



Volspec:



Filespec:

Tapeqry_spec:

Notes:

1 When the *volid1-volid2* range is specified, the names must follow a clearly defined format: **(A)** At least the right-most position of *volid1* and *volid2* must be numeric. **(B)** If there is a non-numeric character in *volid1*, the fixed portion of *volid1* is position 1 through the right-most, non-numeric character of the identifier. The numeric portion of the identifier contains the remaining digits. **(C)** The fixed portion of *volid2* must be the same as the fixed portion of *volid1*. The length of the numeric portion of *volid2* must be the same length as the numeric portion of *volid1*, and must be greater than the numeric portion of *volid1*.

2 The minus sign is an exclusion operator. See the information below.

3 The default virtual address of the MDISK for the file is 191. See the help for TAPCMD for additional information pertaining to the virtual address or file mode when the FILE operand is specified.

4 See QRY QEND in the "Operands" section and the TAPEQRY command for the list of parameters.

Figure 2. Syntax diagram for TAPEDEL command

Operands

The TAPEDEL operands are described in the table below.

Table 8. List of operands for TAPEDEL command

Operand	Description
VOL *volspec*	Volspec is a space-delimited list of one or more volume specifications. A volume specification can be a single volume identifier or a volume range. For more details on how to specify ranges, refer to "TAPEADD" on page 9
volid	Volid is a volume identifier. A volume identifier can be one to six characters. No edit checking is performed on the characters within the *volid*, but embedded blanks are not valid.
volid1-volid2	Volid1-volid2 is a volume identifier range. A range specification is only valid for numeric values in the right-most part of the volume identifier. If the left-most part contains non-numeric data, all of the following conditions must be met: • The non-numeric data must be identical for *volid1* and *volid2*. • The identifiers must be of equal length. • The numeric portion of *volid1* must be less than the numeric portion of *volid2*. For example, `RA0001-RA0050` and `000001-000050` are valid ranges, but `RA0001-RX0050` ("RA" and "RX") and `00001-000050` (one has five digits, the other has six) are not valid ranges.
Minus_sign (-)	As of PTF UI48913, the minus sign with at least one space on both sides (-) is an exclusion operator. Volumes following the minus sign will be excluded from the list of volumes to be processed. A minus sign cannot be the first operator in a volume specification and only a single occurrence is permitted. For example, `VOL V00000-V00005 - V00003-V00004` is equivalent to volumes `V10001 V10002 V10005`. Note that a minus sign connected to a VOLSER on one side with a space on the other side is never valid.
FILE *filespec*	Specifies a file, *filespec*, that contains one or more volume serial numbers. The filespec includes: • *fname*, which is the name of the file to be processed, and • *ftype*, which is the type of file to be processed. When the FILE operand is specified, the file can contain multiple records. Each record in the file can contain multiple, space-delimited volume specifications and, optionally, a single exclusion character followed by volume specifications of any volumes that are to be excluded. You can use the FM or VADDR option of the TAPCMD command to specify the location of the file.
POOL SYS	Specifies tapes to be deleted from the system inventory. None of the related information is retained.
POOL *powner pname*	Specifies an existing pool from which EXTERNAL tapes are to be deleted.

Table 8. List of operands for TAPEDEL command (continued)

Operand	Description
QRY QEND	As of PTF UI48913, allows you to specify TAPEQRY parameters that result in a list of volumes that is processed by the TAPEMOD command. Both QRY and QEND must be specified. The specification can be any valid parameters and operands of the TAPEQRY command except SHORT, LONG, MSG, RDR, and TERSE. All tapes in the result set from the query are processed, unless LIST is specified immediately before the QEND delimiter. In that case, no volumes are processed and information for the volumes that otherwise would have been processed is sent to the requestor. See “TAPEQRY” on page 88 for additional information. See "Example of using QRY QEND parameters" below.
LIST	As of PTF UI48913, lists the volumes that would otherwise have been processed if LIST had not been specified. When LIST is specified, it must be the last parameter before QEND; otherwise, it will be treated as a TAPEQRY parameter. No processing occurs when LIST is specified. The information returned is in the same format as a TAPEQRY command with SHORT specified.
FREE	Specifies that delete processing will be performed only for tapes that are free.
FORCE	Deletes tapes without regard to the volume attributes. The use of this operand may result in loss of data especially when POOL SYS is specified. When a private pool is specified, this option will delete an EXTERNAL volume from the catalog regardless of the volume attributes **CAUTION:** **The use of FORCE with POOL SYS is NOT recommended because loss of data may result. The loss of data can occur because internal volumes in private pools may be deleted from the catalog regardless of the volume attributes, including when the use status is USED and the expiration date has not been reached.**
TERSE	Suppresses the informational messages EUM0010I, EUM0074I, EUM0083I, EUM0084I, EUM0288I, and EUM0291I for the requestor.

Example of using QRY QEND parameters

The following example demonstrates the use of QRY and QEND to set the User Hold Status to HOLD for all volumes in the SYSTEM BACKUP pool that have a VOLSER which begins with P and have a User Hold Status of NOHOLD. When using QRY and QEND, first use the LIST parameter before the QEND parameter to see what volumes will be affected when the LIST parameter is removed.

```
TAPEMOD QRY VOL P* POWNER SYSTEM PNAME BACKUP HSTAT NOHOLD QEND HSTAT HOLD
```

The parameters between QRY and QEND are passed to TAPEQRY, which supports regular expressions such as `P*` for VOLID. The volumes in the list generated by TAPEQRY are then modified, unless LIST is specified immediately before QEND. In that case, the volumes in the list that would otherwise have been modified are listed and no modifications occur.

Usage notes

When using the TAPEDEL command, consider the following:

1. If any of the volumes specified are not eligible for deletion, none of the volumes will be deleted.
2. When POOL SYS is specified (and FORCE is not specified), a volume is eligible for deletion if it is not in a private pool and the status is either HOLD or FREE. When both POOL SYS and FORCE are specified, a volume is eligible for deletion whether or not it is in a private pool, whether or not it is an external volume, and regardless of the volume status. In other words, the specified tapes will be deleted if the command is entered by a system administrator.
3. When a private pool is specified (and FORCE is not specified), a volume is eligible for deletion if it is an EXTERNAL volume and the status is either HOLD or FREE. When a private pool is specified with FORCE, a volume is eligible for deletion if it is an external volume, regardless of the volume status.
4. When tapes are deleted from the system inventory, no catalog information is retained.
5. When a private pool is specified, only EXTERNAL tapes are eligible for deletion.
6. If FORCE is not specified, chained volumes cannot be deleted. To delete chained volumes, first use the TAPEMOD command to free the base volume.
7. When a file name is supplied, each record in the file can contain multiple space-delimited volume serial numbers.

Messages

The table below lists the messages generated by TAPEDEL.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 9. TAPEDEL messages

Message number	Message text	Return code
EUM0002E	Unauthorized <text> from <reqID>.	20
EUM0005E	Invalid value - <value> - for <parm>.	24
EUM0007E	Error returned from <routine> - RC <return code>.	30
EUM0010I	<cmnd> message <reqnum> required from <user ID>.	N/A
EUM0011E	Unknown command <req> in request <req#> from <reqID>.	16
EUM0022E	Pool ID <pool> is not a valid pool name.	24
EUM0024E	Pool ID <pool> does not exist.	N/A
EUM0031E	Required parameter <parm> not specified.	24
EUM0032E	Invalid parameter <parm>.	24
EUM0034E	Error <return code> linking <mdsk>.	34
EUM0035E	Authorization error <return code> linking <mdsk>.	34
EUM0036E	Error <return code> accessing <vaddr>.	34
EUM0037E	Error <return code> locating file <file name>.	26
EUM0038E	Error <return code> reading file <file name>.	26
EUM0039E	File <file name> cannot be processed due to a version mismatch.	26
EUM0040E	File <file name> cannot be processed due to a record type error.	26
EUM0041E	Invalid delimiter for <parm>.	24
EUM0042E	No values found in file <file name>.	24

Table 9. TAPEDEL messages (continued)

Message number	Message text	Return code
EUM0043E	Invalid value <val> found in file <file name>.	24
EUM0044E	The length of <parm> is less than the system minimum <min>.	24
EUM0045E	The length of <parm> exceeds the system maximum <max>.	24
EUM0046E	The length of <parm> exceeds the maximum of <max>.	24
EUM0049E	Volume <vol> is in private pool <pool ID>.	20
EUM0051E	User <user ID> is not authorized to alter the system inventory.	20
EUM0054E	Volume <vol> is not in <pool name>.	28
EUM0055E	Volume <vol> is ineligible - status <volstat>.	28
EUM0056E	User <user ID> is not authorized to alter pool <pool ID>.	20
EUM0057E	Volume <vol> was not deleted because only external volumes can be deleted when the pool is not SYS.	N/A
EUM0065E	Volume <vol> is not in the system inventory.	28
EUM0075E	Unexpected return code from <command> - RC <return code>.	30
EUM0077E	Volume index error: INV=<invvol> VOL=<indxvol> IND=<indxval>.	30
EUM0083I	<cmnd> request <reqnum> complete – RC <rc>.	N/A
EUM0084I	<cmnd> request <reqnum> error – RC <rc>.	N/A
EUM0125I	Volume <volume name> in pool <pool name> not in inventory.	30
EUM0146E	Source and target pool media types do not match.	24
EUM0148E	Source and target are the same pool.	24
EUM0156E	Invalid index entry for volume <volume name>	30
EUM0161I	Volume <vol> not processed - not in source pool.	N/A
EUM0162I	Volume <vol> not processed - status USED is invalid for pool sys.	N/A
EUM0163I	Volume <vol> not processed - EXTERNAL tape is invalid for pool sys.	N/A
EUM0164I	Volume <vol> not processed - wrong media type for target pool.	N/A
EUM0165I	Volume <vol> not processed - in use.	N/A
EUM0166I	Source pool not deleted.	N/A
EUM0167I	Request completed with volume errors.	N/A
EUM0171E	Error <return code> processing file <file>.	30
EUM0172E	Error <return code> writing file <file>.	30
EUM0174E	Volume count is negative.	30
EUM0175E	Volume count is not numeric.	30
EUM0176E	Index error processing <req#> request.	30
EUM0181I	Volume <vol> not processed - invalid index.	30
EUM0187E	Invalid file info passed for pool <pool>.	30
EUM0188I	File info is <text>.	N/A
EUM0206I	Expired volumes in pool <pool1> retained - free pool <pool2> not found.	N/A
EUM0207I	Expired volumes in pool <pool1> retained - free pool <pool2> has wrong media.	N/A

Table 9. TAPEDEL messages (continued)

Message number	Message text	Return code
EUM0221E	<type> request <req#> from <rqstID> was rejected by the installation exit processing.	20
EUM0329E	<msg>	N/A
EUM0349E	Request <req#> could not be processed by the installation command exit.	20
EUM0352E	<req> request <reqnum> from <rqstID> was rejected because the response from the installation command exit timed out.	20
EUM0392W	The used tape percentage in pool <powner pname> has reached <pct> percent of the tape <maximum/total>.	N/A
EUM0393W	The free count exceeds the tape count for pool <powner pname>.	N/A
EUM0395W	The tape count exceeds the tape maximum for pool <powner pname>.	N/A
EUM0396W	The <value> for pool <powner pname> is invalid.	N/A
EUM0402I	Tape pool <powner pname> has no tapes and no free pool.	N/A
EUM0403I	Tape pool <powner pname> has a maximum tape value of zero.	N/A
EUM0472W	Mount message ID <ID> for pool <pool> is not valid. The system mount message ID will be used if it is defined.	N/A
EUM0496W	Exception ID <ID> for pool <pool> is not defined to the system.	N/A
EUM0523E	No volumes for DSN <name> in record <num>.	30
EUM0524E	The volume count for DSN <name> exceeds the maximum of <max> in record <num> of file <file>.	30
EUM0525E	The record length for <type> record <num> exceeds the maximum of <max>.	30
EUM0526E	The record number - <num> - for the <type> record is not numeric.	30
EUM0527E	The record number <num> for the <type> record is beyond EOF.	30
EUM0528E	The record number <num> for the <type> record is negative.	30
EUM0535E	An invalid <name> field was detected in record <num> of file <file>.	30
EUM0541E	Qualifier number <num> of the data set name is not valid.	24
EUM0542E	The length of volume <vol> exceeds the system maximum of <max> in record <num> of file <file>.	30
EUM0543E	The length of volume <vol> is less than the system minimum of <min> in record <num> of file <file>	30
EUM0544E	Data set name <name> in record <num> of file <file> failed the validity check.	30
EUM0558E	Volume <vol> in record <num> of file <file> is not defined to the system.	30
EUM0559W	The record type has been changed to <val> for record <num> in file <file>.	30
EUM0560W	The record version has been changed to <val> for record <num> in file <file>.	30
EUM0566E	The use-status of volume <vol> is not <val>.	30
EUM0584I	Pending volumes have been released for DSN occurrence <text>.	N/A

Table 9. TAPEDEL messages (continued)

Message number	Message text	Return code
EUM0589I	Data set <name> associated with volume <vol> will be deleted.	N/A
EUM0601E	The FILE parameter requires a file name and file type.	24
EUM0606E	Volume <vol> is in the system pool but it is associated with data set <dsname>.	30
EUM0607E	Volume <vol1> is in pool <pool1> but volume <vol2> is in pool <pool2>. The volumes are associated with data set <dsname>.	20
EUM0610E	An invalid record pointer -<recnum> - was passed from the calling routine.	30
EUM0613E	Data set volume <vol> is not in the system inventory. The volume is associated with data set <dsname>.	30
EUM0614E	Data set volume <vol> has an index problem. The volume is associated with data set <dsname>.	30
EUM0722E	<req> request <req#> could not be sent to node <name>.	26
EUM0734E	The <req> command was not accepted because catalog node <name> is quiesced.	20
EUM0735E	The <req> command was not accepted because local node <name> is quiesced.	20
EUM0736E	The <req> command was not accepted because Tape Manager is quiesced.	20
EUM0812E	The <req> command was not accepted because External Security Manager authorizations cannot be performed – RC <rc>.	20
EUM0817E	User <reqID> failed the External Security Manager check for the <req> command.	N/A
EUM0831E	Unable to authorize user <reqID> for <req> request <req#> – the details were logged.	20
EUM0875E	An invalid value -<val>- was specified for a volume range.	24
EUM0913E	Only one space-delimited minus sign (-) can be specified in the volume parameter.	24
EUM0914E	The volume parameter cannot contain a hyphen that is preceded by a character and followed by a space.	24
EUM0915E	The volume parameter cannot contain a hyphen that is preceded by a space and followed by a character.	24
EUM0916E	The volume parameter cannot contain a hyphen prior to the first volume operand.	24
EUM0917E	The <parm> parameter is not a valid QRY parameter	24
EUM0918E	When QRY is specified QEND must also be specified.	24
EUM0919E	The minimum length required to match the pattern <pattern> exceeds the system maximum length of <max> for <parm>.	24
EUM0920I	Query processing returned RC <rc>. See the TAPEQRY command for messages and return codes.	
EUM0921I	<cmd> processing was not performed because LIST was specified as a QRY operand.	

Return codes

The return codes for TAPEDEL are listed in the table below.

Table 10. TAPEDEL Return codes

Return code	Description
0	Finished correctly
20	Unauthorized request
24	Bad PLIST
26	I/O Error
28	Volume error
30	Unexpected error
1000	I/O error
2000	Logic error
3000	Syntax error
4xxx	User interface error (See help for TAPCMD.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

TAPEDEV

Use the TAPEDEV command to query Tape Manager devices, to give Tape Manager additional devices, or to take devices from Tape Manager. The command is valid for Tape Manager or RMM catalogs.

Shared Catalog Execution

The TAPEDEV command can be entered on the catalog node or a request node. The command executes on the catalog node in all cases.

Authorization

To use the TAPEDEV command, you must have Tape Manager Admins or Operations authority, except for QRY. When a general user issues a QRY command, only devices attached to the user, as a result of a tape mount command, are listed.

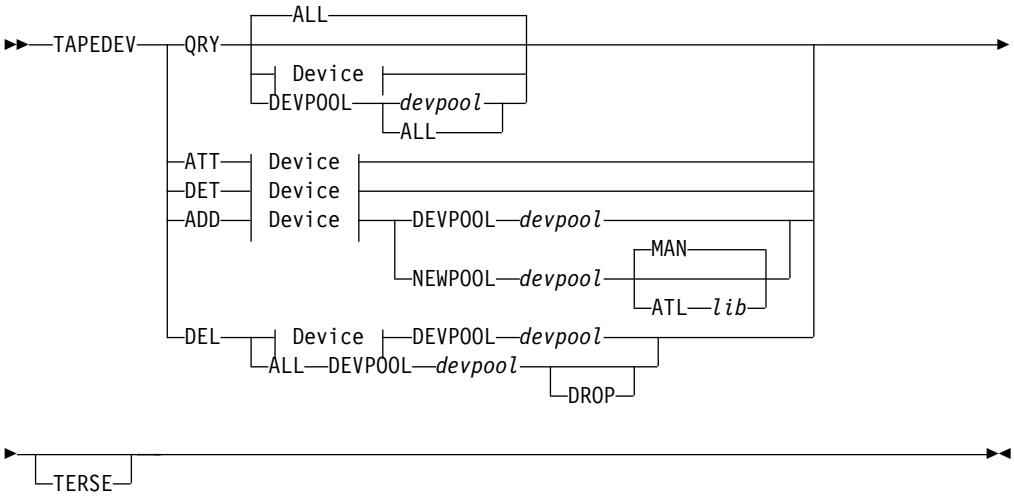
When an External Security Manager (ESM) is active, the authorization requirements may be controlled by ESM profiles:

- When `Privileged_User_Authority` is YES, Tape Manager Operations authority requires READ access to the operator profile.
- When `Privileged_User_Authority` is YES, Tape Manager Admins authority requires READ access to the administrator profile.

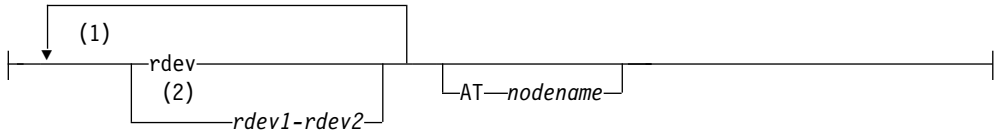
For more details, refer to the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344).

Syntax

The next diagram shows the TAPEDEV syntax.



Device:



Notes:

1 A maximum of 16 devices is allowed for the address specification.

2 When a device range is specified, the device numbers must be connected with a hyphen.

Figure 3. Syntax diagram for TAPEDEV command

Operands

The TAPEDEV operands are described in the table below.

Table 11. List of operands for TAPEDEV command

Operand	Description
QRY ALL	Requests information for all tape devices owned by Tape Manager.
QRY Device	Requests information for one or more real devices.
QRY DEVPOOL *devpool*	Lists all of the devices in device pool specified by *devpool*.
QRY DEVPOOL ALL	Lists all of the devices in all of the device pools.
ATT	Directs Tape Manager to attach the devices specified.
DET	Directs Tape Manager to detach the devices specified.
ADD	Directs Tape Manager to add the devices specified to the device pool specified as *devpool*.
DEL Device	Directs Tape Manager to delete the devices specified from the device pool specified as *devpool*.

Table 11. List of operands for TAPEDEV command (continued)

Operand	Description
DEL ALL	Directs Tape Manager to delete the devices in device pool *devpool* from that pool.
AT *nodename*	Specifies the Tape Manager node on which the device(s) will be dedicated.
rdev *rdev1 - rdev2*	Specifies a list of one or more real devices and/or device ranges. A maximum of 16 devices is allowed for the address specification.
DEVPOOL *devpool*	Specifies the name of an existing device pool, which is *devpool*.
DEVPOOL ALL	Lists all of the devices in all of the device pools when specified with the TAPEDEV QRY command.
NEWPOOL *devpool*	Specifies a new device pool, which is *devpool*.
MAN	Specifies that the new device pool contains manual devices.
ATL *lib*	Specifies that the new device pool contains ATL devices that are in an automated tape library, and the library name is *lib*.
DROP	Specifies that the device pool is to be deleted.
TERSE	Suppresses the informational messages EUM0010I, EUM0074I, EUM0083I, EUM0084I, EUM0288I, and EUM0291I for the requestor.

Usage notes

When using the TAPEDEV command, consider the following:

1. When ATT is used, the device will be added to the list of managed devices immediately, even if the device cannot be attached.

   If the ATT is issued with the WAIT option, the command will complete when Tape Manager processes the command and before the Device Manager (DMM) performs the attach. A return code of zero (0) indicates that the attach request was passed to the Device Manager.
2. When DET is used, the device will be removed from the list of managed devices immediately, even if the device is associated with an active tape mount request. The device will be detached when the active request completes.

   If the DET is issued with the WAIT option, the command will complete when Tape Manager processes the command and before the Device Manager performs the detach. A return code of zero (0) indicates that the detach request was passed to the device manager.
3. When ADD or DEL is used, the devices will be removed from the device pool list and a corresponding request will be sent to the Device Manager (DMM).

   If the WAIT option is used, the command will not complete until a response has been received from the Device Manager or the request times out. The DMM response will be reflected to the requestor. A successful response means that the DMM processed the request and those devices have been added to or deleted from the device pool.
4. A device that is dedicated at a remote node will not be removed from the list of dedicated devices unless the TAPEDEV DET command specifies the correct node name. Instead, message EUM0767W will be issued.

Messages

The table below lists the messages generated by TAPEDEV.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 12. TAPEDEV messages

Message number	Message text	Return Code
EUM0002E	Unauthorized <text> from <reqID>.	20
EUM0005E	Invalid value - <value> - for <parm>.	24
EUM0007E	Error returned from <routine> - RC <return code>.	30
EUM0010I	<cmnd> message <reqnum> required from <userid>.	N/A
EUM0011E	Unknown command <req> in request <req#> from <reqID>.	16
EUM0017E	Error sending SMSG to <ID> - RC <return code>.	30
EUM0031E	Required parameter <parm> not specified.	24
EUM0032E	Invalid parameter <parm>.	24
EUM0041E	Invalid delimiter for <parm>.	24
EUM0083I	<cmnd> request <reqnum> complete – RC <rc>.	N/A
EUM0084I	<cmnd> request <reqnum> error – RC <rc>.	N/A
EUM0089E	Send failed - ID: <ID> MSG: <msg>.	30
EUM0129I	Device <dev> is unallocated with status <stat>.	N/A
EUM0130I	Device <dev> is allocated to request <rqst>.	N/A
EUM0131I	No status information available for device <dev>.	N/A
EUM0132I	There are no devices in the device list.	N/A
EUM0198I	Device <dev> is allocated to user <user>.	N/A
EUM0215E	Invalid value - <val> - for the <parm> parameter.	24
EUM0221E	<type> request <req#> from <rqstID> was rejected by the installation exit processing.	20
EUM0245I	Device <dev> is unallocated and READY with volume <vol>.	N/A
EUM0326E	Event not processed - invalid request type <type>.	30
EUM0329E	<msg>	N/A
EUM0343I	The event number <num> is in use by another request.	30
EUM0349E	Request <req#> could not be processed by the installation command exit.	20
EUM0352E	<req> request <reqnum> from <rqstID> was rejected because the response from the installation command exit timed out.	20
EUM0364E	Device <dev> is in a manual pool but device pool <pool> is a ATL pool.	24
EUM0365E	Device <dev> is in an ATL pool but device pool <pool> is a manual pool.	24
EUM0366E	Either the DEVPOOL or NEWPOOL parameter must be specified.	24
EUM0367E	The DEVPOOL parameter must be specified.	24
EUM0368E	Device pool <pool> is not defined.	24
EUM0369E	Device pool <pool> is already defined.	24
EUM0370E	The pool type must be either ATL or MAN.	24
EUM0371E	The device parameter must be ALL when DROP is specified.	24

Table 12. TAPEDEV messages (continued)

Message number	Message text	Return Code
EUM0372I	Device Manager processing is pending for TAPEDEV request <rqst>.	N/A
EUM0373E	The TAPEDEV <type> command requires system operator or admin authority.	20
EUM0374E	A library name is required when ATL is specified.	24
EUM0375E	A library name is not permitted when MAN is specified.	24
EUM0376E	Unexpected parameter <parm> was passed for a TAPEDEV event.	30
EUM0377E	A SEND error occurred for TAPEDEV request <req #>.	30
EUM0378E	The TAPEDEV command is restricted to <max#> addresses.	24
EUM0380E	A <errtype> error was returned by the Device Manager.	30
EUM0381E	The Device Manager did not find pool <devpool>.	4
EUM0382E	Request <req#> was processed with errors.	4
EUM0383I	Request <req#> completed successfully.	0
EUM0384E	Unexpected status <status> was returned by the Device Manager.	30
EUM0385I	There are no devices in the device pool.	0
EUM0401I	DevPool: <devpool> Device: <device> Status: <status> Request: <req#>	N/A
EUM0473I	Device <dev> has been removed from the dedicated device list.	N/A
EUM0474I	Device <dev> is assigned to request <num> and will be detached after the request is completed.	N/A
EUM0722E	<req> request <req#> could not be sent to node <node>.	26
EUM0734E	The <req> command was not accepted because catalog node <node> is quiesced.	20
EUM0735E	The <req> command was not accepted because local node <node> is quiesced.	20
EUM0736E	The <req> command was not accepted because Tape Manager is quiesced.	20
EUM0738E	Unable to send the <msgtype> message to node <node>.	24
EUM0762E	Unable to send the command to <ID>.	N/A
EUM0765E	Server <srvr> reports that <cmd> request <req#> for device <dev> failed.	8
EUM0767W	Device <dev> was not in the active device list.	N/A
EUM0768I	Device <dev> is unallocated on node <node> and READY with volume <vol>.	N/A
EUM0769I	Device <dev> is unallocated on node <node> and status is <status>.	N/A
EUM0770I	Device <dev> is allocated on node <node> to request <req#>.	N/A
EUM0771I	Device <dev> is allocated on node <node> to user <user>.	N/A
EUM0776E	Invalid null value for the <parm> parameter.	N/A
EUM0780E	The <opr> operand is not permitted when a <type> node is not defined.	24
EUM0812E	The <req> command was not accepted because External Security Manager authorizations cannot be performed – RC <rc>.	20

Table 12. TAPEDEV messages (continued)

Message number	Message text	Return Code
EUM0817E	User <reqID> failed the External Security Manager check for the <req> command.	N/A
EUM0831E	Unable to authorize user <reqID> for <req> request <req#> – the details were logged.	20

Return codes

The return codes for TAPEDEV are listed in the table below.

Table 13. TAPEDEV Return codes

Return code	Description
0	Finished correctly
4	Completed with warnings
8	Server error
20	Unauthorized request
24	Bad PLIST
26	Send error
30	Unexpected error
1000	I/O error
2000	Logic error
3000	Syntax error
4xxx	User interface error (See note below.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

TAPEDSN

Use the TAPEDSN command to do any of the following:

- query a data set name
- delete a data set name
- rename a data set
- move the volumes associated with a data set to a different pool.

The query output will return all occurrences of a data set and the volume (or volumes) on which the data set resides. The command is valid for a Tape Manager catalog, but not for an RMM catalog.

Shared Catalog Execution

The TAPEDSN command can be entered on the catalog node or a request node. The command executes on the catalog node in all cases.

Authorization

For a query, Tape Manager Admins authority is sufficient and it is required to specify a wildcard character (other than '*') in the high-level qualifier; otherwise,

define authority for the high-level qualifier is required . If the user ID of the requestor is the same as the high-level qualifier, the use of the high-level qualifier is permitted unless the requestor is explicitly prohibited.

For an add, Tape Manager Admins authority is sufficient. For non-administrator requests, at least write access to the pool that owns the volume(s) and define authority for the high-level qualifier is required. If the user ID of the requestor is the same as the high-level qualifier, the use of the high-level qualifier is permitted unless the requestor is explicitly prohibited.

For a delete, Tape Manager Admins authority is sufficient. For non-administrator requests, you must have at least write access to the pool that owns the volume(s).

For a move, Tape Manager Admins authority is sufficient. For non-administrator requests, you must have at least tape access to the pool that owns the volume(s) and the target pool.

For a rename, Tape Manager Admins authority is sufficient. For non-administrator requests, you must have at least write access to the pool that owns the volume(s) and define authority for the high-level qualifier of the new data set name. If the user ID of the requestor is the same as the high-level qualifier, use of the high-level qualifier is permitted unless the requestor is explicitly prohibited.

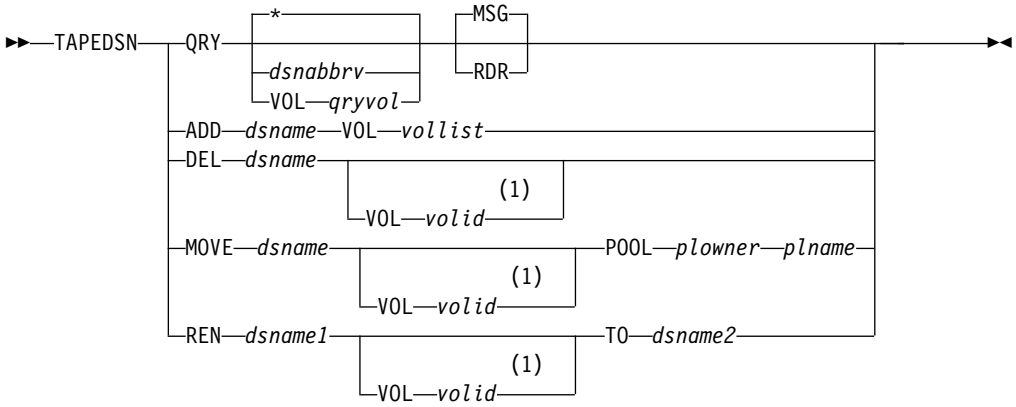
When an External Security Manager (ESM) is active, the authorization requirements may be controlled by ESM profiles:

- When `Pool_Authority` is YES, pool administrator authority requires READ access to the pool administrator profile for the pool being deleted.
- When `Pool_Authority` is YES, TAPE authority for a private pool requires ALTER access to the pool volume profile of the private pool. WRITE authority for a private pool requires UPDATE access to the pool volume profile. If the pool volume profile is not defined, the user ID that corresponds to the pool owner has TAPE authority by default.
- When `Privileged_User_Authority` is YES, Tape Manager Admins authority requires READ access to the administrator profile.

For more details, refer to the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344).

Syntax

The next syntax diagram shows the TAPEDSN command and its operands.



Notes:

1 For data sets with multiple occurrences, the first volume of the data set must be specified.

Figure 4. Syntax diagram for TAPEDSN command

Operands

The table below lists all of the operands you can use with the TAPEDSN command.

Table 14. List of operands for TAPEDSN command

Operand	Description
QRY or QRY *	Displays a list of all the data sets and the volume (or volumes) for each data set. For a Tape Manager catalog, this format is equivalent to using the data set name abbreviation `'user_name.*'`
QRY *dsnabbrv*	Returns data set information for data sets matching the abbreviation. The data set name abbreviation can be a complete data set name or an abbreviation of a data set name where one or more wild card characters are specified. The *dsnabbrv* supports the use of regular expressions for the search argument. The following special characters are supported: ***** Represents zero (0) or more characters of any sort. **%** Represents one (1) required character of any sort. **#** Represents one (1) required numeric (0-9) character. **&** Represents one (1) required alphabetic (A-Z, a-z) character. **@** Represents one (1) required hex (A-F, a-f, 0-9) character. **"** Represents the escape character (to allow use of one of the special characters in a pattern). A request from a non-administrative user, with an asterisk for the high-level qualifier (HLQ), will have the user ID substituted for the HLQ. **Note:** When any of these characters are "special" to CP or CMS, an appropriate escape sequence must be entered in the command line for the character to be passed to Tape Manager.
ADD *dsname*	Creates an occurrence of a data set using free volumes in a private pool. The rules for data set names in Tape Manager are: • The length of a data set name must not exceed 44 characters. • The length of a data set name qualifier must not exceed eight (8) characters. • The first character of a data set name qualifier should be alphabetic (A-Z) or national (# @ $). The remaining characters should be alphabetic, numeric (0-9), national, or a hyphen (-). • A data set name must not begin or end with a period ("."). • A data set name must not contain two consecutive periods (".."). Although the rules for data set names may vary among z/OS releases, these conventions are intended to provide an acceptable level of compatibility with all levels of z/OS.
DEL *dsname*	Deletes an occurrence of a data set and frees the volumes associated with the data set.

Table 14. List of operands for TAPEDSN command (continued)

Operand	Description
MOVE *dsname* POOL *plowner plname*	Moves the volumes associated with the data set name to the pool specified by the pool owner and pool name.
REN *dsname1* TO *dsname2*	Renames data set *dsname1* to *dsname2*.
VOL *qryvol*	Requests data set information related to a specific volume.
VOL *volid*	Specifies the first (or only) volume of the data set. The volume must be specified when there are multiple occurrences of the data set. The volume is optional when there is only one occurrence of a data set.
VOL *vollist*	Specifies a list of up to eight (8) volumes that will be associated with the data set name.
MSG	Indicates the output will be returned as messages.
RDR	Indicates the output will be returned as a reader file.
TERSE	Suppresses the informational messages EUM0010I, EUM0074I, EUM0083I, EUM0084I, EUM0288I, and EUM0291I for the requestor.

Usage notes

There are no additional notes at this time on how to use TAPEDSN.

Messages

The following table lists the messages generated by the TAPEDSN command.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 15. TAPEDSN messages

Message number	Message text	Return code
EUM0005E	Invalid value - <val> - for <parm>.	24
EUM0007E	Error returned by <routine> - RC <return code>.	30
EUM0010I	<cmnd> message <reqnum> required from <userid>.	N/A
EUM0011E	Unknown command <req> in request <req#> from <reqID>.	16
EUM0012E	Invalid null parameter for <parm>.	24
EUM0022E	Pool ID <pool> is not a valid pool name.	24
EUM0024E	Pool ID <pool> does not exist	24
EUM0031E	Required parameter <parm> not specified.	24
EUM0032E	Invalid parameter <parm>.	30
EUM0037E	Error <return code> locating file <file name>.	26
EUM0038E	Error <return code> reading file <file name>.	26
EUM0039E	File <file name> cannot be processed due to a version mismatch.	26
EUM0040E	File <file name> cannot be processed due to a record type error.	26
EUM0041E	Invalid delimiter for <parm>.	24
EUM0043E	Invalid value <value> found in file <file name>.	24
EUM0046E	The length of <parm> exceeds the maximum of <max>.	24

Table 15. TAPEDSN messages (continued)

Message number	Message text	Return code
EUM0065E	Volume <vol> is not in the system inventory.	28
EUM0075E	Unexpected return code from <command> - RC <return code>.	30
EUM0077E	Volume index error: INV=<invvol> VOL=<indxvol> IND=<indxnum>.	30
EUM0083I	<cmnd> request <reqnum> complete – RC <rc>.	N/A
EUM0084I	<cmnd> request <reqnum> error – RC <rc>.	N/A
EUM0125I	Volume <volume name> in pool <pool name> not in inventory.	30
EUM0126E	Free pointer error for volume <vol>.	30
EUM0133E	Unauthorized request for volume <vol> in pool <pool>.	20
EUM0146E	Source and target pool media types do not match.	24
EUM0148E	Source and target are the same pool.	24
EUM0156E	Invalid index entry for volume <volume name>	30
EUM0157E	Error <action> output - RC <return code>.	30
EUM0171E	Error <return code> processing file <file>.	30
EUM0172E	Error <return code> writing file <file>.	26
EUM0173E	Unauthorized request by <ID> for pool <pool>.	20
EUM0174E	Volume count is negative.	30
EUM0175E	Volume count is not numeric.	30
EUM0176E	Index error processing <req#> request.	30
EUM0181I	Volume <vol> not processed - invalid index.	30
EUM0187E	Invalid file info passed for pool <pool>.	30
EUM0188I	File info is <text>.	N/A
EUM0215E	Invalid value <value> for the <keyword> parameter.	24
EUM0216E	Keyword <val> is required when <val2> is specified.	24
EUM0221E	<type> request <req#> from <rqstID> was rejected by the installation exit processing.	20
EUM0256E	Unexpected value <val> in <name> field for request <num>.	30
EUM0329E	<msg>	N/A
EUM0349E	Request <req#> could not be processed by the installation command exit.	20
EUM0352E	<req> request <reqnum> from <rqstID> was rejected because the response from the installation command exit timed out.	20
EUM0373E	The <cmnd> command requires operations or admin authority.	20
EUM0392W	The used tape percentage in pool <pool> has reached <pct> percent of the tape <maximum/total>.	N/A
EUM0393W	The free count exceeds the tape count for pool <pool>.	N/A
EUM0395W	The tape count exceeds the tape maximum for pool <pool>.	N/A
EUM0523E	No volumes for DSN <name> in record <num>.	30
EUM0524E	The volume count for DSN <name> exceeds the maximum of <max> in record <num> of file <file>.	30

Table 15. TAPEDSN messages (continued)

Message number	Message text	Return code
EUM0535E	An invalid <name> field was detected in record <num> of file <file>.	30
EUM0539E	The data set name cannot end with a <value>.	24
EUM0540E	The data set name cannot begin with a <value>.	24
EUM0541E	Qualifier number <num> of the data set name contains an invalid character.	24
EUM0542E	The length of the volume <vol> exceeds the system maximum of <max> in record <num> of file <file>.	30
EUM0543E	The length of the volume <vol> is less than the system minimum of <min> in record <num> of file <file>.	30
EUM0544E	Data set name <name> in record <num> of file <file> failed the validity check.	30
EUM0558E	Volume <vol> in record <num> of file <file> is not defined to the system.	30
EUM0559W	The record type has been changed to <val> for record <num> in file <file>.	30
EUM0560W	The record version has been changed to <val> for record <num> in file <file>.	30
EUM0566E	The use-status of volume <vol> is not <val>.	30
EUM0584I	Pending volumes have been released for DSN occurrence <text>.	N/A
EUM0596E	Qualifier number <num> of the data set name begins with a numeric character.	24
EUM0598E	Qualifier number <num> of the data set name is longer than 8 characters.	24
EUM0606E	Volume <vol> is in the system pool but it is associated with data set <dsname>.	30
EUM0607E	Volume <vol> is in pool <pool1> but volume <vol2> is in pool <pool2>. The volumes are associated with data set <dsname>.	20
EUM0608E	Volume <vol> is part of a multi-volume data set and not all of the data set volumes were specified. Specify all of the data set volumes or use TAPEDSN MOVE to move the data set.	28
EUM0609E	The data set volumes cannot be moved to the system pool.	26
EUM0610E	An invalid record pointer - <var> - was passed from the calling routine.	30
EUM0611E	Volume <vol> is in use by request <req#>.	28
EUM0612E	User <user> does not have <auth> authority for pool <pool>.	20
EUM0613E	Data set volume <vol> is not in the system inventory. The volume is associated with data set <dsname>.	30
EUM0614E	Data set volume <vol> has an index problem. The volume is associated with data set <dsname>.	30
EUM0620W	An error occurred while updating the data set pool information.	30
EUM0722E	<req> request <req#> could not be sent to node <name>.	26
EUM0734E	The <req> command was not accepted because catalog node <name> is quiesced.	20

Table 15. TAPEDSN messages (continued)

Message number	Message text	Return code
EUM0735E	The <req> command was not accepted because local node <name> is quiesced.	20
EUM0736E	The <req> command was not accepted because Tape Manager is quiesced.	20
EUM0812E	The <req> command was not accepted because External Security Manager authorizations cannot be performed – RC <rc>.	20
EUM0817E	User <reqID> failed the External Security Manager check for the <req> command.	N/A
EUM0831E	Unable to authorize user <reqID> for <req> request <req#> – the details were logged.	20
EUM0935E	Event <event#> failed to set the category code for volume <vol> in library <libname> to <category> for request <req#>.	N/A
EUM0937E	Unable to verify that event <event#> set the category code for volume <vol> in library <libname> to <category> for request <req#>.	N/A
EUM0938E	Event <event#> failed to set the category code for volume <vol> in library <libname> to <cateogry> for <req#> because the volume was not in the library.	N/A
EUM0939E	An attempt to set the library category for volume <vol> to <category> failed when a message could not be sent to library server <server>.	N/A
EUM0940E	An attempt to set the library category for volume <vol> to <category> failed when a message could not be sent to library server <server> at node <name>.	N/A
EUM0941W	This is a severe error that should be reported to a Tape Manager Administrator immediately!	N/A
EUM0942E	An attempt to set the library category for volume <vol> to <category> failed because no library server was defined for library <libname>.	N/A
EUM0943E	An attempt to set the library category for volume <vol> to <value> failed because there is no local server for library <libname> and no remote server is on a node where a connection is available.	N/A
EUM0949E	VOLSTAT returned <return code> for an attempt to set the <field> to <value> for volume <vol>.	30

Return Codes

The following table lists the return codes for TAPEDSN.

Table 16. TAPEDSN Return codes

Return code	Description
0	Finished correctly
4	Warning issued
20	Unauthorized request
24	Bad PLIST
26	I/O error

Table 16. TAPEDSN Return codes (continued)

Return code	Description
28	Volume error
30	Unexpected error
1000	I/O error
2000	Logic error
3000	Syntax error
4xxx	User interface error (See note below.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

TAPEEOV

Use the TAPEEOV command to chain mount requests and to create or process multi-volume data sets. The TAPEEOV command is valid only when a data set name is specified in the initial TAPEMNT request. The TAPEEOV command can be issued when the application detects EOV (end of volume) for an active mount request, before the device associated with the active request is detached. Each tape mount is associated with a request number that is used to track the status of the request.

Normally, a mount request is finalized after the requestor detaches the mount device and the device is returned to Tape Manager. However, when a TAPEEOV command is issued before the mount device is detached, Tape Manager prepares for the next volume associated with the data set to be mounted, before the prior mount request is finalized.

Following the initial TAPEMNT command, a series of TAPEEOV and TAPEMNT commands can be repeated to create a multi-volume data set or to mount additional volumes of an existing multi-volume data set. The request number specified with the PREREQ operand, in any related TAPEEOV or TAPEMNT commands, must always refer to the request number of the initial TAPEMNT request.

Consider the following limits on volume count:

- *In a Tape Manager catalog*, the volume count for a multi-volume data set cannot exceed eight (8) volumes.
- *In an RMM catalog*, the maximum is determined by whatever z/OS or RMM limitations are relevant.

The command is valid for Tape Manager or RMM catalogs.

Example

As an example, assume that you have just reached EOV on an initial mount request that was assigned request number 001435 for volume VOL001. Now this request number (001435) is used as the PREREQ operand in any subsequent TAPEEOV or TAPEMNT commands related to the initial mount request. If the data set name was `TEST.DSN`, the TAPEEOV command would be the following:

```
TAPEEOV DSN TEST.DSN PREREQ 1435
```

The format of the TAPEEOV command is the same whether the initial mount was a scratch request or a request to mount an existing data set. Now, when the mount device for volume VOL001 is detached, mount request 001435 is complete and the TAPEEOV request is pending. To mount the next volume (VOL002), another TAPEMNT command is issued that uses the initial mount request number:

```
TAPEMNT DSN TEST.DSN PREREQ 1435
```

Suppose this new mount request is completed and VOL002 is successfully mounted. The following results will occur, depending upon which catalog (RMM or Tape Manager) you are using:

- *For a scratch request for a Tape Manager catalog*, the result is a record in the Tape Manager catalog for `TEST.DSN` that contains an entry for VOL001 and VOL002.
- *For a scratch request for an RMM catalog*, the result is a "next volume" field in the RMM catalog for volume VOL001 that points to VOL002, and a "previous volume" field for volume VOL002 that points to VOL001.

Authorization

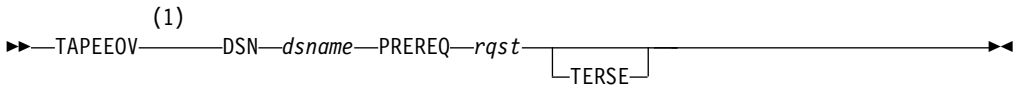
No specific authority is required to use the TAPEEOV command.

Shared Catalog Execution

The TAPEEOV command can be entered on the catalog node or a request node. The command executes on the catalog node in all cases.

Syntax

The next syntax diagram shows the TAPEEOV command and its operands.



Notes:

1 The parameters will be translated to upper case.

Figure 5. Syntax diagram for TAPEEOV command

Operands

The table below lists all of the operands you can use with the TAPEEOV command.

Table 17. List of operands for TAPEEOV command

Operand	Description
DSN *dsname*	Identifies a valid data set name. The rules for data set names in Tape Manager are: • The length of a data set name must not exceed 44 characters. • The length of a data set name qualifier must not exceed eight (8) characters. • The first character of a data set name qualifier should be alphabetic (A-Z) or national (# @ $). The remaining characters should be alphabetic, numeric (0-9), national or a hyphen (-). • A data set name must not begin or end with a period (.). • A data set name must not contain two consecutive periods. Although the rules for data set names may vary among z/OS releases, these conventions are intended to provide an acceptable level of compatibility with all levels of z/OS.
PREREQ *rqst*	Specifies the mount request number for which the EOV is being issued.
TERSE	Suppresses the informational messages EUM0010I, EUM0074I, EUM0083I, EUM0084I, EUM0288I, and EUM0291I for the requestor.

Usage notes

When using the TAPEEOV command, consider the following:

1. A mount request is normally considered complete when the drive that was attached to the mount request is returned. To create a chain of multi-volume mounts, issue the TAPEEOV command before detaching the drive and before the next tape mount is issued. The data set name and request number must be the same ones that were used with the first mount request in the chain.
2. The same DSN and PREREQ values must be supplied on subsequent TAPEMNT commands in order for the volumes to be chained.

Messages

The following table lists the messages generated by the TAPEEOV command.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 18. TAPEEOV messages

Message number	Message text	Return code
EUM0002E	Unauthorized <text> from <reqID>.	20
EUM0007E	Error returned by <routine> - RC <return code>.	30
EUM0010I	<cmnd> message <reqnum> required from <userid>.	N/A
EUM0011E	Unknown command <req> in request <req#> from <reqID>.	16
EUM0032E	Invalid parameter <parm>.	24
EUM0083I	<cmnd> request <reqnum> complete – RC <rc>.	N/A
EUM0084I	<cmnd> request <reqnum> error – RC <rc>.	N/A
EUM0221E	<type> request <req#> from <rqstID> was rejected by the installation exit processing.	20
EUM299E	Invalid volume count detected for request <num>.	30

Table 18. TAPEEOV messages (continued)

Message number	Message text	Return code
EUM0304E	No information for the data set name <dsn> and request <rseq#> was found.	24
EUM0305E	Request <rseq#> is not active for the initial EOV request.	24
EUM0306E	The ID of the requestor does not match the request ID.	24
EUM0307E	The DSN specified does not match the request DSN.	24
EUM0329E	<msg>	N/A
EUM0349E	Request <req#> could not be processed by the installation command exit.	20
EUM0352E	<req> request <reqnum> from <rqstID> was rejected because the response from the installation command exit timed out.	20
EUM0539E	The data set name cannot end with a <value>.	24
EUM0540E	The data set name cannot begin with a <value>.	24
EUM0541E	Qualifier number <num> of the data set name contains an invalid character.	24
EUM0546E	Volume <vol> was not found in the volume list of request.	24
EUM0547E	There are no additional volumes for data set <name>.	24
EUM0593E	The status of PREREQ request <num> must be GIVN.	24
EUM0596E	Qualifier number <num> of the data set name begins with a numeric character.	24
EUM0598E	Qualifier number <num> of the data set name is longer than 8 characters.	24
EUM0722E	<req> request <req#> could not be sent to node <name>.	26
EUM0734E	The <req> command was not accepted because catalog node <name> is quiesced.	20
EUM0735E	The <req> command was not accepted because local node <name> is quiesced.	20
EUM0736E	The <req> command was not accepted because Tape Manager is quiesced.	20
EUM0812E	The <req> command was not accepted because External Security Manager authorizations cannot be performed – RC <rc>.	20
EUM0817E	User <reqID> failed the External Security Manager check for the <req> command.	N/A
EUM0831E	Unable to authorize user <reqID> for <req> request <req#> – the details were logged.	20

Return Codes

The following table lists the return codes for TAPEEOV.

Table 19. TAPEEOV Return codes

Return code	Description
0	Finished correctly
20	Unauthorized request
24	Bad PLIST

Table 19. TAPEEOV Return codes (continued)

Return code	Description
30	Unexpected error
36	RMM command failure
1000	I/O error
2000	Logic error
3000	Syntax error
4xxx	User interface error (See note below.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

TAPELBL

Use the TAPELBL command to do any of the following tasks:

- Query non-standard tape label settings.
- Specify the defaults for specific non-standard label types.
- Add or delete IDs from the list of users to be excluded from the default settings.

If the default setting is NONE, an ADD allows the user(s) to specify a non-standard label parameter on the TAPEMNT command. If the default setting is ALL, an ADD prevents the user(s) from specifying the use of a non-standard label parameter on the TAPEMNT command. The use of DEL enforces the default setting by deleting the user(s) from the exempt list.

The command is valid for Tape Manager or RMM catalogs.

Shared Catalog Execution

The TAPELBL command can be entered on the catalog node or a request node. The command executes on the catalog node in all cases.

Authorization

No authorization is required when a QRY request is for the requestor ID or when an AUTH request is for STATUS. Tape Manager Admins or Operations authority is required for ADD and DEL requests, and also for QRY requests for anyone other than the requestor ID. Administrator authority is required for AUTH requests other than STATUS.

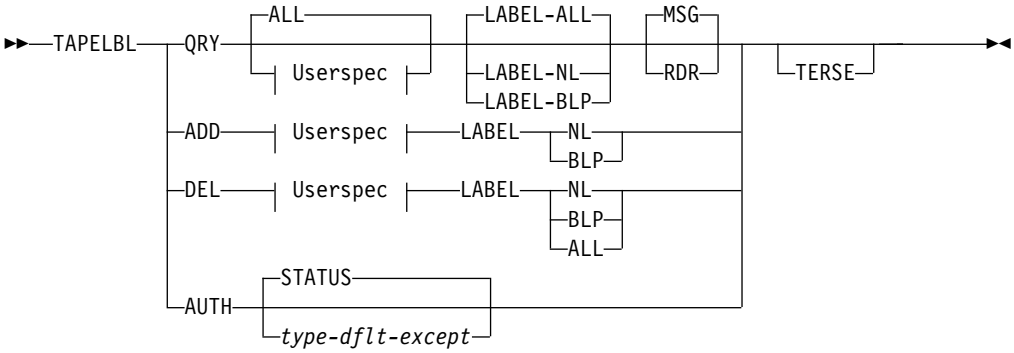
When an External Security Manager (ESM) is active, the authorization requirements may be controlled by ESM profiles:

- When `Privileged_User_Authority` is YES, Tape Manager Operations authority requires READ access to the operator profile.
- When `Privileged_User_Authority` is YES, Tape Manager Admins authority requires READ access to the administrator profile.

Refer to the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for more details.

Syntax

The following diagram shows the TAPELBL syntax:



Userspec:

Notes:

1 The default virtual address of the MDISK for the file is 191. See the help for TAPCMD for additional information pertaining to the virtual address or file mode when the FILE operand is specified.

Figure 6. Syntax diagram for TAPELBL command

Operands

The TAPELBL operands are described in the table below.

Table 20. List of operands for TAPELBL command

Operand	Description
QRY or QRY ALL	Displays all of the users that are exempted from the default non-standard label setting for the specified label type.
QRY USER *userlist*	Displays the exempt status for the user ID (or list of user IDs) for the specified non-standard label type.
QRY FILE *fname ftype*	Displays the exempt status for the list of user IDs in the file specified by the file name (*fname*) and file type (*ftype*).
ADD USER *userlist*	Adds the user ID (or a list of user IDs), defined by *userlist*, to the exempt list for the specified label value.
ADD FILE *fname ftype*	Adds the list of users, contained in the file specified by file name (*fname*) and file type (*ftype*), to the exempt list for the specified label value.
DEL USER *userlist*	Deletes the user ID (or list of user IDs) from the exempt list for the specified label value.
DEL FILE *fname ftype*	Deletes the list of users, contained in the file specified by file name (*fname*) and file type (*ftype*), from the exempt list for the specified label value.

Table 20. List of operands for TAPELBL command (continued)

Operand	Description
LABEL ALL	Indicates that the command applies to both the NL (non-labeled) and BLP (bypass label processing) exempt lists. *When used in conjunction with the QRY operand*, LABEL ALL displays all of the users who are exempt from the default setting for any non-standard label processing and the corresponding label types. *When used in conjunction with the DEL function*, LABEL ALL indicates the user (or list of users) is removed from the exempt list for all label types. Therefore non-standard label processing for the user (or users) is controlled by the default setting for each label type. If a user ID is not defined to the system, the ID is ignored and a warning is issued.
LABEL NL	Indicates the command applies to the exempt list for non-labeled tape mounts. *When used in conjunction with the TAPELBL QRY operand*, LABEL NL displays all users who are exempt from the default setting for LABEL NL. The setting for any user who is queried, but not exempt, will show as NONE. *When used in conjunction with the ADD operand*, LABEL NL indicates that the user (or users) is added to the exempt list for non-labeled processing. Therefore the user (or users) is exempt from the default setting for non-labeled processing. If a user ID is not defined to the system, the ID is ignored and a warning is issued. *When used in conjunction with the DEL function*, LABEL NL indicates the user (or list of users) is removed from the exempt list for non-labeled types. Therefore non-standard label processing for the user (or users) is controlled by the default setting for all LABEL NL. If a user ID is not defined to the system, the ID is ignored and a warning is issued.
LABEL BLP	Indicates the command applies to the exempt list for bypass label processing. *When used in conjunction with the TAPELBL QRY operand*, LABEL BLP displays all users who are exempt from the default setting for LABEL BLP. The setting for any user who is queried, but not exempt, will show as NONE. *When used in conjunction with the ADD operand*, LABEL BLP indicates that the user (or users) is added to the exempt list for bypass label processing. Therefore the user (or users) is exempt from the default setting for bypass label processing. If a user ID is not defined to the system, the ID is ignored and a warning is issued. *When used in conjunction with the DEL function*, LABEL BLP indicates the user (or list of users) is removed from the exempt list for all label types. Therefore bypass label processing for the user (or users) is controlled by the default setting for all LABEL BLP. If a user ID is not defined to the system, the ID is ignored and a warning is issued.
AUTH STATUS	Requests the current settings for non-standard label processing.

Table 20. List of operands for TAPELBL command (continued)

Operand	Description

AUTH *type dflt except*	Overrides a default setting for non-standard label processing. AUTH specifies a non-standard label type (*type*), the default authority (*dflt*) for the label type , and whether there are exceptions to the default setting (*except*). The values for the variables are shown below:
	• Values for *type* are NL (non-labeled) and BLP (bypass label processing).
	• Values for *dflt* are:
	– ALL: By default, all users are allowed to use non-standard label processing. With ALL, the TAPELBL ADD command prevents the user(s) from using the specified non-standard label processing.
	– NONE: By default, no users are allowed to use non-standard label processing. With NONE, the TAPELBL ADD command authorizes the user(s) to use the specified non-standard label processing.
	Different default values may be used for different non-standard label types.
	• Values for *except* are:
	– YES: Exceptions to the default authority are permitted.
	– NO: No exceptions to the default authority are permitted. The default will be used in all cases and no authorization checking will be performed.
	The CMDAUTH ADD or TAPELBL ADD command can be used to exempt users from the default setting, if exceptions are allowed. The CMDAUTH DEL or TAPELBL DEL command can be used to remove the exempt status for users.
	Example #1:
	`TAPELBL AUTH BLP NONE YES`
	This example indicates that BLP processing is not permitted unless an administrator has authorized the requestor using the TAPELBL ADD command.
	Example #2:
	`TAPELBL AUTH NL ALL YES`
	This example indicates NL processing is permitted unless the requestor has been prohibited by an administrator using the TAPELBL ADD command.

USER *userlist*	Specifies a list of one or more space-delimited existing user IDs. Example: `TAPELBL USER user1 user2 user3 user4 user5`

Table 20. List of operands for TAPELBL command (continued)

Operand	Description
FILE *fname ftype*	Specifies a file that contains the list of user IDs where *fname* is the CMS file name and *ftype* is the CMS file type. This file exists on an accessed disk of the requestor. When the FILE operand is specified, the file can contain multiple records. Each record in the file can contain multiple, space-delimited user IDs. You can use the FM or VADDR option of the TAPCMD command to specify the location of the file.
TERSE	Suppresses the informational messages EUM0010I, EUM0074I, EUM0083I, EUM0084I, EUM0288I, and EUM0291I for the requestor.

Usage notes

When using the TAPELBL command, consider the following items:

1. If the default setting is NONE, the ADD operand will permit the use of a non-standard label parameter in the TAPEMNT command and DEL will remove the permission.

   If the default setting is ALL, the ADD operand will prevent the use of a non-standard label parameter in the TAPEMNT command and DEL will remove the restriction.
2. If a user ID is specified that is not defined to the system, a warning will be issued and no processing will occur for that user. Processing for users who are defined to the system will not be affected.

Messages

The table below lists the messages generated by the TAPELBL command.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 21. TAPELBL messages

Message number	Message text	Return code
EUM0002E	Unauthorized <text> from <reqID>.	20
EUM0007E	Error returned by <routine> - RC <return code>.	30
EUM0010I	<cmnd> message <reqnum> required from <userid>.	N/A
EUM0011E	Unknown command <req> in request <req#> from <reqID>.	16
EUM0012E	Invalid null parameter for <parm>.	24
EUM0031E	Required parameter <parm> not specified.	24
EUM0032E	Invalid parameter <parm>.	30
EUM0034E	Error <return code> linking <mdsk>.	34
EUM0035E	Authorization error <return code> linking <mdsk>.	34
EUM0036E	Error <return code> accessing <vaddr>.	34
EUM0037E	Error <return code> locating file <filename> <filetype>.	26
EUM0038E	Error <return code> reading file <filename> <filetype>.	26
EUM0041E	Invalid delimiter <dlm> for <parm>.	24

Table 21. TAPELBL messages (continued)

Message number	Message text	Return code
EUM0042E	No values found in file <filename> <filetype>.	24
EUM0043E	Invalid value <value> found in file <file name>.	24
EUM0075E	Unexpected return code from <command> - RC <return code>.	30
EUM0080E	Invalid value <stat> detected for STATUS.	30
EUM0083I	<cmnd> request <reqnum> complete – RC <rc>.	N/A
EUM0084I	<cmnd> request <reqnum> error – RC <rc>.	N/A
EUM0134E	Unauthorized <command name> request by <requestor ID>.	20
EUM0157E	Error <action> output - RC <return code>.	30
EUM0172E	Error <return code> writing file <file name>.	26
EUM0215E	Invalid value <value> for the <keyword> parameter.	24
EUM0221E	<type> request <req#> from <rqstID> was rejected by the installation exit processing.	20
EUM0329E	<msg>	N/A
EUM340W	ID <id> is not defined to the system.	N/A
EUM0349E	Request <req#> could not be processed by the installation command exit.	20
EUM0352E	<req> request <reqnum> from <rqstID> was rejected because the response from the installation command exit timed out.	20
EUM0373E	The <cmnd> command requires operations or admin authority.	20
EUM0425E	Either QRY, ADD, DEL or AUTH must be specified.	24
EUM0426I	File <file1> was successfully recovered from file <file2>.	N/A
EUM0427W	The changes were not saved permanently.	N/A
EUM0435I	The use of <label> is not permitted.	N/A
EUM0436I	The use of <label> is permitted for <desc> users.	N/A
EUM0437I	The default setting for <label> is <default> and exception checking is <status>.	N/A
EUM0466I	No disk has been defined for the retention of <authtype> authorizations.	N/A
EUM0601E	The FILE parameter requires a file name and file type.	24
EUM0722E	<req> request <req#> could not be sent to node <name>.	26
EUM0734E	The <req> command was not accepted because catalog node <name> is quiesced.	20
EUM0735E	The <req> command was not accepted because local node <name> is quiesced.	20
EUM0736E	The <req> command was not accepted because Tape Manager is quiesced.	20
EUM0812E	The <req> command was not accepted because External Security Manager authorizations cannot be performed – RC <rc>.	20
EUM0817E	User <reqID> failed the External Security Manager check for the <req> command.	N/A
EUM0831E	Unable to authorize user <reqID> for <req> request <req#> – the details were logged.	20

Table 21. TAPELBL messages (continued)

Message number	Message text	Return code
EUM0888W	User ID <UserID> is not defined on the catalog node but has been accepted.	4

Return codes

The return codes for TAPELBL are listed in the table below.

Table 22. TAPELBL Return codes

Return code	Description
0	Finished correctly
4	Warning issued
20	Unauthorized request
24	Bad PLIST
26	I/O error
34	Link/access error
1000	I/O error
2000	Logic error
3000	Syntax error
4xxx	User interface error (See note below.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

TAPELIB

Use the TAPELIB command to query Automated Tape Library (ATL) status, to modify ATL attributes, or to temporarily define a new ATL to the tape management system. The command is valid for Tape Manager or RMM catalogs.

Shared Catalog Execution

The command can be entered on the catalog node or a request node. The command executes on the catalog node in all cases.

Authorization

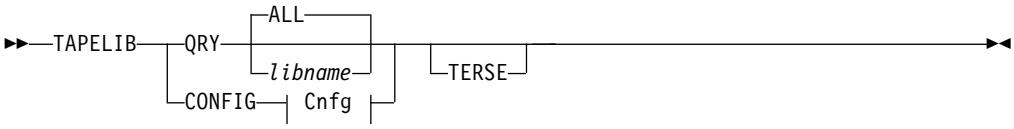
When using the **TAPELIB** command with the **CONFIG** parameter, you must have Tape Manager Admins authority. No authorization is required when using the **QRY** parameter.

When an External Security Manager (ESM) is active, the authorization requirements may be controlled by ESM profiles. When `Privileged_User_Authority` is YES, Tape Manager Admins authority requires READ access to the administrator profile.

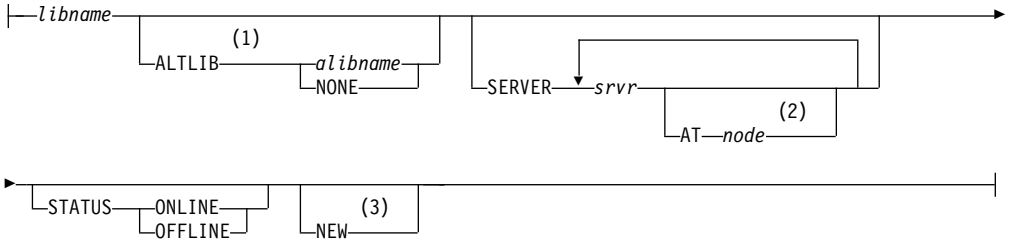
For more details, refer to the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344).

Syntax

The next diagram shows the TAPELIB syntax.



Cnfg:



Notes:

1 The ALTLIB parameter is not valid with an RMM catalog implenetation.

2 If there are no Tape Manager nodes defined, the AT operand is not permitted. If a catalog node is defined and the AT operand is not specified, the node defaults to the catalog node.

3 The STATUS and SERVER parameters are required when NEW is specified.

Figure 7. Syntax diagram for TAPELIB command

Operands

The TAPELIB operands are described in the table below.

Table 23. List of operands for TAPELIB command

Operand	Description
QRY ALL	Requests status information for all libraries.
QRY *libname*	Requests status information for the library specified.
CONFIG *libname*	Specifies the library to be configured or defined. See the LIBRARY configuration statement in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for additional information when using the CONFIG operand.
ALTLIB *alibname*	Some environments may support access to a volume from multiple libraries. Use the ALTLIB keyword to specify the name of an alternate library that can be used when the Tape Manager status of the primary library is OFFLINE and the status of the alternate library is ONLINE.
SERVER *srvr* SERVER *srvr* AT *node*	Sets the Tape Library Manager (TLM) service machine associated with the library. When AT *node* is specified, the server name is associated with the node name specified. If the server is not logged-on at a request node, an attempt will be made to auto-log the server when the first message for the server is received from the catalog node. If a catalog node is specified, an attempt will be made to auto-log the server when the TAPELIB command is processed.

Table 23. List of operands for TAPELIB command (continued)

Operand	Description
STATUS ONLINE	Sets the status of the library to ONLINE. The status applies to all nodes when running in a Shared Catalog environment.
STATUS OFFLINE	Sets the status of the library to OFFLINE. The status applies to all nodes when running in a Shared Catalog environment.
NEW	Specifies that this is a temporary definition for a new library. The definition must be added to the Tape Manager configuration file before it is permanent.
TERSE	Suppresses the informational messages EUM0010I, EUM0074I, EUM0083I, EUM0084I, EUM0288I, and EUM0291I for the requestor.

Usage notes

When using the TAPELIB command, consider the following:

1. When a new library server is dynamically configured for a request node, an attempt will be made to log on the server when the request node receives the first server command for the library server from the catalog node. The autolog attempt will only be made if the server ID is defined to the system and the ID is not already logged on.
2. Changes or additions of libraries via the TAPELIB command will not be permanent. An appropriate LIBRARY statement must be included in the configuration file for permanency. If you add a LIBRARY statement for a server on a request node, remember to include the server name on a LIBRARY_SERVER statement in the configuration file on the request node.

Messages

The table below lists the messages generated by the TAPELIB command.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 24. TAPELIB messages

Message number	Message text	Return code
EUM0002E	Unauthorized <text> from <reqID>.	20
EUM0005E	Invalid value <value> for <parm>.	24
EUM0007E	Error returned from <routine> - RC <return code>.	30
EUM0010I	<cmnd> message <reqnum> received from <userID>.	N/A
EUM0011E	Unknown command <req> in request <req#> from <reqID>.	16
EUM0020E	ID <ID> is not defined to the system.	24
EUM0031E	Required parameter <parm> not specified.	24
EUM0032E	Invalid parameter <parm>.	24
EUM0041E	Invalid delimiter for <parm>.	24
EUM0046E	The length of <parm> exceeds the maximum of <max>.	24
EUM0083I	<cmnd> request <reqnum> complete - RC <rc>.	N/A
EUM0084I	<cmnd> request <reqnum> error - RC <rc>.	N/A
EUM0134E	Unauthorized <command name> request by <requestor ID>.	20

Table 24. TAPELIB messages (continued)

Message number	Message text	Return code
EUM0157E	Error <action> output - RC <rc>.	30
EUM0214E	Library <name> is not defined to Tape Manager.	24
EUM0215E	Invalid value <value> for the <keyword> parameter.	24
EUM0216E	Keyword <keyword1> is required when <keyword2> is specified.	24
EUM0217E	NEW was specified but <library> is already defined.	24
EUM0218E	No library server is defined for library <name>.	24
EUM0219W	No library was found.	4
EUM0221E	<type> request <req#> from <rqstID> was rejected by the installation exit processing.	20
EUM0329E	<msg>	N/A
EUM0349E	Request <req#> could not be processed by the installation command exit.	20
EUM0352E	<req> request <reqnum> from <rqstID> was rejected because the response from the installation command exit timed out.	20
EUM0373E	The <cmd> command requires operations or admin authority.	20
EUM0640E	<val> is not a valid <desc>.	24
EUM0722E	<req> request <req#> could not be sent to node <name>.	26
EUM0734E	The <req> command was not accepted because catalog node <name> is quiesced.	20
EUM0735E	The <req> command was not accepted because local node <name> is quiesced.	N/A
EUM0736E	The <req> command was not accepted because Tape Manager is quiesced.	20
EUM0780E	The <opr> operand is not permitted when a <type> node is not defined.	24
EUM0812E	The <req> command was not accepted because External Security Manager authorizations cannot be performed - RC <rc>.	20
EUM0817E	User <reqID> failed the External Security Manager check for the <req> command.	N/A
EUM0831E	Unable to authorize user <reqID> for <req> request <req#> - the details were logged.	20
EUM0844E	EUM0884E The <LibParm> library <Libname> is not defined.	24

Return codes

The return codes for TAPELIB are listed in the table below.

Table 25. TAPELIB Return codes

Return code	Description
0	Finished correctly
4	Warning issued
20	Unauthorized request
24	Bad PLIST
30	Unexpected error

Table 25. TAPELIB Return codes (continued)

Return code	Description
1000	I/O error
2000	Logic error
3000	Syntax error
4xxx	User interface error (See note below.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

TAPEMNT

Use the TAPEMNT command to request a READ mount or WRITE mount for a specific volume or a scratch mount. The command is valid for Tape Manager or RMM catalogs.

Shared Catalog Execution

The TAPEMNT command can be entered on the catalog node or a request node. The command executes on the catalog node in all cases.

Authorization

The requestor requires at least READ authority for read-only mounts and WRITE authority for read-write or scratch mounts. A pool administrator has full mount authority with Tape Manager security, but requires additional mount authority (to the POOLVOLS profile) when access to the pool is managed by an External Security Manager. System administrators require additional authority to mount volumes that reside in private pools whether or not access to pools is managed by an External Security Manager.

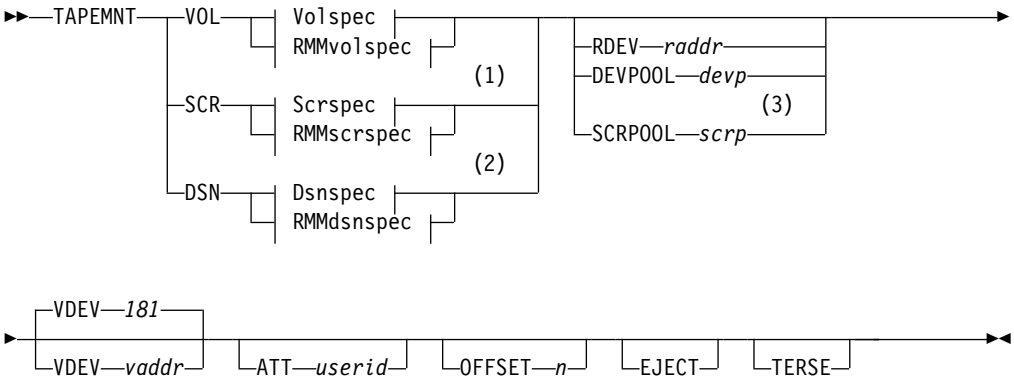
When an External Security Manager (ESM) is active, the authorization requirements may be controlled by ESM profiles:

- When `Pool Authority` is YES, authority for a private pool requires access to the pool volume profile of the target pool.
- Write access requires either ALTER access to the profile (TAPE authority) or UPDATE access to the profile (WRITE authority).
- Read access requires at least READ access to the profile (READ authority).
- If the pool volume profile is not defined, the user ID that corresponds to the pool owner has TAPE authority by default.

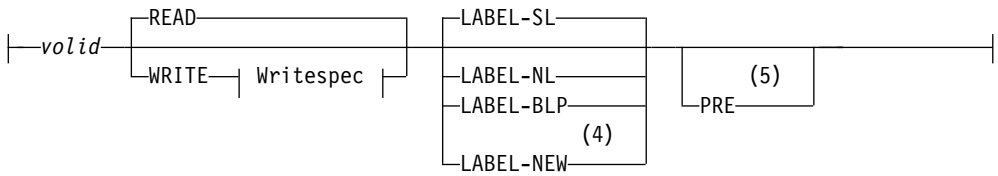
For more details, refer to the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344).

Syntax

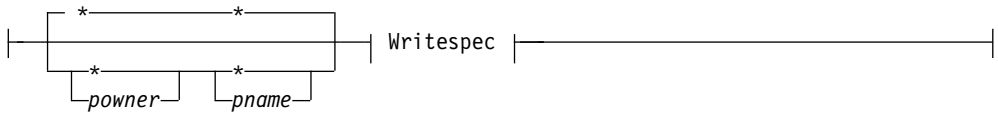
The next diagram shows the TAPEMNT syntax.



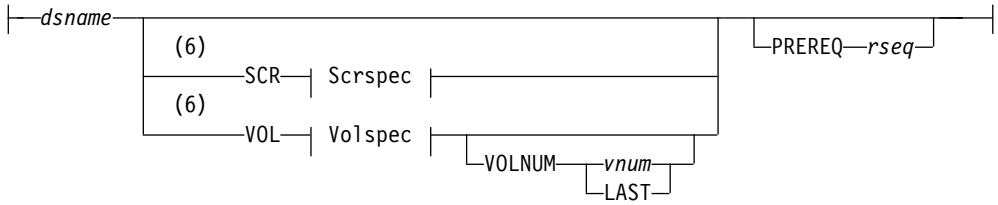
Volspec:



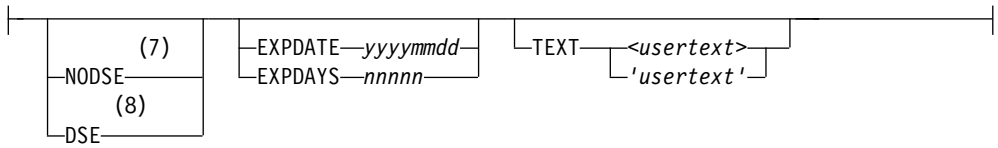
Scrspec:



Dsnspec:



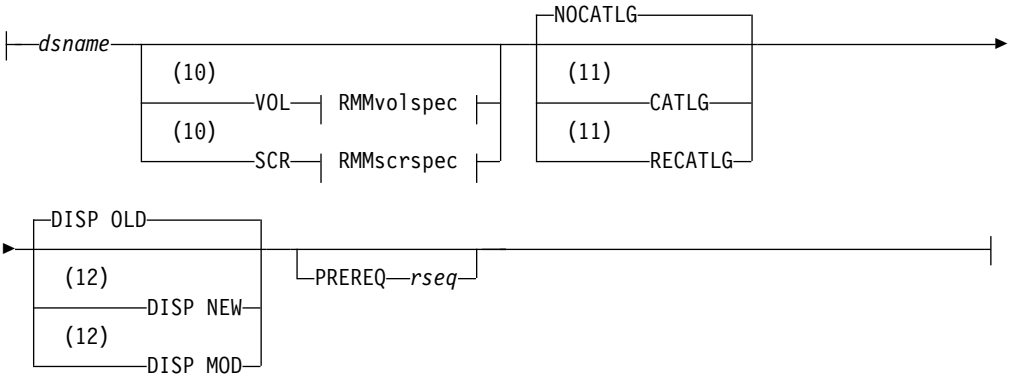
Writespec:



RMMvolspec (RMM catalog installations):

RMMscrspec (RMM catalog installations):

RMMdsnspec (RMM catalog installations):



Notes:

1 For RMM catalogs, either RDEV, DEVPOOL, or SCRPOOL must be specified when the SCR form of the command is used, unless the site has defined a default scratch pool.

2 The data set name is translated to uppercase.

3 The SCRPOOL parameter is only valid with RMM catalogs.

4 LABEL NEW requires the RDEV parameter for manual tape mounts.

5 The PRE parameter is ignored unless RDEV is specified.

6 When neither VOL nor SCR is specified, the default is for a volume-specific mount of the most recently written volume associated with the data set name.

7 The Writespec data is not valid for tapes in the system pool, but those tapes can be mounted with the WRITE parameter by a system administrator.

8 Site defaults will be used for the expiration date and DSE values if none are specified.

9 Site default will be used for the expiration date if a value is not specified.

10 When neither VOL nor SCR is specified, the default is for a volume-specific mount of the most recently written volume associated with the data set name.

11 Valid only when DSN is specified.

12 Valid only when DSN is specified. The default access is WRITE when DISP MOD or DISP NEW is specified.

Figure 8. Syntax diagram for TAPEMNT command

Operands

The TAPEMNT operands are described in the next table.

Table 26. List of operands for TAPEMNT command

Operand	Description
VOL *volid*	Specifies the volume ID that is to be mounted. • For a pool owner, the site configuration value for SCROWNER will be used. If SCROWNER is not supplied, the pool owner is the ID of the requestor. • For the pool name, the site configuration value for SCRNAME will be used. If SCRNAME is not supplied, the pool name is the ID of the requestor.
SCR	Requests a scratch mount.
DSN *dsname*	Identifies a valid data set name. The data set must be an existing data set when the VOL parameter is specified with READ access. A new data set is created when the SCR parameter is specified or the VOL parameter is specified with the WRITE parameter and the specified volume is not associated with an existing data set. The rules for data set names in Tape Manager are: • The length of a data set name must not exceed 44 characters. • The length of a data set name qualifier must not exceed eight (8) characters. • The first character of a data set name qualifier should be alphabetic (A-Z) or national (# @ $). The remaining characters should be alphabetic, numeric (0-9), national, or a hyphen (-). • A data set name must not begin or end with a period ("."). • A data set name must not contain two consecutive periods (".."). Although the rules for data set names may vary among z/OS releases, these conventions are intended to provide an acceptable level of compatibility with all levels of z/OS.
RDEV *raddr*	Specifies a real device address, *raddr*, on which the tape is to be mounted.
DEVPOOL *devp*	Specifies the device pool, *devp*, on which the tape is to be mounted.
SCRPOOL *scrp*	Specifies an RMM scratch pool, *scrp*, that is defined in the configuration for ATL devices.
VDEV *vaddr*	Specifies the virtual device address, *vaddr*, that will be used when the device is attached to the user. The default is 181.
ATT *userid*	Specifies the *user ID* to which the device is to be attached. The default ID is the command issuer.
OFFSET *n*	Positions the tape before it is given to the user. Use OFFSET 0 to position to the beginning of the tape. • The default is OFFSET 1 for standard label processing, which positions a standard label volume to the file that immediately follows the label. • The default is OFFSET 0 for LABEL NL or LABEL BLP processing.
EJECT	Specifies that the volume is to be ejected from the ATL. The library type will be set to MAN and the library name will be set to blank.
TERSE	Suppresses the informational messages EUM0010I, EUM0074I, EUM0083I, EUM0084I, EUM0288I, and EUM0291I for the requestor.

Table 26. List of operands for TAPEMNT command (continued)

Operand	Description
READ	Requests a READ mount for the specified volume.
WRITE	Requests a WRITE mount for the specified volume.
LABEL SL	Indicates that the volume has a standard label. This is the default.
LABEL NL	Indicates that the volume is non-labeled.
LABEL BLP	Indicates that label processing will be bypassed.
LABEL NEW	As of PTF UI48913, indicates that an I/O error detected by the DMM should be tolerated and that the mounted volume should be given to the requestor. This feature allows an uninitialized volume that returns an I/O error to be given to the requestor for initialization.
PRE	When used with the RDEV parameter, PRE indicates that the volume is pre-mounted. • If RDEV specifies a dedicated device and the device is ready, the device will be unloaded unless PRE is specified. • If RDEV specifies a dynamically allocated (non-dedicated) device and the device is ready, the device will not be allocated unless PRE is specified.
asterisk (*)	*For pool owner*, an asterisk (*) specifies that the site configuration value for SCROWNER will be used. If SCROWNER is not supplied, the pool owner is the ID of the requestor. *For pool name*, an asterisk (*) specifies that the site configuration value for SCRNAME will be used. If SCRNAME is not supplied, the pool name is the ID of the requestor.
powner pname	Specifies ID of an existing pool that will own the tape after the tape is mounted. The default value for the *powner* is the requestor ID.
VOLNUM *vnum*	Specifies a numeric value based on the order of the volumes in the data set. If *vnum* is one (1), the first volume of the data set will be mounted. The number specified must not exceed the number of volumes in the data set.
VOLNUM LAST	Specifies that the last volume of the data set is to be mounted.
NODSE	Specifies that DSE (data security erase) processing is *not* required after the tape volume expires and before the volume is returned to scratch status.
DSE	Specifies that DSE (data security erase) processing is required after the tape volume expires and before the volume is returned to scratch status. It is the responsibility of the site to ensure that the DSE processing occurs and that the DSE flag is cleared once the DSE is completed. The TMDSE utility provided in Tape Manager can be used to perform this processing and clear the flag. For more information on TMDSE, refer to "TMDSE" on page 179.
EXPDATE *yyyymmdd*	Sets the year, month, and day after which the tape status will be changed from USED to FREE by the expiration process. The expiration date will be set to zeros at the same time that the status is reset. The value will default to the smaller of the pool retention default and the system retention maximum.

Table 26. List of operands for TAPEMNT command (continued)

Operand	Description
EXPDAYS *nnnnn*	Sets the number of days, from one to five digits, after which a tape will be changed from USED to FREE by the expiration process. The expiration date will be set to zeros at the same time that the status is reset.
TEXT <*usertext*> or TEXT *'usertext'*	Specifies up to 32 bytes of user data in the volume catalog entry. The field must be delimited by the less-than (<) and greater-than (>) characters or by single quotes (' '). The text field will be cleared if a TAPEMOD command is used to change the volume use-status from USED to FREE. If a used volume expires, the text field will be retained until the expired volume is next mounted with WRITE access.
NOCATLG CATLG RECATLG	Specifies the z/OS catalog option. • NOCATLG indicates that the data set is not to be cataloged. • CATLG indicates that the data set will be cataloged unless there is an existing catalog entry for the data set. • RECATLG indicates that the data set will be cataloged, even when there is an existing catalog entry for the data set. In that case, the existing entry will be deleted and the data set will be re-cataloged with the new volume information.
DISP NEW	Indicates that a new data set is being created. The parameter is ignored when *dsname* is not specified.
DISP OLD	Indicates that an existing data set is being requested. The first volume of the data set will be mounted. The parameter is ignored when *dsname* is not specified.
DISP MOD	Indicates an existing data set will be written from the last volume. If RMM does not locate the data set and no volume is specified, the request will be converted to a scratch request with DISP NEW. The parameter is ignored when *dsname* is not specified.
PREREQ *rseq*	Refers to the request sequence number that was specified in a previous TAPEEOV command. This operand is used to create a multi-volume data set and it is valid only with RMM catalogs. The PREREQ value in the TAPEEOV and TAPEMNT commands must refer to the request number of the first tape mount request in the chain, regardless of the number of volumes that are to be chained together.

Usage notes for Tape Manager catalog operations

Consider the following when using the TAPEMNT command with the Tape Manager catalog:

1. A scratch request will fail if there are no free tapes available for the pool. The pool will be checked for free tapes first. If the pool has been defined with a FREEPOOL, that pool will be checked next. If the pool is authorized to use the system free pool, that pool will be checked next.
2. If the volume ID is specified and the volume is in the system pool, the status of the tape will not be changed when the tape is unmounted.
3. If RDEV is specified and the volume becomes available on a different device, different processing occurs, depending on the volume library type (MAN or ATL).

- A volume with a manual library type will be unloaded and the mount will remain pending.
- A volume with an automated library type will be given to the attach ID and an informational message (191) will be issued.

Generally, it is **not** recommended that you specify RDEV for mounts, especially library mounts.

4. If DEVPOOL is specified and a volume becomes available on a device that is not explicitly associated with the device pool, different processing occurs depending on the volume library type (MAN or ATL).
   - A volume with a manual library type will be unloaded and the mount will remain pending.
   - A volume with an automated library type will be given to the attach ID and an informational message (EUM0191I) will be issued.
5. If DEVPOOL is specified on the command and there are no devices associated with the requested device pool, the mount request will fail since there is no way to validate that a device is in the pool.

   For a Tape Manager catalog (non-RMM) scratch mount request, the system will select a scratch volume based on the pool media type. If the volume is mounted on a device that is not associated with the device pool, the mount request will remain in a pending status. No checking is performed to verify that the selected volume is compatible with the device pool for which the request was made.
6. If an ATL mount request is cancelled by the Library Manager, ensure that the volume is in the ATL.
7. The expiration date will be set to the default for R/W mounts whenever "no expiration" is specified on the TAPEMNT command, for both scratch and volume-specific mounts.
8. A system administrator can move volumes into and out of private pools, but administrators must be explicitly authorized (using the POOLACC command) to mount tapes that are in a private pool. This requirement means that a command will be logged that will show an administrator was authorized to mount volumes from a private pool using the TAPEMNT command.

Usage notes for RMM catalog operations

In addition to the information in “Usage notes for Tape Manager catalog operations” on page 57, the following items apply to using the RMM catalog operations of Tape Manager:

- An RDEV request will be treated as a manual mount request unless the device is in a device pool that was identified as an ATL pool in the configuration file.
- Only a device in the appropriate device pool (for DEVPOOL) or the exact device (for RDEV) is eligible for scratch requests. For volume-specific requests, it is possible for a volume to be mounted on an inappropriate device. If the volume is an ATL volume, the device will be given to the attach ID and a warning message will be issued. If the volume is a scratch volume, the device will be unloaded and the mount request will remain in pending status.
- The DSE, NODSE, and TEXT parameters are ignored.
- The expiration date will default to the configuration value for RETNDFLT if not specified.

Messages

The table below lists the messages generated by the TAPEMNT command.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 27. TAPEMNT messages

Message number	Message text	Return code
EUM0002E	Unauthorized mount request from <userID>.	20
EUM0005E	Invalid value <value> for <parm>.	24
EUM0007E	Error returned from <routine> - RC <return code>.	30
EUM0010I	<cmnd> message <reqnum> required from <userID>.	N/A
EUM0011E	Unknown command <req> in request <req#> from <reqID>.	16
EUM0017E	Error sending SMSG to <ID> - RC <return code>.	30
EUM0020E	ID <user ID> is not defined to the system.	24
EUM0022E	Pool ID <pool ID> is not a valid pool name.	24
EUM0024E	Pool ID <pool ID> does not exist.	30
EUM0025E	Unexpected error condition.	30
EUM0026E	Logic error at <line> - RC <return code>.	1000
EUM0027E	Syntax error at <line>.	2000
EUM0030E	Parameter <parm> exceeds the <desc> maximum.	24
EUM0031E	Required parameter <parm> not specified.	24
EUM0032E	Invalid parameter <parm>.	24
EUM0037E	Error <return code> locating file <file name>.	26
EUM0038E	Error <return code> reading file <file name>.	26
EUM0039E	File <file name> cannot be processed due to a version mismatch.	26
EUM0040E	File <file name> cannot be processed due to a record type error.	26
EUM0041E	Invalid delimiter for <parm>.	24
EUM0043E	Invalid value <value> found in file <file name>.	24
EUM0045E	The length of <parm> exceeds the system maximum <val>.	24
EUM0046E	The length of <parm> exceeds the maximum of <val>.	24
EUM0052E	<parm1> is not valid with <parm2>.	24
EUM0065E	Volume <volid> is not in the system inventory.	28
EUM0066E	Invalid parameter <parm> for system volume.	24
EUM0067E	System pool volume <volid> mount requires admin authority.	24
EUM0068E	Volume <volid> in free list but status is <status>.	30
EUM0069E	Volume <vol> is in free list <list> but pool <pool>.	30
EUM0070E	Volid <v> in free list <list> is a media mismatch for pool <pool>.	30
EUM0071E	No free volumes available for the scratch request <rqst#>.	28
EUM0072I	Mount request <rqst#> received from <user>.	N/A
EUM0073I	Mount request <rqst#> successful.	N/A
EUM0074I	Mount request <rqst#> failed - RC <return code>.	N/A
EUM0075E	Unexpected return code from <routine> - RC <return code>.	30
EUM0076E	Tape count for pool <pool> would exceed pool maximum.	28

Table 27. TAPEMNT messages (continued)

Message number	Message text	Return code
EUM0077E	Volume index error: INV=<invvol> VOL=<indxvol> IND=<indxnum>	30
EUM0079I	Mount request <rqst#> pending.	N/A
EUM0080E	Invalid value <val> detected for <var>.	30
EUM0082E	Inventory and volume index out of synch.	30
EUM0083I	<cmd> request <seq> complete - RC <return code>.	N/A
EUM0084I	<cmd> request <seq> error - RC<return code>.	N/A
EUM0085E	Volume wait time for request <req> exceeded the system limit.	28
EUM0086E	Device wait time for request <req> exceeded the system limit.	32
EUM0089E	Send failed - ID: <ID> MSG: <msg>.	30
EUM0091E	Unexpected value <val> in <type> message from <ID>.	30
EUM0094E	Volume <vol> is not in pool <pool>.	30
EUM0096E	Unknown result <rslt> for mount request <rqst>.	30
EUM0099E	Device <dev> access is <RW RO> needed <RO RW>.	32
EUM0101I	CNCLD USER=<user> RQST=<num> VOL=<vol> DEV=<dev>	N/A
EUM0103E	Device <dev> given to user <user id> but no request found.	N/A
EUM0108E	GIVE volume mismatch dvol=<vol1> mvol=vol2.	28
EUM0109I	Device <dev> attached to user <user id> with volume <vol>.	N/A
EUM0111E	Device <dev> NOT READY - expected volume <vol>.	28
EUM0112E	Volume <vol1> on device <dev> - expected volume <vol2>.	28
EUM0117I	CNCLD USER=<user> RQST=<num> VOL=<vol> DEVPOOL=<pool>	N/A
EUM0121E	Response timeout for request <req> on GIVE device <dev>.	32
EUM0125I	Volume <volume name> in pool <pool name> not in inventory.	30
EUM0126E	Free pointer error for volume <vol>.	30
EUM0146E	Source and target pool media types do not match.	24
EUM0148E	Source and target are the same pool.	24
EUM0150E	Keyword <parm1> is not valid with keyword <parm2>.	24
EUM0156E	Invalid index entry for volume <volume name>	30
EUM0161I	Volume <vol> not processed - not in source pool.	N/A
EUM0162I	Volume <vol> not processed - status USED is invalid for pool sys.	N/A
EUM0163I	Volume <vol> not processed - EXTERNAL tape is invalid for pool sys.	N/A
EUM0164I	Volume <vol> not processed - wrong media type for target pool.	N/A
EUM0165I	Volume <vol> not processed - in use.	N/A
EUM0167I	Request completed with volume errors.	N/A
EUM0171E	Error <return code> processing file <file>.	30
EUM0172E	Error <return code> writing file <file>.	26
EUM0174E	Volume count is negative.	30

Table 27. TAPEMNT messages (continued)

Message number	Message text	Return code
EUM0175E	Volume count is not numeric.	30
EUM0176E	Index error processing <req#> request.	30
EUM0181I	Volume <vol> not processed - invalid index.	30
EUM0187E	Invalid file info passed for pool <pool>.	30
EUM0188I	File info is <text>.	N/A
EUM0191I	Request <req#> loaded on device <dev1> rather than <dev2>.	N/A
EUM0194E	Unexpected LM mount response <resp> for request <req#>.	30
EUM0197E	Request <req#> cancelled by the LM - RMS RC <return code> Rsn <reason>	34
EUM0206I	Expired volumes in pool <pool1> retained - free pool <pool2> not found.	N/A
EUM0207I	Expired volumes in pool <pool1> retained - free pool <pool2> has wrong media.	N/A
EUM0213I	ID <user1> has cancelled mount request <req#> issued by <user2>.	8
EUM0215E	Invalid value <val> for the <parm> parameter.	24
EUM0220E	Library <name> associated volume <volid> is not available.	32
EUM0221E	<type> request <req#> from <rqstID> was rejected by the installation exit processing.	20
EUM0227E	The requested device pool <name> is not defined.	24
EUM0228E	No drives are defined for device pool <name>.	24
EUM0229I	Request <req#> loaded on device <dev> not in pool <pool>.	N/A
EUM0230E	No site default RMM device pool - DEVPOOL or RDEV required.	24
EUM0231E	Unable to perform RMM authorization - RC <return code>.	20
EUM0232E	Unauthorized RMM request - RC=<return code> Text=<text>.	20
EUM0234E	Invalid sequence number in RMM request.	N/A
EUM0236E	<type> communication error - RC <return code> Rsn <reason>.	30
EUM0237I	Volume <vol> returned on device <dev>.	N/A
EUM0238E	Unlabeled tape returned on device <dev> - expected volume <vol>.	28
EUM0239E	Device <dev> returned NOT READY - expected volume <vol>.	28
EUM0240E	Volume <vol> returned on device <dev> - expected volume <vol>.	28
EUM0241E	Unexpected status <stat> processing RMM <type> response for request <req#>.	30
EUM0244E	RMM volume <vol> is in unknown library <lib>.	28
EUM0253E	Unrecognized RMM message parameter: <parm>.	30
EUM0254E	RMM authorization timeout for request <req#>.	20
EUM0255I	RMM request <req#> waiting for authorization.	N/A
EUM0256E	Unexpected value <val> in <fld> field for request <req#>.	30
EUM0259E	Invalid volume ID <vol> specified.	24

Table 27. TAPEMNT messages (continued)

Message number	Message text	Return code
EUM0260E	Request <req#> returned RC <return code> - <text>.	36
EUM0266E	Null value detected for ATL scratch pool <name>.	30
EUM0267E	Scratch pool <name> is not defined.	24
EUM0268I	Unknown RMM request type <type>.	30
EUM0274E	Request <req#> failed because of an RMS failure response.	36
EUM0275E	The LM has failed request <req#> - RSN <text>.	34
EUM0276E	Null category value detected for ATL device pool <devp> containing device <dev>.	30
EUM0277E	Null category value detected for ATL device pool <devp>.	30
EUM0285E	Unexpected mount value <type> for RMM request <req#>.	30
EUM0286E	Invalid RMM volume count <vcnt>.	30
EUM0294E	DSN authorization for request <request> returned no volumes.	28
EUM0295I	Unload error <return code> for device <dev>.	N/A
EUM0296I	No request found for <type> response for DSN <name> from ID <user ID>.	N/A
EUM0297I	Unknown response type <type> from DMSTVI.	N/A
EUM0298I	Unknown reference request <req#> from DMSTVI.	N/A
EUM0299E	Invalid volume count detected for request <req#>.	30
EUM0300E	Volume list mismatch for request <req#>.	28
EUM0301E	Volume count exceeded volume list for request <req#>.	28
EUM0302E	No volume information found for request <req#>.	30
EUM0303I	The RMM agent processed request <req#> with a warning.	N/A
EUM0304E	No information for the data set name <dsn> and request <rseq#> was found.	24
EUM0305E	Request <rseq#> is not active for the initial EOV request.	24
EUM0306E	The ID of the requestor does not match the request ID.	20
EUM0307E	The DSN specified does not match the request DSN.	24
EUM0308E	No volume specified and PREREQ volume list is empty.	24
EUM0310E	Unable to locate volume in RMM volume list.	30
EUM0311E	The access specified does not match the PREREQ access.	24
EUM0313E	Duplicate mount VDEV <vdev>.	24
EUM0315E	Device wait time exceeded for offline library <lib>.	32
EUM0326E	Event not processed - invalid request type <type>.	30
EUM0329E	<msg>	N/A
EUM0330E	No scratch tape available for category <cat>.	28
EUM0343I	The event number <num> is in use by another request.	30
EUM0349E	Request <req#> could not be processed by the installation command exit.	20
EUM0352E	<req> request <reqnum> from <rqstID> was rejected because the response from the installation command exit timed out.	20
EUM0360E	Not authorized for the <parm> parameter.	20

Table 27. TAPEMNT messages (continued)

Message number	Message text	Return code
EUM0361E	Unable to position the tape to file offset <fileno>.	28
EUM0362I	Converting MOD request <req#> to SCRATCH DISP NEW.	N/A
EUM0363E	Error converting MOD request <req#> to the default scratch pool <pool>.	30
EUM0373E	The <cmnd> command requires operations or admin authority.	20
EUM0392W	The used tape percentage in pool <powner pname> has reached <pct> percent of the tape <maximum/total>.	N/A
EUM0393W	The free count exceeds the tape count for pool <pool>.	N /A
EUM0395W	The tape count exceeds the tape maximum for pool <pool>.	N/A
EUM0396W	The <value> for pool <powner pname> is invalid.	N/A
EUM0402I	Tape pool <powner pname> has no tapes and no free pool.	N/A
EUM0403I	Tape pool <powner pname> has a maximum tape value of zero.	N/A
EUM0412I	The retention date has been set to the default value.	N/A
EUM0431E	Unauthorized use of LABEL <type> for request <num> by <user>.	24
EUM0444E	Device <rdev> was NOT READY for pre-mount request <req#>.	28
EUM0445E	The <val1> keyword is not valid unless the <val2> keyword is specified.	24
EUM0446E	The <val1> keyword is not valid for <reqtype> requests.	24
EUM0447E	A labeled volume was found on device <rdev> for NL pre-mount request <req#>.	28
EUM0448I	The volume remains mounted and will not be used.	N/A
EUM0449W	Volume <vol name> was pre-mounted on device <rdev> for <reqtype> request <req#> but the request was not a pre-mount request.	28
EUM0451E	Volume labeled <vol1> was mounted on ATL device <rdev> for standard label request <req#> that requested volume <vol2>. The request failed.	28
EUM0453E	Volume labeled <vol1> was mounted on ATL device <rdev> for non-labeled request <req#> that requested volume <vol2>. The request failed.	28
EUM0455E	A non-labeled volume was mounted on ATL device <rdev> for standard label request <req#> that requested volume <vol name>. The request failed.	28
EUM0472W	Mount message ID <ID> for pool <pool> is not valid. The system mount message ID will be used if it is defined.	N/A
EUM0496W	Exception ID <ID> for pool <pool> is not defined to the system.	N/A
EUM0498E	Volume <vol name> on device <rdev> is in the wrong pool for scratch request <req#> for pool <pool name>.	30
EUM0499E	Pool <pool> has no scratch volumes available for request <req#>.	28
EUM0506I	Scratch mount request <num> was not converted to a generic scratch mount because the maximum tape count for pool <pool> has been reached or exceeded.	N/A
EUM0512I	Eject processing was bypassed for request <req#> because the request ended with a non-zero return code.	N/A

Table 27. TAPEMNT messages (continued)

Message number	Message text	Return code
EUM0513I	Eject processing was bypassed for request <req#> because the volume was not in an automated library.	N/A
EUM0514I	The <parm> parameter was ignored because user <userID> is not authorized to use it.	N/A
EUM0515W	The ATL volume category for request <req#> and volume <vol> was not changed. Verify that the volume category is consistent with the RMM status.	N/A
EUM0516I	The RMM status for volume <vol> is SCRATCH. The volume specific mount request <req#> is permitted and the RMM status will be changed.	N/A
EUM0517E	The system maximum for <parm> is <value> days.	24
EUM0518E	The pool maximum for <parm> is <value> days.	24
EUM0519W	The <parm> parameter is ignored for read-only mounts.	N/A
EUM0523E	No volumes for DSN <name> in record <num>.	30
EUM0524E	The volume count for DSN <name> exceeds the maximum of <max> in record <num> of file <file>.	30
EUM0525E	The record length for <type> record <num> exceeds the maximum of <max>.	30
EUM0526E	The record number - <num> - for the <type> record is not numeric.	30
EUM0527E	The record number <num> for the <type> record is beyond EOF.	30
EUM0528E	The record number <num> for the <type> record is negative.	30
EUM0529E	The data set associated with volume <vol> does not match the data set associated with request <num>.	28
EUM0530E	No entry for data set <dsname> was found.	28
EUM0531E	The DSN pointer for data set <name1> points to record <num> that contains data set name <name2>.	30
EUM0532W	Volume <vol> is currently associated with DSN <name>.	28
EUM0533E	Data set record <num> for data set <name> does not include volume <vol> but the volume DSN pointer points to that record.	30
EUM0534E	The DSN pointer for volume <vol> points to record <num>. The pointer is for DSN <name1> but the record is for DSN <name2>. The volume DSN pointer will be cleared.	N/A
EUM0535E	An invalid <name> field was detected in record <num> of file <file>.	30
EUM0537E	Unable to restore the SYS DSNAMES record for data set <name> after a give failure for volume <vol>.	30
EUM0538E	Volume <vol> is associated with DSN <name>.	28
EUM0539E	The data set name cannot end with a <val>.	24
EUM0540E	The data set name cannot begin with a <val>.	24
EUM0541E	Qualifier number <num> of the data set name is not valid.	24
EUM0542E	The length of volume <vol> exceeds the system maximum of <max> in record <num> of file <file>.	30
EUM0543E	The length of volume <vol> is less than the system minimum of <min> in record <num> of file <file>.	30

Table 27. TAPEMNT messages (continued)

Message number	Message text	Return code
EUM0544E	Data set name <name> in record <num> of file <file> failed the validity check.	30
EUM0545E	The volume count for EOV request <num> is <val>.	28
EUM0547E	There are no additional volumes for data set <name>.	24
EUM0549E	Volume <vol> was not found in record <num> of file <name>.	30
EUM0550E	The volume list exceeds the maximum of <max> in record <num> of file <file>.	30
EUM0551E	An active volume flag was found for a null volume in record <num> of file <file>.	30
EUM0552E	An incorrect volume DSN pointer was found for an active volume in record <num> of file <file>.	30
EUM0553E	A pending volume flag was found for a null volume in record <num> of file <file>.	30
EUM0554E	An incorrect volume DSN pointer was found for a pending volume in record <num> of file <file>.	30
EUM0555E	An undefined volume flag was found for a non-null volume in record <num> of file <file>.	30
EUM0556E	An invalid volume flag was found in record <num> of file <file>.	30
EUM0557E	Volume <vol> was found in the volume list for DSN <name> but the volume pointer points to record <num> in file <file> that contains a different data set name.	30
EUM0558E	Volume <vol> in record <num> of file <file> is not defined to the system.	30
EUM0559W	The record type has been changed to <val> for record <num> in file <file>.	30
EUM0560W	The record version has been changed to <val> for record <num> in file <file>.	30
EUM0566E	The use-status of volume <vol> is not <val>.	30
EUM0574E	No data set entry was found for volume <vol>.	28
EUM0584I	Pending volumes have been released for DSN occurrence <text>.	N/A
EUM0585W	Volume <vol> is associated with data set <name>. This mount may delete or truncate that data set occurrence.	N/A
EUM0589I	Data set <name> associated with volume <vol> will be deleted.	N/A
EUM0590I	User <user> is not authorized to create a data set with <val> as a high-level qualifier.	24
EUM0591E	The value of VOLNUM is <num1> but the number of data set volumes is <num2>.	24
EUM0596E	Qualifier number <num> of the data set name begins with a numeric character.	24
EUM0598E	Qualifier number <num> of the data set name is longer than 8 characters.	24
EUM0603I	The <free|mount> pool contains <ATL|manual> scratch volumes but the site LIBTYPPRI and LIBTYPSEC configuration settings prohibit scratch mounts to <ATL|manual> devices.	N/A

Table 27. TAPEMNT messages (continued)

Message number	Message text	Return code
EUM0605E	Pool <pool> has no scratch volumes available for <RDEV | devpool> request <req#>.	28
EUM0606E	Volume <vol> is in the system pool but it is associated with data set <dsname>.	30
EUM0607E	Volume <vol> is in pool <pool1> but volume <vol2> is in pool <pool2>. The volumes are associated with data set <dsname>.	20
EUM0610E	An invalid record pointer - <var> - was passed from the calling routine.	30
EUM0613E	Data set volume <vol> is not in the system inventory. The volume is associated with data set <dsname>.	30
EUM0614E	Data set volume <vol> has an index problem. The volume is associated with data set <dsname>.	30
EUM0707E	The <parm> value must be a non-negative integer.	24
EUM0722E	<req> request <req#> could not be sent to node <name>.	26
EUM0734E	The <req> command was not accepted because catalog node <name> is quiesced.	20
EUM0735E	The <req> command was not accepted because local node <name> is quiesced.	20
EUM0736E	The <req> command was not accepted because Tape Manager is quiesced.	20
EUM0759E	No library server is defined for automated library <lib> that is associated with volume <vol>.	30
EUM0785E	The request node does not match the PREREQ node.	20
EUM0812E	The <req> command was not accepted because External Security Manager authorizations cannot be performed – RC <return code>.	20
EUM0817E	User <reqID> failed the External Security Manager check for the <req> command.	N/A
EUM0831E	Unable to authorize user <reqID> for <req> request <req#> – the details were logged.	20
EUM0850E	Unable to authorize user <user> for pool <pool>.	20
EUM0872E	Volume <vol> was not found in the library.	28
EUM0873E	The eject attempt for request <req#> failed because volume <vol> was not in library <lib>.	28
EUM0874I	The completion of eject request <req#> for volume <vol> from library <lib> could not be confirmed.	N/A
EUM0926W	Error reading volume <vol> mounted for request <req> on device <dev>.	N/A
EUM0927W	Error reading volume <vol> returned by request <req> on device <dev>.	N/A
EUM0928E	Mount request <req> was cancelled because an I/O error occurred reading volume <vol> and LABEL NEW was not specified for the request.	28
EUM0929E	Mount request <req> for volume <vol> was cancelled because the RDEV parameter is required for manual mounts when LABEL NEW is specified.	24

Table 27. TAPEMNT messages (continued)

Message number	Message text	Return code
EUM0930W	An error occurred reading the volume mounted on device <dev>.	N/A
EUM0931I	Mount request <req> ended with a warning - RC <rc>.	4
EUM0935E	Event <event#> failed to set the category code for volume <vol> in library <libname> to <category> for request <req#>.	N/A
EUM0937E	Unable to verify that event <event#> set the category code for volume <vol> in library <libname> to <category> for request <req#>.	N/A
EUM0938E	Event <event#> failed to set the category code for volume <vol> in library <libname> to <cateogry> for <req#> because the volume was not in the library.	N/A
EUM0939E	An attempt to set the library category for volume <vol> to <category> failed when a message could not be sent to library server <server>.	N/A
EUM0940E	An attempt to set the library category for volume <vol> to <category> failed when a message could not be sent to library server <server> at node <name>.	N/A
EUM0941W	This is a severe error that should be reported to a Tape Manager Administrator immediately!	N/A
EUM0942E	An attempt to set the library category for volume <vol> to <category> failed because no library server was defined for library <libname>.	N/A
EUM0943E	An attempt to set the library category for volume <vol> to <value> failed because there is no local server for library <libname> and no remote server is on a node where a connection is available.	N/A
EUM0948E	Volume <vol> cannot be mounted because its current category code is unknown and data loss might occur if the volume is in a fast-ready scratch category. A system administrator must ensure the volume is in the correct category and then clear the SSTAT VC flag using the TAPEMOD command.	N/A
EUM0949E	VOLSTAT returned <return code> for an attempt to set the <field> to <value> for volume <vol>.	30
EUM0951E	Unable to verify that scratch volume <vol> has been set to a non-scratch category (timeout). A read-only mount implies data on the tape is needed, but if the volume is a virtual volume in a fast-ready scratch category then the mount would cause the data to be lost.	32
EUM0966I	A SETVOL attempt for request <event#> failed - RMS RC <return code> Rsn <reason>.	N/A

Return codes

The return codes for TAPEMNT are listed in the table below.

Table 28. TAPEMNT Return codes

Return code	Description
0	Finished correctly
4	Warning issued

Table 28. TAPEMNT Return codes (continued)

Return code	Description
8	Request cancelled
20	Unauthorized request
24	Bad PLIST
26	I/O Error
28	Volume error
30	Unexpected error
32	Device error
34	Library Manager Response
36	RMM command error
1000	I/O error
2000	Logic error
3000	Syntax error
4xxx	User interface error (See help for TAPCMD.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

TAPEMOD

Use the TAPEMOD command to modify the attributes associated with the tape volume catalog. The command is valid for a Tape Manager catalog, but not for an RMM catalog.

Shared Catalog Execution

The TAPEMOD command can be entered on the catalog node or a request node. The command executes on the catalog node in all cases.

Authorization

If the requestor does not have Tape Manager Admins authority, you must have pool administrator or TAPE authority for any volumes processed in private pools. Tape Manager Admins authority is required for any volumes in the System pool.

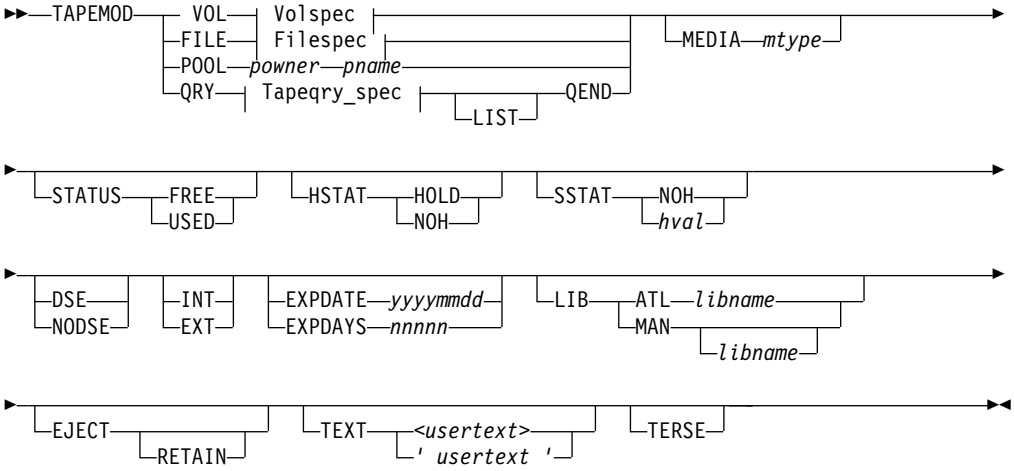
When an External Security Manager (ESM) is active, the authorization requirements may be controlled by ESM profiles:

- When `Pool_Authority` is YES, the TAPE authority for a private pool requires ALTER access to the pool volume profile of the target pool. Pool administrators will also require TAPE authority for any volumes processed in private pools. If the pool volume profile is not defined, the user ID that corresponds to the pool owner has TAPE authority by default.
- When `Privileged_User_Authority` is YES, Tape Manager Admins authority requires READ access to the administrator profile.

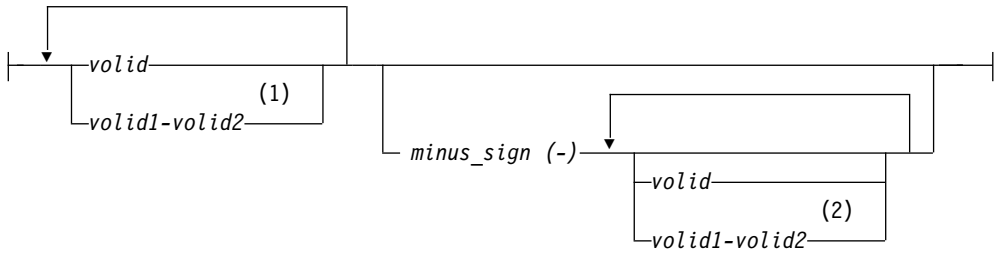
For more details, refer to the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344).

Syntax

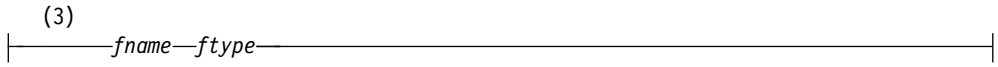
The next diagram shows the TAPEMOD syntax.



Volspec:



Filespec:



Tapeqry_spec:

Notes:

1 When the *volid1-volid2* range is specified, the names must follow a clearly defined format: **(A)** At least the right-most position of *volid1* and *volid2* must be numeric. **(B)** If there is a non-numeric character in *volid1*, the fixed portion of *volid1* is position 1 through the right-most, non-numeric character of the identifier. The numeric portion of the identifier contains the remaining digits. **(C)** The fixed portion of *volid2* must be the same as the fixed portion of *volid1*. The length of the numeric portion of *volid2* must be the same length as the numeric portion of *volid1*, and must be greater than the numeric portion of *volid1*.

2 The minus sign is an exclusion operator. See the information below.

3 The default virtual address of the MDISK for the file is 191. See the help for TAPCMD for additional information pertaining to the virtual address or file mode when the FILE operand is specified.

4 See QRY QEND in the "Operands" section and the TAPEQRY command for the list of parameters.

Figure 9. Syntax diagram for TAPEMOD command

Operands

The table lists the TAPEMOD operands.

Table 29. List of operands for TAPEMOD command

Operand	Description
VOL *volspec*	Volspec is a space-delimited list of one or more volume specifications. A volume specification can be a single volume identifier or a volume range. For more details on how to specify ranges, refer to "TAPEADD" on page 9
volid	Volid is a volume identifier. A volume identifier can be one to six characters. No edit checking is performed on the characters within the *volid*, but embedded blanks are not valid.
volid1-volid2	Volid1-volid2 is a volume identifier range. A range specification is only valid for numeric values in the right-most part of the volume identifier. If the left-most part contains non-numeric data, all of the following conditions must be met: • The non-numeric data must be identical for *volid1* and *volid2*. • The identifiers must be of equal length. • The numeric portion of *volid1* must be less than the numeric portion of *volid2*. For example, `RA0001-RA0050` and `000001-000050` are valid ranges, but `RA0001-RX0050` ("RA" and "RX") and `00001-000050` (one has five digits, the other has six) are not valid ranges.
Minus_sign (-)	As of PTF UI48913, the minus sign with at least one space on both sides (-) is an exclusion operator. Volumes following the minus sign will be excluded from the list of volumes to be processed. A minus sign cannot be the first operator in a volume specification and only a single occurrence is permitted. For example, `VOL V00000-V00005 - V00003-V00004` is equivalent to volumes `V10001 V10002 V10005`. Note that a minus sign connected to a VOLSER on one side with a space on the other side is never valid.

Table 29. List of operands for TAPEMOD command (continued)

Operand	Description
FILE *filespec*	Specifies a file, *filespec*, that contains one or more volume serial numbers. The filespec includes: • *fname*, which is the name of the file to be processed, and • *ftype*, which is the type of file to be processed. When the FILE operand is specified, the file can contain multiple records. Each record in the file can contain multiple, space-delimited volume specifications and, optionally, a single exclusion character followed by volume specifications of any volumes that are to be excluded. You can use the FM or VADDR option of the TAPCMD command to specify the location of the file.
POOL *powner pname*	Specifies an existing pool. All tapes in the pool are modified as specified.
QRY QEND	As of PTF UI48913, allows you to specify TAPEQRY parameters that result in a list of volumes that is processed by the TAPEMOD command. Both QRY and QEND must be specified. The specification can be any valid parameters and operands of the TAPEQRY command except SHORT, LONG, MSG, RDR, and TERSE. All tapes in the result set from the query are processed, unless LIST is specified immediately before the QEND delimiter. In that case, no volumes are processed and information for the volumes that otherwise would have been processed is sent to the requestor. See “TAPEQRY” on page 88 for additional information. See "Example of using QRY QEND parameters" below.
LIST	As of PTF UI48913, lists the volumes that would otherwise have been processed if LIST had not been specified. When LIST is specified, it must be the last parameter before QEND; otherwise, it will be treated as a TAPEQRY parameter. No processing occurs when LIST is specified. The information returned is in the same format as a TAPEQRY command with SHORT specified.
MEDIA *mtype*	Indicates the media type that will be used for device compatibility checking.
STATUS FREE	Sets the use status of a volume to FREE. See "Understanding volume attributes and hold conditions" in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for additional information.

Table 29. List of operands for TAPEMOD command (continued)

Operand	Description
STATUS USED	Sets the use status of a volume to USED. See "Understanding volume attributes and hold conditions" in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for additional information.
HSTAT HOLD	Sets the user hold value to HOLD. See "Understanding volume attributes and hold conditions" in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for additional information.
HSTAT NOH	Sets the user hold value to NOHOLD. See "Understanding volume attributes and hold conditions" in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for additional information.
SSTAT NOH	Sets the system hold value to NOHOLD. See "Understanding volume attributes and hold conditions" in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for additional information.
SSTAT *hval*	Clears the hold flag associated with the two-character hold value. See "Hold Flag values for SSTAT operand" on page 74 below for more details. See "Understanding volume attributes and hold conditions" in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for additional information.
NODSE	Specifies that DSE (data security erase) processing is *not* required after the volume expires and before the volume is returned to scratch status.
DSE	Specifies that DSE (data security erase) processing is required after the tape volume expires and before the volume is returned to scratch status. It is the responsibility of the site to ensure that the DSE processing occurs and that the DSE flag is cleared once the DSE is completed. The TMDSE utility provided in Tape Manager can be used to perform this processing and clear the flag. For more information on TMDSE, refer to "TMDSE" on page 179.
INT	Designates a volume as an INTERNAL volume. This is the default. See "Understanding volume attributes and hold conditions" in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for additional information.

Table 29. List of operands for TAPEMOD command (continued)

Operand	Description
EXT	Designates the tape as EXTERNAL or foreign volumes. An external tape must be added directly to a private pool. At that point, it can be mounted for READ/WRITE, but it will never be used as a free (i.e. scratch) tape for the pool. **Note:** EXT is not valid with POOL SYS.
EXPDATE *yyyymmdd*	Sets the year, month, and day after which a tape will become a free tape if it is not in HOLD status.
EXPDAYS *nnnnn*	Specifies the number of days, from one to five digits, after which a tape will become a free tape if there are no conditions (such as a user hold) that will cause the expiration process to be bypassed. A value of `EXPDAYS -1` can be specified to trigger selection of the volume when the expiration process next runs; otherwise, the value must be a non-negative integer. See "Understanding expiration processing and scratch tapes" in the IBM Tape Manager for z/VM Installation and Administration Guide (SC18-9344) for additional information.
LIB MAN *libname*	Indicates that this is a manually mounted tape. Optionally, you may specify a 1- to 16-character library name to be displayed on mount requests.
LIB ATL *libname*	Indicates that this tape is in an automated tape library (ATL). Optionally, you may specify a 1- to 16-character library name to be used for RMS requests. If a library name is not provided, RMS requests are issued without a library name.
EJECT	Specifies that the volume is to be ejected from the ATL and the library type is set to MAN with no library name. If the LIB parameter is also specified, the library type and name are set to the value in the LIB parameter.
EJECT RETAIN	Specifies that the volume is to be ejected from the ATL and the library type and name are not to be altered. If the LIB parameter is also specified, the library type and name are set to the value in the LIB parameter.

Table 29. List of operands for TAPEMOD command (continued)

Operand	Description
TEXT <*usertext*> or TEXT *'usertext'*	Specifies up to 32 bytes of user data in the volume catalog entry. The field must be delimited by the less-than (<) and greater-than (>) characters or by single quotes (' '). The text field will be cleared if a TAPEMOD command is used to change the volume use-status from USED to FREE. If a used volume expires, the text field will be retained until the expired volume is next mounted with WRITE access.
TERSE	Suppresses the informational messages EUM0010I, EUM0074I, EUM0083I, EUM0084I, EUM0288I, and EUM0291I for the requestor.

Hold Flag values for SSTAT operand

With PTF UI54509, the SSTAT field was modified from a one-byte character field, which was used for mutually exclusive hold values, to a one-byte field of flag bits, where each bit represents an independent hold flag. When any of the bit flags are set, the TAPEQRY output will show an "H" in the SSTAT field.

When the structure of the field was modified, the output of the LONG form of the TAPEQRY command was extended to show the status of the independent hold flags. For code levels that support the independent hold flags, the hold values that are reported with TAPEQRY LONG, and that can be reset to no hold with *hval*, are listed below:

VF - TMVERIFY flag
The VF flag will be "H" if the volume data was modified by the TMVERIFY utility. Mount requests are allowed. The volume is not an eligible scratch volume.

NV - No Volume flag
The NV flag will be "H" if a TAPEREQ command has been issued with the NOVOL parameter. Mount requests are allowed. The volume is not an eligible scratch volume.

NI - Not in Library flag
The NI flag will be "H" if a scratch request to an automated library received a Not-In-Library response. Mount requests are allowed. The volume is not an eligible scratch volume.

NM - No Match flag
The NM flag will be "H" if the volume was mounted by an automated library for a scratch request and the internal label does not match the VOLSER. Mount requests are allowed. The volume is not an eligible scratch volume.

NL - No Label flag
The NM flag will be "H" if the volume was mounted by an automated library for a scratch request and the volume is unlabeled. Mount requests are allowed. The volume is not an eligible scratch volume.

RO - Read Only flag
The RO flag will be "H" if the volume was mounted by an automated library for a scratch request and the volume is read-only. Mount requests are allowed. The volume is not an eligible scratch volume.

UK - Unknown flag
The UK flag will be "H" if there was a non-specific SSTAT hold prior to the update for flag independent bit flags. Mount requests are allowed. The volume is not an eligible scratch volume.

VC - Volume Category flag
The VC flag will be "H" if an attempt to set the category of the volume to the Volume Category could not be verified. No mounts are allowed and the volume is not an eligible scratch volume.

XH - Expire Hold flag
The XH flag will be "H" if for volumes that are within an Expire Hold period associated the media Scratch Category.

Example of using QRY QEND parameters

The following example demonstrates the use of QRY and QEND to set the User Hold Status to HOLD for all volumes in the SYSTEM BACKUP pool that have a VOLSER which begins with P and have a User Hold Status of NOHOLD. When using QRY and QEND, first use the LIST parameter before the QEND parameter to see what volumes will be affected when the LIST parameter is removed.

```
TAPEMOD QRY VOL P* POWNER SYSTEM PNAME BACKUP HSTAT NOHOLD QEND HSTAT HOLD
```

The parameters between QRY and QEND are passed to TAPEQRY, which supports regular expressions such as `P*` for VOLID. The volumes in the list generated by TAPEQRY are then modified, unless LIST is specified immediately before QEND. In that case, the volumes in the list that would otherwise have been modified are listed and no modifications occur.

Usage notes

When using the TAPEMOD command, consider the following:

1. Except for the base volume, the status and expiration date of chained volumes cannot be modified. Modifications to the status or expiration date of a base volume will be applied to all of the volumes in a chain.
2. The volume attributes cannot be modified when the volume is in use except for the expiration date.
3. If STATUS FREE is specified, any tape processed that resides in a private pool with a free pool will be moved to the free pool if NONE of the following are true:
   - The Use Status is "U" indicating that the volume is in use.
   - The Site Hold Status is "H" indicating that the volume is on hold.
   - The System Hold Status is "H" indicating that the volume is held by the system.
   - The volume is an external (or foreign) volume.
   - The volume is flagged for Data Security Erase processing.
   - If EJECT is specified with either the RETAIN option or the LIB parameter, the resulting library values may be reset inadvertently if the ATL Synch utility is run in update mode. The utility sets the library type to MAN and clears the library name in update mode if the volume is not in the ATL.

4. If EJECT is specified with either the RETAIN option or the LIB parameter, the resulting library values may inadvertently be reset if the automated library synchronization utility (TMSYNCH) is run in update mode. The utility sets the library type to MAN and clears the library name in update mode if the volume is not in the ATL.
5. The default value for the STATUS will be USED if an expiration date is specified.
6. For Category Managed Media, the library category will be modified to the appropriate category if the command changes the scratch status of the volume. The possible library categories are Volume and Scratch, as described below:
   - If a volume was an eligible scratch volume before the command, but not after the command, the category will be changed to the **Volume** Category.
   - If the volume was not an eligible scratch volume before the command, but was after the command, the category will be changed to the **Scratch** Category.
7. If a change to the media type causes a category managed volume to not be category managed, and the volume is an eligible scratch volume or a volume with an expiration hold set, then an attempt will be made to move the volume to the non-scratch category associated with the category managed media type.

Messages

The table below lists the messages generated by the TAPEMOD command.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 30. TAPEMOD messages

Message number	Message text	Return code
EUM0001E	Error reading <file> - RC <io return code>.	26
EUM0002E	Unauthorized TAPEMOD request from <user id>.	20
EUM0005E	Invalid value <value> for <parm>.	24
EUM0007E	Error returned from <routine> - RC <return code>.	30
EUM0010I	<cmnd> message <reqnum> required from <userID>.	N/A
EUM0011E	Unknown command <req> in request <req#> from <reqID>.	16
EUM0017E	Error sending SMSG to <ID> - RC <return code>.	30
EUM0022E	Pool ID <pool ID> is not a valid pool name.	24
EUM0024E	Pool ID <pool ID> does not exist.	30
EUM0031E	Required parameter <parm> not specified.	24
EUM0032E	Invalid parameter <parm>.	24
EUM0034E	Error <return code> linking <mdsk>.	34
EUM0035E	Authorization error <return code> linking <mdsk>.	34
EUM0036E	Error <return code> accessing <vaddr>.	34
EUM0037E	Error <return code> locating file <filename>.	26
EUM0038E	Error <return code> reading file <filename>.	26
EUM0039E	File <file> cannot be processed due to a version mismatch.	26
EUM0040E	File <file> cannot be processed due to a record type error.	26
EUM0041E	Invalid delimiter for <parm>.	24

Table 30. TAPEMOD messages (continued)

Message number	Message text	Return code
EUM0042E	No values found in file <filename>.	24
EUM0043E	Invalid value <val> found in file <file>.	24
EUM0044E	Length of <parm> is less than the system minimum <min>.	24
EUM0045E	Length of <parm> exceeds the system maximum <value>.	24
EUM0046E	The length of <parm> exceeds the maximum of <max>.	24
EUM0051E	User <user id> is not authorized to alter the system inventory.	20
EUM0052E	<text1> is not valid with <text2>.	24
EUM0054E	Volume <vol> is not in <pool>.	24
EUM0056E	User <user id> is not authorized to alter pool <pool id>.	20
EUM0058E	Volume <volid> is in a chain with base volume <vol2>.	28
EUM0065E	Volume <volid> is not in the system inventory.	28
EUM0075E	Unexpected return code from <routine> - RC <return code>.	30
EUM0077E	Volume index error: INV=<invvol> VOL=<indxvol> IND=<indxnum>	30
EUM0080E	Invalid value <val1> detected for <val2>.	30
EUM0081E	Parameter <parm> is less than current date.	24
EUM0083I	<cmd> request <seq> complete - RC <return code>.	N/A
EUM0084I	<cmd> request <seq> error - RC<return code>.	N/A
EUM0125I	Volume <vol> in pool <pool> not in inventory.	30
EUM0133E	Unauthorized request for volume <vol> in pool <pool>.	20
EUM0135I	No volumes found for pool <pool id>.	N/A
EUM0136E	The <parm> value must be <info>.	24
EUM0137E	Media type mismatch for volume <vol> in pool <pool>.	24
EUM0138E	Cannot locate pool <pool> referenced by volume <vol>.	30
EUM0139E	Invalid pool ID <pool> referenced by volume <vol>.	30
EUM0140E	Error <return code> reading pool <pool> referenced by volume <vol>.	26
EUM0141E	<cond> is not valid for system volume <vol>.	24
EUM0142E	Parameter <parm> exceeds the pool maximum for pool <pool>.	24
EUM0143E	Request will not be processed because volume <vol> is in use.	28
EUM0144E	Volume in pool file <poolid> is in pool <tapepool>.	30
EUM0146E	Source and target pool media types do not match.	24
EUM0148E	Source and target are the same pool.	24
EUM0150E	Keyword <parm1> is not valid with keyword <parm2>.	24
EUM0156E	Invalid index entry for volume <vol>.	30
EUM0171E	Error <return code> processing file <file>.	30
EUM0172E	Error <return code> writing file <file>.	26
EUM0174E	Volume count is negative.	30
EUM0175E	Volume count is not numeric.	30
EUM0176E	Index error processing TAPEMOD command.	30

Table 30. TAPEMOD messages (continued)

Message number	Message text	Return code
EUM0177E	Error reading pool <pool> for volume <vol>.	30
EUM0181I	Volume <vol> not processed - invalid index.	30
EUM0187E	Invalid file info passed for pool <pool>.	30
EUM0188I	File info is <text>.	N/A
EUM0214E	Library <name> is not defined to the tape system.	24
EUM0215E	Invalid value <parm> for the VOL parameter.	24
EUM0218E	Library server <srvr> is not defined.	24
EUM0221E	<type> request <req#> from <rqstID> was rejected by the installation exit processing.	20
EUM0326E	Event not processed - invalid request type <type>.	30
EUM0329E	<msg>	N/A
EUM0343I	The event number <num> is in use by another request.	30
EUM0349E	Request <req#> could not be processed by the installation command exit.	20
EUM0352E	<req> request <reqnum> from <rqstID> was rejected because the response from the installation command exit timed out.	20
EUM0373E	The <cmnd> command requires operations or admin authority.	20
EUM0374E	A library name is required when ATL is specified.	24
EUM0392W	The used tape percentage in pool <powner pname> has reached <pct> percent of the tape <maximum/total>.	N/A
EUM0393W	The free count exceeds the tape count for pool <pool>.	N/A
EUM0395W	The tape count exceeds the tape maximum for pool <pool>.	N/A
EUM0396W	The <value> for pool <powner pname> is invalid.	N/A
EUM0402I	Tape pool <powner pname> has no tapes and no free pool.	N/A
EUM0403I	Tape pool <powner pname> has a maximum tape value of zero.	N/A
EUM0411W	The expiration date for volume <vol> has been modified while the volume was in use.	4
EUM0413I	The default retention date will be used for free tapes.	N/A
EUM0414E	An expiration date is invalid for volume <vol> that has a FREE status.	24
EUM0472W	Mount message ID <ID> for pool <pool> is not valid. The system mount message ID will be used if it is defined.	N/A
EUM0475W	Volume <vol> cannot be ejected because the library type is not ATL.	N/A
EUM0476W	Volume <vol> cannot be ejected because it has no library name.	N/A
EUM0477W	Volume <vol> cannot be ejected because there is no server for library name <lib name>.	N/A
EUM0478W	The attempt to eject volume <vol name> from library <lib name> by eject request <req#> could not be verified.	N/A
EUM0479E	The attempt to eject volume <vol name> from library <lib name> by eject request <req#> failed with Rc <return code> Rsn <reason>.	N/A

Table 30. TAPEMOD messages (continued)

Message number	Message text	Return code
EUM0480I	Volume <vol name> has been ejected from library <lib name> by EJECT request <req#>.	N/A
EUM0481W	The volume library type of any tape to be ejected will be set to manual - MAN - before the eject success is verified.	N/A
EUM0496W	Exception ID <ID> for pool <pool> is not defined to the system.	N/A
EUM0517E	The system maximum for <parm> is <value> days.	24
EUM0518E	The pool maximum for <parm> is <value> days.	24
EUM533E	Data set record <num> for data set <name> does not include volume <vol> but the volume DSN pointer points to that record.	30
EUM586E	Volume <vol> is associated with data set <name> so the status cannot be set to FREE. The TAPEDSN command can be used to delete the data set.	28
EUM0587E	The expiration date for volume <vol> cannot be modified because only the first volume of a multi-volume data set can have the expiration date modified.	28
EUM0588E	Data set related volume <vol> cannot be processed because the data set volumes are controlled by request <num>.	28
EUM0594E	The expiration date of volume <vol> could not be set because the volume is part of a multi-volume data set that has an invalid expiration date for the first volume of the data set.	30
EUM0601E	The FILE parameter requires a file name and file type.	24
EUM0619W	An error occurred while moving freed volumes to pool <powner> <pname>.	4
EUM0621W	An error occurred while updating the data set expiration date information for data set <dsname>.	4
EUM0707E	The <parm> value must be a non-negative integer.	24
EUM0722E	<req> request <req#> could not be sent to node <name>.	26
EUM0734E	The <req> command was not accepted because catalog node <name> is quiesced.	20
EUM0735E	The <req> command was not accepted because local node <name> is quiesced.	20
EUM0736E	The <req> command was not accepted because Tape Manager is quiesced.	20
EUM0766W	Volume <vol> could not be ejected because none of the nodes associated with library <lib> were started.	N/A
EUM0812E	The <req> command was not accepted because External Security Manager authorizations cannot be performed – RC <return code>.	20
EUM0817E	User <reqID> failed the External Security Manager check for the <req> command.	N/A
EUM0831E	Unable to authorize user <reqID> for <req> request <req#> – the details were logged.	20
EUM0872E	Volume <vol> was not found in the library.	28
EUM0873E	The eject attempt for request <req#> failed because volume <vol> was not in library <lib>.	28
EUM0874I	The completion of eject request <req#> for volume <vol> from library <lib> could not be confirmed.	N/A

Table 30. TAPEMOD messages (continued)

Message number	Message text	Return code
EUM0885E	The minimum value for <parm> is <value>.	24
EUM0913E	Only one space-delimited minus sign (-) can be specified in the volume parameter.	24
EUM0914E	The volume parameter cannot contain a hyphen that is preceded by a character and followed by a space.	24
EUM0915E	The volume parameter cannot contain a hyphen that is preceded by a space and followed by a character.	24
EUM0916E	The volume parameter cannot contain a hyphen prior to the first volume operand.	24
EUM0917E	The <parm> parameter is not a valid QRY parameter	24
EUM0918E	When QRY is specified QEND must also be specified.	24
EUM0919E	The minimum length required to match the pattern <pattern> exceeds the system maximum length of <max> for <parm>.	24
EUM0920I	Query processing returned RC <rc>. See the TAPEQRY command for messages and return codes.	N/A
EUM0921I	<cmd> processing was not performed because LIST was specified as a QRY operand.	N/A
EUM0925E	Only Tape Manager can set the System Hold SSTAT value to HOLD. The value can be reset to NOHOLD by an administrator.	24
EUM0935E	Event <event#> failed to set the category code for volume <vol> in library <libname> to <category> for request <req#>.	N/A
EUM0937E	Unable to verify that event <event#> set the category code for volume <vol> in library <libname> to <category> for request <req#>.	N/A
EUM0938E	Event <event#> failed to set the category code for volume <vol> in library <libname> to <cateogry> for <req#> because the volume was not in the library.	N/A
EUM0939E	An attempt to set the library category for volume <vol> to <category> failed when a message could not be sent to library server <server>.	N/A
EUM0940E	An attempt to set the library category for volume <vol> to <category> failed when a message could not be sent to library server <server> at node <name>.	N/A
EUM0941W	This is a severe error that should be reported to a Tape Manager Administrator immediately!	N/A
EUM0942E	An attempt to set the library category for volume <vol> to <category> failed because no library server was defined for library <libname>.	N/A
EUM0943E	An attempt to set the library category for volume <vol> to <value> failed because there is no local server for library <libname> and no remote server is on a node where a connection is available.	N/a
EUM0949E	VOLSTAT returned <return code> for an attempt to set the <field> to <value> for volume <vol>.	30
EUM0966I	A SETVOL attempt for request <event#> failed - RMS Rc <return code> Rsn <reason>.	N/A

Return codes

The return codes for TAPEMOD are listed in the table below.

Table 31. TAPEMOD Return codes

Return code	Description
0	Finished correctly
4	Finished with warnings
20	Unauthorized request
24	Bad PLIST
26	I/O Error
28	Volume error
30	Unexpected error
32	Device error
34	Link/access error
1000	I/O error
2000	Logic error
3000	Syntax error
4xxx	User interface error (See note below.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

TAPEMOV

Use the TAPEMOV command to move tapes from one pool to another. The command is valid for a Tape Manager catalog, but not for an RMM catalog.

Shared Catalog Execution

The TAPEMOV command can be entered on the catalog node or a request node. The command executes on the catalog node in all cases.

Authorization

A requestor without Tape Manager Admins or Operations authority must have TAPE authority for both pools involved. If either pool is the system pool (SYS), Admins authority is required. The CMDAUTH command can be used to define system administrators unless privileged IDs are controlled by an External Security Manager.

When an External Security Manager (ESM) is active, the authorization requirements may be controlled by ESM profiles:

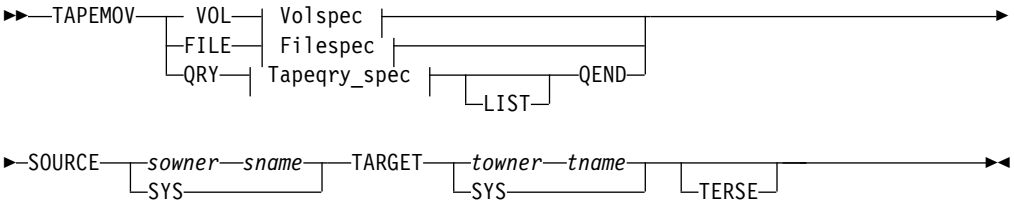
- When `Pool_Authority` is YES, the TAPE authority for a private pool requires ALTER access to the pool volume profile of the target pool. Pool administrators will also require TAPE authority for any volumes processed in private pools. If the pool volume profile is not defined, the user ID that corresponds to the pool owner has TAPE authority by default.
- When `Privileged_User_Authority` is YES, Tape Manager Operations authority requires READ access to the operator profile.

- When `Privileged_User_Authority` is YES, Tape Manager Admins authority requires READ access to the administrator profile.

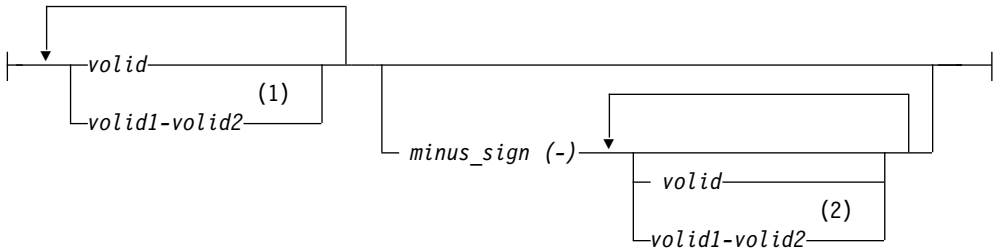
For more details, refer to the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344).

Syntax

The next diagram shows the TAPEMOV syntax.



Volspec:



Filespec:

Tapeqry_spec:

Notes:

1 When the *volid1-volid2* range is specified, the names must follow a clearly defined format: **(A)** At least the right-most position of *volid1* and *volid2* must be numeric. **(B)** If there is a non-numeric character in *volid1*, the fixed portion of *volid1* is position 1 through the right-most, non-numeric character of the identifier. The numeric portion of the identifier contains the remaining digits. **(C)** The fixed portion of *volid2* must be the same as the fixed portion of *volid1*. The length of the numeric portion of *volid2* must be the same length as the numeric portion of *volid1*, and must be greater than the numeric portion of *volid1*.

2 The minus sign is an exclusion operator. See the information below.

3 The default virtual address of the MDISK for the file is 191. See the help for

TAPCMD for additional information pertaining to the virtual address or file mode when the FILE operand is specified.

4 See QRY QEND in the "Operands" section and the TAPEQRY command for the list of parameters.

Figure 10. Syntax diagram for TAPEMOV command

Operands

The following table lists the operands for the TAPEMOV command.

Table 32. List of operands for TAPEMOV

Operand	Description
VOL *volspec*	Volspec is a space-delimited list of one or more volume specifications. A volume specification can be a single volume identifier or a volume range. For more details on how to specify ranges, refer to “TAPEADD” on page 9
volid	Volid is a volume identifier. A volume identifier can be one to six characters. No edit checking is performed on the characters within the *volid*, but embedded blanks are not valid.
volid1-volid2	Volid1-volid2 is a volume identifier range. A range specification is only valid for numeric values in the right-most part of the volume identifier. If the left-most part contains non-numeric data, all of the following conditions must be met: • The non-numeric data must be identical for *volid1* and *volid2*. • The identifiers must be of equal length. • The numeric portion of *volid1* must be less than the numeric portion of *volid2*. For example, `RA0001-RA0050` and `000001-000050` are valid ranges, but `RA0001-RX0050` ("RA" and "RX") and `00001-000050` (one has five digits, the other has six) are not valid ranges.
Minus_sign (-)	As of PTF UI48913, the minus sign with at least one space on both sides (-) is an exclusion operator. Volumes following the minus sign will be excluded from the list of volumes to be processed. A minus sign cannot be the first operator in a volume specification and only a single occurrence is permitted. For example, `VOL V00000-V00005 - V00003-V00004` is equivalent to volumes `V10001 V10002 V10005`. Note that a minus sign connected to a VOLSER on one side with a space on the other side is never valid.
FILE *filespec*	Specifies a file, *filespec*, that contains one or more volume serial numbers. The filespec includes *fname* and *ftype*, where *fname* is the name of the file and *ftype* is the type of file to be processed. When the FILE operand is specified, the file can contain multiple records. Each record in the file can contain multiple, space-delimited volume specifications. You can use the FM or VADDR option of the TAPCMD command to specify the location of the file.

Table 32. List of operands for TAPEMOV (continued)

Operand	Description
QRY QEND	As of PTF UI48913, allows you to specify TAPEQRY parameters that result in a list of volumes that is processed by the TAPEMOD command. Both QRY and QEND must be specified. The specification can be any valid parameters and operands of the TAPEQRY command except SHORT, LONG, MSG, RDR, and TERSE. All tapes in the result set from the query are processed, unless LIST is specified immediately before the QEND delimiter. In that case, no volumes are processed and information for the volumes that otherwise would have been processed is sent to the requestor. See “TAPEQRY” on page 88 for additional information. See "Example of using QRY QEND parameters" below.
LIST	As of PTF UI48913, lists the volumes that would otherwise have been processed if LIST had not been specified. When LIST is specified, it must be the last parameter before QEND; otherwise, it will be treated as a TAPEQRY parameter. No processing occurs when LIST is specified. The information returned is in the same format as a TAPEQRY command with SHORT specified.
SOURCE *sowner sname*	Specifies an existing pool from which the tapes are moved.
SOURCE SYS	Specifies the tapes that are moved from the system pool.
TARGET *towner tname*	Specifies an existing pool to which the tapes are moved.
TARGET SYS	Specifies the tapes that are moved to the system pool.
TERSE	Suppresses the informational messages EUM0010I, EUM0074I, EUM0083I, EUM0084I, EUM0288I, and EUM0291I for the requestor.

Example of using QRY QEND parameters

The following example demonstrates the use of QRY and QEND to set the User Hold Status to HOLD for all volumes in the SYSTEM BACKUP pool that have a VOLSER which begins with P and have a User Hold Status of NOHOLD. When using QRY and QEND, first use the LIST parameter before the QEND parameter to see what volumes will be affected when the LIST parameter is removed.

```
TAPEMOD QRY VOL P* POWNER SYSTEM PNAME BACKUP HSTAT NOHOLD QEND HSTAT HOLD
```

The parameters between QRY and QEND are passed to TAPEQRY, which supports regular expressions such as P* for VOLID. The volumes in the list generated by TAPEQRY are then modified, unless LIST is specified immediately before QEND. In that case, the volumes in the list that would otherwise have been modified are listed and no modifications occur.

Usage notes

When using the TAPEMOV command, consider the following items:

1. When tapes are moved from one pool to another, the catalog information is retained.
2. If any of the volumes specified are not in the source pool, the request will fail and no volumes will be moved.
3. Tapes that are to be moved from a private pool to the system pool must be FREE. The TAPEMOD command can be used to alter the status of a volume.
4. The TAPEMOV command will fail, meaning no volumes will be processed, if any of the specified volumes are in use.

5. When a file name is supplied, each record in the file can contain multiple, space-delimited volume serial numbers.

Messages

The table below lists the messages generated by the TAPEMOV command.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 33. TAPEMOV messages

Message number	Message text	Return code
EUM0002E	Unauthorized <text> from <reqID>.	20
EUM0005E	Invalid value <value> for <parm>.	24
EUM0007E	Error returned from <routine> - RC <return code>.	30
EUM0010I	<cmd> message <reqnum> received from <userID>.	N/A
EUM0011E	Unknown command <req> in request <req#> from <reqID>.	16
EUM0022E	Pool ID <pool ID> is not a valid pool name.	24
EUM0024E	Pool ID <pool ID> does not exist.	30
EUM0031E	Required parameter <parm> not specified.	24
EUM0032E	Invalid parameter <parm>.	24
EUM0034E	Error <return code> linking <mdsk>.	34
EUM0035E	Authorization error <return code> linking <mdsk>.	34
EUM0036E	Error <return code> accessing <vaddr>.	34
EUM0037E	Error <return code> locating file <file name>.	26
EUM0038E	Error <return code> reading file <file name>.	26
EUM0039E	File <file> cannot be processed due to a version mismatch.	26
EUM0040E	File <file> cannot be processed due to a record type error.	26
EUM0041E	Invalid delimiter for <parm>.	24
EUM0042E	No values found in file <file name>.	24
EUM0043E	Invalid value <val> found in file <file>.	24
EUM0044E	Length of <value> is less than the system minimum <min>.	24
EUM0045E	Length of <value> exceeds the system maximum <value>.	24
EUM0051E	User <user id> is not authorized to alter the system inventory.	20
EUM0054E	Volume <vol> is not in <pool>.	28
EUM0056E	User <user id> is not authorized to alter pool <poolid>.	20
EUM0065E	Volume <volid> is not in the system inventory.	28
EUM0075E	Unexpected return code from <routine> - RC <return code>.	30
EUM0077E	Volume index error: INV=<invvol> VOL=<indxvol> IND=<indxnum>	N/A
EUM0083I	<cmd> request <reqnum> complete - RC <rc>.	N/A
EUM0084I	<cmd> request <reqnum> error - RC <rc>.	N/A
EUM0125I	Volume <vol> in pool <pool> not in inventory.	30
EUM0143E	Request will not be processed because volume <vol> is in use.	28
EUM0145E	Target pool is <pool> but volume <vol> is status <stat>.	28

Table 33. TAPEMOV messages (continued)

Message number	Message text	Return code
EUM0146E	Source and target pool media types do not match.	24
EUM0147E	Volume <vol> media type does not match pool <pool>.	28
EUM0148E	Source and target are the same pool.	24
EUM0156E	Invalid index entry for volume <volume name>	30
EUM0161I	Volume <vol> not processed - not in source pool.	N/A
EUM0162I	Volume <vol> not processed - status USED is invalid for pool sys.	N/A
EUM0163I	Volume <vol> not processed - EXTERNAL tape is invalid for pool sys.	N/A
EUM0164I	Volume <vol> not processed - wrong media type for target pool.	N/A
EUM0165I	Volume <vol> not processed - in use.	N/A
EUM0166I	Source pool not deleted.	N/A
EUM0167I	Request completed with volume errors.	N/A
EUM0171E	Error <return code> processing file <file>.	30
EUM0172E	Error <return code> writing file <file>.	26
EUM0173I	Unauthorized request by <user> for pool <pool>.	20
EUM0174E	Volume count is negative.	30
EUM0175E	Volume count is not numeric.	30
EUM0176E	Index error processing TAPEMOD command.	30
EUM0181I	Volume <vol> not processed - invalid index.	30
EUM0187E	Invalid file info passed for pool <pool>.	30
EUM0188I	File info is <text>.	N/A
EUM0215E	Invalid value <parm> for the VOL parameter.	24
EUM0221E	<type> request <req#> from <rqstID> was rejected by the installation exit processing.	20
EUM0329E	<msg>	N/A
EUM0349E	Request <req#> could not be processed by the installation command exit.	20
EUM0352E	<req> request <reqnum> from <rqstID> was rejected because the response from the installation command exit timed out.	20
EUM0392W	The used tape percentage in pool <powner pname> has reached <pct> percent of the tape <maximum/total>.	N/A
EUM0393W	The free count exceeds the tape count for pool <pool>.	N/A
EUM0395W	The tape count exceeds the tape maximum for pool <pool>.	N/A
EUM0396E	The <value> for pool <powner pname> is invalid.	N/A
EUM0402I	Tape pool <powner pname> has no tapes and no free pool.	N/A
EUM0403I	Tape pool <powner pname> has a maximum tape value of zero.	N/A
EUM0472W	Mount message ID <ID> for pool <pool> is not valid. The system mount message ID will be used if it is defined.	N/A
EUM0496W	Exception ID <ID> for pool <pool> is not defined to the system.	N/A
EUM0601E	The FILE parameter requires a file name and file type.	24
EUM0722E	<req> request <req#> could not be sent to node <name>.	26

Table 33. TAPEMOV messages (continued)

Message number	Message text	Return code
EUM0734E	The <req> command was not accepted because catalog node <name> is quiesced.	20
EUM0735E	The <req> command was not accepted because local node <name> is quiesced.	N/A
EUM0736E	The <req> command was not accepted because Tape Manager is quiesced.	20
EUM0812E	The <req> command was not accepted because External Security Manager authorizations cannot be performed - RC <rc>.	20
EUM0817E	User <reqID> failed the External Security Manager check for the <req> command.	N/A
EUM0831E	Unable to authorize user <reqID> for <req> request <req#> - the details were logged.	20
EUM0913E	Only one space-delimited minus sign (-) can be specified in the volume parameter.	24
EUM0914E	The volume parameter cannot contain a hyphen that is preceded by a character and followed by a space.	24
EUM0915E	The volume parameter cannot contain a hyphen that is preceded by a space and followed by a character.	24
EUM0916E	The volume parameter cannot contain a hyphen prior to the first volume operand.	24
EUM0917E	The <parm> parameter is not a valid QRY parameter	24
EUM0918E	When QRY is specified QEND must also be specified.	24
EUM0919E	The minimum length required to match the pattern <pattern> exceeds the system maximum length of <max> for <parm>.	24
EUM0920I	Query processing returned RC <rc>. See the TAPEQRY command for messages and return codes.	
EUM0921I	<cmd> processing was not performed because LIST was specified as a QRY operand.	

Return codes

The return codes for TAPEMOV are listed in the table below.

Table 34. TAPEMOV Return codes

Return code	Description
0	Finished correctly
20	Unauthorized request
24	Bad PLIST
26	I/O Error
28	Volume error
30	Unexpected error
32	Device error
34	Link/access error
1000	I/O error
2000	Logic error

Table 34. TAPEMOV Return codes (continued)

Return code	Description
3000	Syntax error
4xxx	User interface error (See help for TAPCMD.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

TAPEQRY

The purpose of the TAPEQRY command is to query the status of a tape. The command is valid for a Tape Manager catalog, but not for an RMM catalog.

Shared Catalog Execution

The TAPEQRY command can be entered on the catalog node or a request node. The command executes on the catalog node in all cases.

Authorization

Tape Manager Admins, Operations IDs, and the DSE ID can do any of the following:

- Query any volume.
- Specify SYS for the pool owner.
- Specify the PERSIST parameter.

General User IDs have these rules for issuing the TAPEQRY command:

- Can query only volumes for which the requestor has at least READ authority.
- Cannot specify SYS for the pool owner.
- Cannot specify the PERSIST parameter.

The TAPEQRY command requires at least READ authority for any volumes requested. You must have Tape Manager Admins, Operations, or DSE ID authority to use the **SYS** operand or the **PERSIST** parameter.

For TAPEQRY VOL requests, a request to query the volume will be granted if the use-status of the volume is FREE and the requestor has at least READ access to the pool that previously owned the volume. The request is granted regardless of the access allowed to the pool in which the volume currently resides.

Note: The pool that previously owned the volume can be displayed using the LONG form of TAPEQRY. In that case, the pool is identified by the previous pool owner and previous pool name.

When pool access is controlled by an External Security Manager, the owner of a pool is authorized for the pool if a security profile for the pool is not defined or the facility class is not active.

When an External Security Manager (ESM) is active, the authorization requirements may be controlled by ESM profiles:

- When `Pool_Authority` is YES, pool administrator authority requires READ access to the pool administrator profile for the pool being queried. Pool administrator

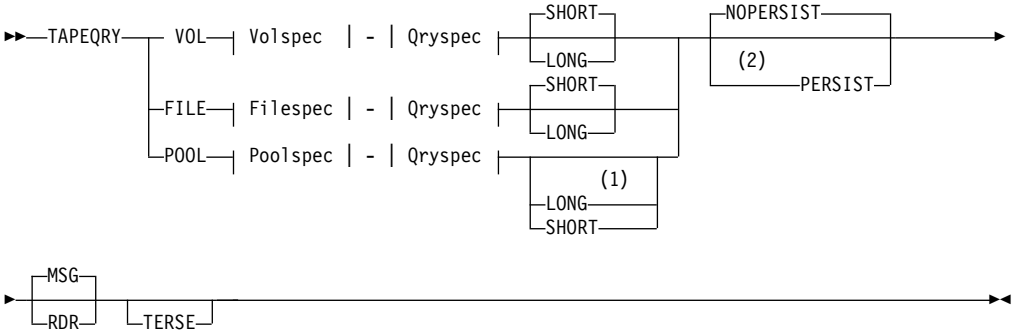
authority for a private pool is sufficient to query volumes in the private pool, but access to the pool volume profile can suffice as well.

- When `Pool_Authority` is YES, READ authority for the private pool requires at least READ access to the pool volume profile of the private pool. If the pool volume profile is not defined, the user ID that corresponds to the pool owner has TAPE authority by default.
- When `Privileged_User_Authority` is YES, Tape Manager Operations authority requires READ access to the operator profile.
- When `Privileged_User_Authority` is YES, Tape Manager Admins authority requires READ access to the administrator profile.

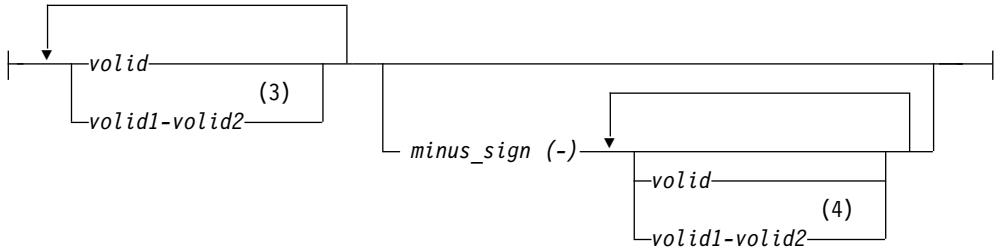
For more details, refer to the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344).

Syntax

The next diagram shows the TAPEQRY syntax.



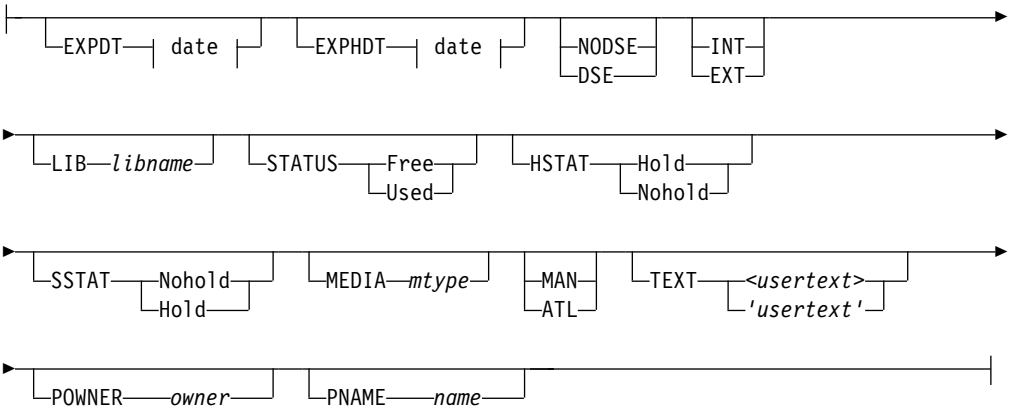
Volspec:



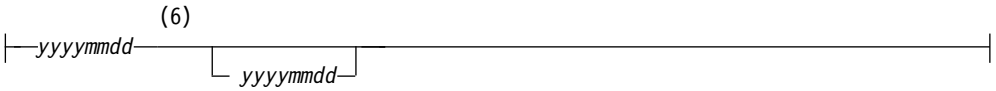
Filespec:

Poolspec:

Qryspec:



Date:



Notes:

1 When neither LONG nor SHORT is specified, the output will be a list of volumes that match the selection criteria.

2 The PERSIST parameter requires system administrator or system operator authority.

3 When the *volid1-volid2* range is specified, the names must follow a clearly defined format: **(A)** At least the right-most position of *volid1* and *volid2* must be numeric. **(B)** If there is a non-numeric character in *volid1*, the fixed portion of *volid1* is position 1 through the right-most, non-numeric character of the identifier. The numeric portion of the identifier contains the remaining digits. **(C)** The fixed portion of *volid2* must be the same as the fixed portion of *volid1*. The length of the numeric portion of *volid2* must be the same length as the numeric portion of *volid1*, and must be greater than the numeric portion of *volid1*.

4 The minus sign is an exclusion operator. See the information below.

5 The default virtual address of the MDISK for the file is 191. See the help for TAPCMD for additional information pertaining to the virtual address or file mode when the FILE operand is specified.

6 The two date values must be separated by one or more blanks. A value of 00000000 is an acceptable date value.

Figure 11. Syntax diagram for TAPEQRY command

Operands

The following table lists the operands for the TAPEQRY command.

Table 35. List of operands for TAPEQRY command

Operand	Description
VOL *volspec*	Volspec is a space-delimited list of one or more volume specifications. A volume specification can be a single volume identifier or a volume range.
Volid	Volid is a volume identifier. A volume identifier can be one to six characters. No edit checking is performed on the characters within the *volid*, but embedded blanks are not valid. As of PTF UI48913, the TAPEQRY volume specification supports regular expressions. See "Usage notes" on page 101 for additional information regarding regular expression matching. Also see Example 3 in "Examples" on page 96.
volid1-volid2	Volid1-volid2 is a volume identifier range. A range specification is only valid for numeric values in the right-most part of the volume identifier. If the left-most part contains non-numeric data, all of the following conditions must be met: • The non-numeric data must be identical for *volid1* and *volid2*. • The identifiers must be of equal length. • The numeric portion of *volid1* must be less than the numeric portion of *volid2*. For example, `RA0001-RA0050` and `000001-000050` are valid ranges, but `RA0001-RX0050` ("RA" and "RX") and `00001-000050` (one has five digits, the other has six) are not valid ranges.
Minus_sign (-)	As of PTF UI48913, the minus sign with at least one space on both sides (-) is an exclusion operator. Volumes following the minus sign will be excluded from the list of volumes to be processed. A minus sign cannot be the first operator in a volume specification and only a single occurrence is permitted. For example, `VOL V00000-V00005 - V00003-V00004` is equivalent to volumes `V10001 V10002 V10005`. Note that a minus sign connected to a VOLSER on one side with a space on the other side is never valid.
FILE *fname ftype*	Specifies a file, *filespec*, that contains one or more volume serial numbers. The filespec includes *fname* and *ftype*, where *fname* is the name of the file and *ftype* is the type of file to be processed. When the FILE operand is specified, the file can contain multiple records. Each record in the file can contain multiple, space-delimited volume specifications. You can use the FM or VADDR option of the TAPCMD command to specify the location of the file.
POOL Poolspec	Specifies the scope of the query.
POOL *powner pname*	Specifies an existing pool. For system administrator requests, using an asterisk (*) for pool owner indicates any pool owner; otherwise, an asterisk for pool owner indicates the user ID of the requestor. An asterisk (*) for pool name indicates any pool name.

Table 35. List of operands for TAPEQRY command (continued)

Operand	Description
POOL SYS ONLY	Searches only those tapes that are in the system pool (i.e., not in a private pool).
POOL SYS ALL	Searches all of the tapes in the system inventory pool.
SHORT	Selects the short format for the detail output.
LONG	Selects the long format for the detail output.
NOPERSIST	The command processing terminates when an error is found. Depending upon where the error occurs, you may see no output or partial output from your command. In either case, you will receive a return code indicating that an error occurred.
PERSIST	Requires administrative, operations, or DSE user authority. The command processing continues through simple errors, such as when a volume is not in the system inventory or when one of multiple volume parameters is in error. When an error occurs during persist processing that does not terminate the command, the command ends with RC 4 rather than the error code normally associated with the message. See "Usage notes" on page 93 below for additional information.
MSG	Indicates that the output will be returned as messages.
RDR	Indicates that the output will be returned as a reader file.
EXPDT *date*	Restricts the status to tapes with an Expiration Date that is within the range specified. If only a single date is specified, the status is restricted to tapes with the Expiration Date on the date specified.
EXPHDT *date*	Restricts the status to tapes with an Expire Hold Date that is within the range specified. If only a single date is specified, the status is restricted to tapes with the Expire Hold Date specified.
DSE	Indicates the status is returned only for tapes with the DSE attribute, meaning the tapes that require Data Security Erase processing.
NODSE	Indicates the status is returned only for tapes with the NODSE attribute, meaning the tapes do not require Data Security Erase processing.
INT	Indicates that status is returned only for tapes that are internal (not external).
EXT	Indicates that status is returned only for tapes that are marked as external.
LIB *libname*	Indicates that status is returned only for tapes that are in the specified library.
STATUS FREE	Indicates that the status is returned only for tapes with a status of FREE.
STATUS USED	Indicates that the status is returned only for tapes with a status of USED.
HSTAT HOLD	Indicates that the status is returned only for tapes that have a HOLD status of HOLD.
HSTAT NOHOLD	Indicates that the status is returned only for tapes that have a HOLD status of NOHOLD.
SSTAT NOHOLD	With PTF UI54509, this operand indicates that the status is returned only for tapes that have a system hold status of NOHOLD.

Table 35. List of operands for TAPEQRY command (continued)

Operand	Description
SSTAT HOLD	With PTF UI54509, this operand indicates that the status is returned only for tapes that have a system hold status of HOLD.
MEDIA *mtype*	Selects only volumes were the media type is *mtype*.
MAN	Selects only volumes marked as manual library volumes.
ATL	Selects only volumes marked as ATL (automated tape library) library volumes.
TEXT *text* or *'text'*	Indicates that status is returned only for tapes that have the specified text field. The field must be delimited by the less-than (<) and greater-than (>) characters or by single quotes (' '). See "Usage notes" for additional information regarding regular expression matching.
POWNER *pool*	Selects only volumes for which the pool **owner** matches the specified pool owner.
PNAME *pool*	Selects only volumes for which the pool **name** matches the specified pool name.
yyyymmdd yyyymmdd	Indicates an expiration date or a range of expiration dates for the query, where *yyyy* is the year, *mm* is the month, and *dd* is the day. For a date range, there must be a blank space between the two date values.
TERSE	Suppresses the informational messages EUM0010I, EUM0074I, EUM0083I, EUM0084I, EUM0288I, and EUM0291I for the requestor.

Usage notes

When using the TAPEQRY command, consider the following items:

1. A pool specification of SYS is *not* equivalent to a pool specification of "* *". The SYS request will search the entire system inventory, including system free tapes. The "* *" request will search all of the private pools.
2. When detailed information is requested (keyword VOL or FILE), the output is proceeded by header information. One of the columns in "FLAGS." The flags are described in the table below.

Table 36. Description of FLAGS

Name of Flag	Description
Byte 1	*M* refers to a tape residing in a manual library. *A* refers to a tape residing in an automated library.
Byte 2	*F* indicates the tape is free. *U* indicates the tape is used.
Byte 3	*H* indicates the tape status is HOLD. *N* indicates the tape status is NOHOLD.
Byte 4	*H* indicates that the system hold status is HOLD. *N* indicates that the system hold status is NOHOLD.
Byte 5	*I* indicates that the tape is an internal tape. *E* indicates that the tape is an external tape.

Table 36. Description of FLAGS (continued)

Name of Flag	Description
Byte 6	*D* indicates that the tape is flagged for Data Security Erase. *N* indicates that the tape is not flagged for Data Security Erase.

With PTF UI54509, the SSTAT field (Flag Byte 4) was modified from a one-byte character field, which is used for mutually exclusive hold values, to a one-byte field of flag bits, where each bit represents an independent hold flag. When any of the bit flags are set, the output will show an "H" in the SSTAT field.

When the structure of the field was modified, the output of the LONG form of the TAPEQRY command was extended to show the status of the independent hold flags. For code levels that support the independent hold flags, the values that are reported with LONG are listed below:

VF - TMVERIFY flag
The VF flag will be "H" if the volume data was modified by the TMVERIFY utility. Mount requests are allowed. The volume is not an eligible scratch volume.

NV - No Volume flag
The NV flag will be "H" if a TAPEREQ command has been issued with the NOVOL parameter. Mount requests are allowed. The volume is not an eligible scratch volume.

NI - Not in Library flag
The NI flag will be "H" if a scratch request to an automated library received a Not-In-Library response. Mount requests are allowed. The volume is not an eligible scratch volume.

NM - No Match flag
The NM flag will be "H" if the volume was mounted by an automated library for a scratch request and the internal label does not match the VOLSER. Mount requests are allowed. The volume is not an eligible scratch volume.

NL - No Label flag
The NM flag will be "H" if the volume was mounted by an automated library for a scratch request and the volume is unlabeled. Mount requests are allowed. The volume is not an eligible scratch volume.

RO - Read Only flag
The RO flag will be "H" if the volume was mounted by an automated library for a scratch request and the volume is read-only. Mount requests are allowed. The volume is not an eligible scratch volume.

UK - Unknown flag
The UK flag will be "H" if there was a non-specific SSTAT hold prior to the update for flag independent bit flags. Mount requests are allowed. The volume is not an eligible scratch volume.

XH - Expiration Hold flag
The XH flag will be "H" if there is an Expiration Hold period in effect for the volume. When the flag value is Hold, the volume is not an eligible scratch volume.

Refer to “TAPEMOD” on page 68 for instructions to reset individual flags or all flags.

3. For pool requests, if any volumes found in a pool inventory have an invalid volume index, one or more of the following error messages may be appended to the response:
   - *** No index entry - POOL' pool ' VOL' vol;
   - *** Invalid index entry - POOL' pool ' VOL' vol
4. A list of volumes meeting the query criteria will be returned when the POOL keyword is specified if neither LONG nor SHORT is specified.
5. The TEXT field supports the use of regular expressions for the search argument. The following special characters are supported:

   ***** Represents zero (0) or more characters of any sort.

   % Represents one required character of any sort.

   # Represents one required numeric (0-9) character.

   & Represents one required alphabetic (A-Z, a-z) character.

   @ Represents one required hex (A-F, a-f, 0-9) character.

   " Represents the escape character (to allow use of one of the special characters in a pattern).

   In addition, there are two special search arguments:

   TEXT " or <>
   Selects only records with blank text fields.

   TEXT '*' or <*>
   Selects only records with non-blank text fields.

   The text field is stripped of trailing spaces before the comparison is made, so it is not necessary to specify trailing spaces in the search argument.

   Note: The entry of special characters on the command line may require the use of escape characters, depending on the CP TERM settings.

Table 37. Examples of special characters

Text field in the catalog	Text parameter	Match
Some text	'S*'	Yes
Some text	'S%me text'	Yes
Some text	'S#me text'	No
Some text	'So*te*'	Yes
Some text	'S*'	No
Some text	' *'	Yes
Two words	'# word&'	Yes

6. Identical error messages for a range of volumes will be consolidated for the range when PERSIST is specified. For example:

```
tapcmd tapeqry vol p20068-p20082 persist
Ready;
 EUMTAP0010I TAPEQRY message 009229 received from USERAA.
 Volume Owner    Name     Flags  MEDIA  Exp Date R/W ID   R/W Date Dev
 EUMTAP0065E Volume P20068-P20069 is not in the system inventory.
 P20070 SYS              AFNNIN 3590K  00000000          00000000
 P20071 USERAA   POOL2    AFHNIN 3590K  00000000          00000000
 P20072 USERAA   POOL2    AFHNIN 3590K  00000000          00000000
 P20073 USERAA   POOL2    AFHNIN 3590K  00000000          00000000
 P20074 USERAA   POOL1    AFNHIN 3590K  00000000 USERAA   20110205 0530
 P20075 USERAA   POOL2    AFNNIN 3590K  00000000 USERAA   20110216 0531
```

```
P20076 USERAA   POOL2    AFNNIN 3590K  00000000 USERAA   20110920 0530
P20077 USERBA   POOL1    AFNNIN 3590K  00000000          00000000
P20078 USERBA   POOL1    AFNNIN 3590K  00000000          00000000
EUMTAP0065E Volume P20079-P20082 is not in the system inventory.
EUMTAP0084I TAPEQRY request 009229 error - RC 4.
```

7. The VOL field of the TAPEQRY command supports the use of regular expressions for the search argument. The following special characters are supported:

   ***** Represents zero (0) or more characters of any sort.

   % Represents one required character of any sort.

   # Represents one required numeric (0-9) character.

   & Represents one required alphabetic (A-Z, a-z) character.

   @ Represents one required hex (A-F, a-f, 0-9) character.

   " Represents the escape character (to allow use of one of the special characters in a VOLSER).

   Note: The entry of special characters on the command line may require the use of escape characters, depending on the CP TERM settings.

Table 38. Examples of special characters

VOLSER in the catalog	VOL Parm	Match	Comment
V12345	V*	Yes	
V#2345	V%*	Yes	
V#2345	V#*	No	Second character is not a number.
V#2345	V"#*	Yes	
V1X345	V#&###	Yes	
V1X345	V#@###	No	Third character is not valid hex.

Examples

This section provides examples of how to string together operands to create the TAPEQRY command you want. Read this section to see how all of these operands and options fit together to accomplish your objective.

Example 1: Find scratch tapes in system pool

To find all the volumes in the system pool that are available as scratch tapes, use this command:

```
TAPCMD TAPEQRY POOL SYS ONLY STATUS F HSTAT N SSTAT N NODSE INT
```

The "SYS ONLY" operand indicates that no tapes from private pools are to be included in the search. The status fields indicate that:

- The tapes must be free (STATUS F),
- Not held (HSTAT N),
- Not system held (SSTAT N),
- Have no DSE processing pending (NODSE), and
- Must be an internal (INT) tape.

All of those conditions must be met before a tape can be used as a scratch tape.

If the "SYS ALL" operand had been specified, private pool scratch volumes, as well as scratch volumes in the system free pool,would have been returned. A library tape (MAN or ATL) and a media type could have been included to further restrict the results.

Example 2: Find external tapes

To find all external tapes in the inventory, use this command:

```
TAPCMD TAPQRY POOL SYS ALL EXT
```

Note that the same command with "SYS ONLY" should never return any volumes, due to the fact that all external tapes must be added to and reside in *private* pools.

Example 3: Find specific volumes

The following example lists all the volumes that begin with "J"and for which the pool owner is USER1.

```
TAPCMD TAPQRY VOL J* POWNER USER1 SHORT
```

Messages

The table below lists the messages generated by the TAPEQRY command.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 39. TAPEQRY messages

Message number	Message text	Return code
EUM0001E	Error reading <file> - RC <io return code>.	26
EUM0002E	Unauthorized TAPEQRY request from <user ID>.	20
EUM0005E	Invalid value <value> for <parm>.	24
EUM0007E	Error returned from <routine> - RC <return code>.	30
EUM0010I	<cmnd> message <reqnum> required from <userID>.	N/A
EUM0011E	Unknown command <req> in request <req#> from <reqID>.	16
EUM0022E	Pool ID <pool ID> is not a valid pool name.	24
EUM0024E	Pool ID <pool ID> does not exist.	24
EUM0031E	Required parameter <parm> not specified.	24
EUM0032E	Invalid parameter <parm>.	24
EUM0034E	Error <return code> linking <mdsk>.	34
EUM0035E	Authorization error <return code> linking <mdsk>.	34
EUM0036E	Error <return code> accessing <vaddr>.	34
EUM0037E	Error <return code> locating file <file name>.	26
EUM0038E	Error <return code> reading file <file name>.	26
EUM0039E	File <file> cannot be processed due to a version mismatch.	26
EUM0040E	File <file> cannot be processed due to a record type error.	26
EUM0041E	Invalid delimiter for <parm>.	24
EUM0042E	No values found in file <filename>.	24
EUM0044E	Length of <value> is less than the system minimum <min>.	24

Table 39. TAPEQRY messages (continued)

Message number	Message text	Return code
EUM0045E	Length of <value> exceeds the system maximum <value>.	24
EUM0065E	Volume <volid> is not in the system inventory.	28
EUM0077E	Volume index error: INV=<invvol> VOL=<indxvol> IND=<indxnum>	N/A
EUM0083I	<cmnd> request <reqnum> complete – RC <rc>.	N/A
EUM0084I	<cmnd> request <reqnum> error – RC <rc>.	N/A
EUM0135I	No volumes found for pool <pool id>.	N/A
EUM0136E	The <parm> value must be <info>.	24
EUM0150E	Keyword <keyword1> is not valid with keyword <keyword2>.	24
EUM0151I	No volumes found for pool specification <pool>.	N/A
EUM0152E	Unexpected error <return code> processing TAPEQRY request.	30
EUM0153I	No volumes found based on the pool specification.	N/A
EUM0154I	No volumes found based on the selection criteria.	N/A
EUM0155E	No index entry found for volume <vol>.	28
EUM0156E	Invalid index entry for volume <vol>.	30
EUM0157E	Error <process> output - RC <return code>.	30
EUM0176E	Index error processing TAPEMOD command.	30
EUM0215E	Invalid value <parm> for the VOL parameter.	24
EUM0221E	<type> request <req#> from <rqstID> was rejected by the installation exit processing.	20
EUM0329E	<msg>	N/A
EUM0349E	Request <req#> could not be processed by the installation command exit.	20
EUM0352E	<req> request <reqnum> from <rqstID> was rejected because the response from the installation command exit timed out.	20
EUM0373E	The <cmnd> command requires operations or admin authority.	20
EUM0400I	Volume <volid> is not in the system inventory.	N/A
EUM0472W	Mount message ID <ID> for pool <pool> is not valid. The system mount message ID will be used if it is defined.	N/A
EUM0496W	Exception ID <ID> for pool <pool> is not defined to the system.	N/A
EUM0601E	The FILE parameter requires a file name and file type.	24
EUM0722E	<req> request <req#> could not be sent to node <name>.	26
EUM0734E	The <req> command was not accepted because catalog node <name> is quiesced.	20
EUM0735E	The <req> command was not accepted because local node <name> is quiesced.	20
EUM0736E	The <req> command was not accepted because Tape Manager is quiesced.	20
EUM0812E	The <req> command was not accepted because External Security Manager authorizations cannot be performed – RC <rc>.	20
EUM0817E	User <reqID> failed the External Security Manager check for the <req> command.	N/A

Table 39. TAPEQRY messages (continued)

Message number	Message text	Return code
EUM0831E	Unable to authorize user <reqID> for <req> request <req#> – the details were logged.	20
EUM0913E	Only one space-delimited minus sign (-) can be specified in the volume parameter.	24
EUM0914E	The volume parameter cannot contain a hyphen that is preceded by a character and followed by a space.	24
EUM0915E	The volume parameter cannot contain a hyphen that is preceded by a space and followed by a character.	24
EUM0916E	The volume parameter cannot contain a hyphen prior to the first volume operand.	24
EUM0919E	The minimum length required to match the pattern <pattern> exceeds the system maximum length of <max> for <parm>.	24

Return codes

The return codes for TAPEQRY are listed in the table below.

Table 40. TAPEQRY Return codes

Return code	Description
0	Finished correctly
20	Unauthorized request
24	Bad PLIST
26	I/O Error
28	Volume error
30	Unexpected error
32	Device error
34	Link/access error
1000	I/O error
2000	Logic error
3000	Syntax error
4xxx	User interface error (See help for TAPCMD.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

TAPEREQ

Use the TAPEREQ QRY command to query the status of active mount requests or to query the status of a specific mount request by request number. Use the TAPEREQ CAN command to cancel a specific mount request by request number or by default when the issuer has only a single active mount request. Use the TAPEREQ MOD command to retry a scratch mount when the requested volume is not available or cannot be used.

The command is valid for Tape Manager or RMM catalogs.

Shared Catalog Execution

The TAPEREQ command can be entered on the catalog node or a request node. The command executes on the catalog node in all cases.

Authorization

The authority required to use the TAPEREQ command varies based on the type of request you are making. Refer to the list below.

- *Non-privileged requests:*

  The command is valid only for tape mounts that the requestor has issued. The FORCE option is not permitted and the ID operand, if specified, is restricted to the ID of the requestor.
- *Tape Manager Admins or Operations requests:*

  The command is valid for any tape mount. The use of FORCE is permitted and the ID operand is not restricted to the ID of the requestor.
- *Alternate Mount Message ID requests (Tape Manager catalog only):*

  If the command specifies a tape mount request and is issued by a user that is an Alternate Mount Message ID for the request, the user has the same command privileges as a system administrator.

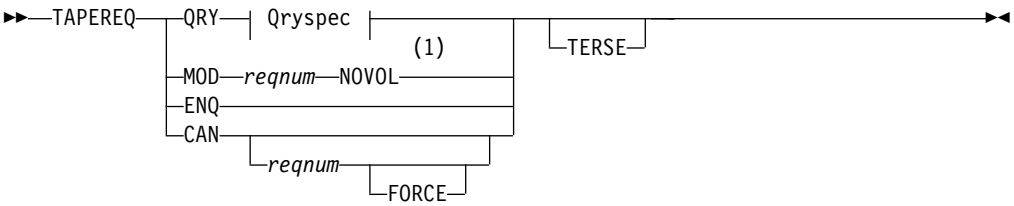
When an External Security Manager (ESM) is active, the authorization requirements may be controlled by ESM profiles:

- When `Privileged_User_Authority` is YES, Tape Manager Operations authority requires READ access to the operator profile.
- When `Privileged_User_Authority` is YES, Tape Manager Admins authority requires READ access to the administrator profile.

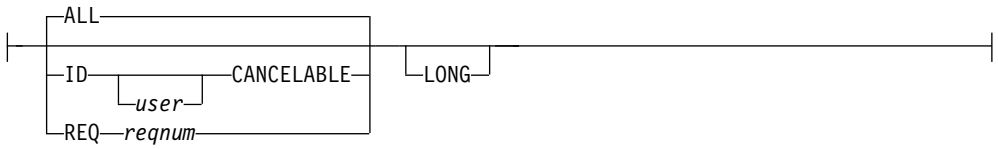
For more details, refer to the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344).

Syntax

The diagram below shows the syntax for the TAPEREQ command.



Qryspec:



Notes:

1 The MOD parameter is NOT valid for RMM catalogs.

Figure 12. Syntax diagram for TAPEREQ command

Operands

The following table lists the operands for the TAPEREQ command.

Table 41. List of operands for TAPEREQ command

Operand	Description
QRY	Indicates a request for mount information.
MOD *reqnum* NOVOL	Informs Tape Manager (in a Tape Manager catalog) that the tape requested for the manual scratch mount, indicated by *reqnum*, is not available and that an alternative volume should be used for the request if another suitable scratch volume is available.
ENQ	Shows the current enqueue list for tape mount requests and tape EOV requests. See the "Usage notes" for more information.
CAN *reqnum*	Specifies that the mount request (or TAPEEOV request) identified by *reqnum* is to be cancelled. If *reqnum* is not specified and the requestor has a single, cancellable mount request, the request will be cancelled. A request number must be specified to cancel a TAPEEOV request. If the TAPEMNT request with that request number is also active, the cancel request will be applied to the TAPEEOV request without regard to the FORCE parameter. When the TAPEEOV request is cancelled, it is then possible to cancel the TAPEMNT request using the FORCE option, if that is deemed to be necessary.
FORCE	Enables a system administrator to "clean up" a request that is otherwise not able to be cancelled, such as a request where the device has been given. This option should be used carefully and only to correct an out-of-sync condition, such as tape or drive error that prevents the normal completion of the request. A request number must be specified when the FORCE parameter is used.
TERSE	Suppresses the informational messages EUM0010I, EUM0074I, EUM0083I, EUM0084I, EUM0288I, and EUM0291I for the requestor.
ALL	Requests information on all outstanding mount requests issued by the requestor. If the requestor is a system administrator, information for all outstanding requests is returned.
ID *user*	Requests mount information for mount requests issued by a specific user. The default is the ID of the requestor.
REQ *reqnum*	Requests mount information for a specific mount request number.
CANCELABLE	Returns information only for requests that are eligible to be cancelled.
LONG	Requests output that includes node information.
TERSE	Suppresses the informational messages EUM0010I, EUM0074I, EUM0083I, EUM0084I, EUM0288I, and EUM0291I for the requestor.

Usage notes

When using the TAPEREQ command, consider the following items:

1. A cancel request will not be processed if the mount request has proceeded to the point where the mount device has been given to the mount requestor.
2. The following information is returned in the default query response:

Table 42. List of information returned from a default query response

Name	Description
Rqst #	Mount request number
Stat	Request status
Date	Request date
Time	Request time
Rqst ID	Requestor
Att ID	Attach ID
VDEV	Virtual device number
Dev/ Pool	Device pool or real device number
Volume	Volume serial number
T	Library type: • M - manual • A - ATL (automated tape library)
Libname	Library name

The request status information is:

Table 43. List of information returned from a status request

Name	Description
TAPE	Requested volume is in use.
ATGD	The request is waiting for the Device Manager service machine to dynamically allocate a manual drive.
MPND	Request mount is pending.
GIVE	Request has been mounted and a GIVE issued for the attach ID.
GIVN	Request has been mounted and the request device has been given to the attach ID.

Additional status for RMM interface:

- SPND - Scratch mount pending
- AUTH - Authorization request pending

3. The following information is returned in the long query response:

Table 44. List of information returned from a long query response

Name	Description
Rqst #	Mount request number
Stat	Request status
Date	Request date
Time	Request time
Rqst ID	Requestor
Req Node	Request node

Table 44. List of information returned from a long query response (continued)

Name	Description
Att ID	Attach ID
Att Node	Attach node
VDEV	Virtual device number
Dev/ Pool	Device pool or real device number
Volume	Volume serial number
T	Library type: • M - manual • A - ATL (automated tape library)
Libname	Library name

4. When running with a Tape Manager catalog, a TAPEREQ QRY ALL command, when issued by a system administrator, will result in additional output if there are any TAPEEOV commands outstanding. The following lines are an example of the output for TAPEEOV requests:

```
Rqst # Stat Rqst ID  MntReq  Data set
------ ---- -------  ------  --------
039450 EOVP USER01   N/A     USER01.TAPEDSN
039452 EOVM USER02   039454  USER02.TAPEDSN
```

   The output for TAPEEOV request shows a status of EOVP. The EOVP status (notice the "P" in EOVP) indicates that the TAPEEOV command was issued, but a corresponding TAPEMNT DSN command with PREREQ 39450 has not been issued. This results in a value of "N/A" in the MntReq (Mount Request) column.

   The EOVM status (notice the "M" in EOVM) indicates that the TAPEEOV command was issued and, afterwards, a TAPEMNT DSN command with PREREQ 39452 was also issued. The request number of the command was 039454.

5. When running with a Tape Manager catalog, the following lines are an example of the output for TAPEREQ ENQ:

```
Volume  Request  Type Pool/Data set
------  -------  ---- -------------
R20166  *000192  VOL  USERA POOL1
R20165  *000194  VOL  USERA POOL1
R20165  *000192  DSN  USERA.D07142
R20165   000194  DSN  USERA.D07142
```

   In this case, the following items are true:

   - Data set USERA.D07142 is a multi-volume data set where volume R20165 is the first volume of the data set and volume R20166 is the second volume of the data set.
   - Request 192 was a data set name mount request with VOLNUM 2 specified.
   - Request 194 was a simple volume-specific request for volume R20165.

   A tape mount request for any volume of a data set generates an enqueue for the volume and an enqueue for the data set (even if the data set name is not used in the mount request). The asterisk (*) for the volume (Type VOL) enqueue indicates that request 192 controls the volume enqueue for volume R20166, and request 194 controls the volume enqueue for volume R20165.

   The asterisk (*) for the data set enqueue (Type DSN) indicates that request 192 controls the enqueue for data set USERA.D07142. Although request 194 controls

the volume enqueue for volume R20165, the request will wait since that volume is associated with a data set for which request 192 owns the enqueue.

A data set enqueue is always associated with the first volume of that specific occurrence of the data set. If there was another occurrence of data set USERA.D07142 (that is, associated with a volume other than R20165), mount requests for that occurrence would not be affected by either of the enqueues.

6. When running with an RMM catalog, the following lines are an example of the output for TAPEREQ ENQ:

```
Volume  Request  Type
------  -------  ----
R20166  *000192  VOL
R20166   000194  VOL
```

In this case, request 192 controls the enqueue for volume R20166 and request 194 will be in a volume-wait until request 192 releases the enqueue.

7. A request with a status of GIVE or GIVN is not eligible to be cancelled.

Messages

The table below lists the messages generated by the TAPEREQ command.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 45. TAPEREQ messages

Message number	Message text	Return code
EUM0002E	Unauthorized TAPEREQ request from <user ID>.	20
EUM0005E	Invalid value <value> for <parm>.	24
EUM0007E	Unexpected return code <routine> - RC <return code>.	30
EUM0010I	<cmnd> message <reqnum> required from <userID>.	N/A
EUM0011E	Unknown command <req> in request <req#> from <reqID>.	16
EUM0017E	Error sending SMSG to <ID> - RC <return code>.	30
EUM0020E	ID <user ID> is not defined to the system.	24
EUM0025E	Unexpected error condition.	30
EUM0026E	Logic error at <line> - RC <return code>.	1000
EUM0027E	Syntax error at <line>.	2000
EUM0031E	Required parameter <parm> not specified.	24
EUM0032E	Invalid parameter <parm>.	24
EUM0037E	Error <return code> locating file <file name>.	26
EUM0038E	Error <return code> reading file <file name>.	26
EUM0039E	File <file name> cannot be processed due to a version mismatch.	26
EUM0040E	File <file name> cannot be processed due to a record type error.	26
EUM0041E	Invalid delimiter for <parm>.	24
EUM0043E	Invalid value <value> found in file <file name>.	24
EUM0046E	The length of <parm> exceeds the maximum of <max>.	24
EUM0065E	Volume <vol> is not in the system inventory.	28
EUM0073I	Mount request <num> successful.	N/A
EUM0074I	EUM0074I Mount request <num> failed - RC <return code>.	

Table 45. TAPEREQ messages (continued)

Message number	Message text	Return code
EUM0075E	Unexpected return code from <routine> - RC <return code>.	30
EUM0076E	Tape count for pool <pool> would exceed pool maximum.	28
EUM0077E	Volume index error: INV=<invvol> VOL=<indxvol> IND=<indxnum>	30
EUM0082E	Inventory and volume index out of synch.	30
EUM0083I	<cmd> request <seq> complete - RC <return code>.	
EUM0084I	<cmd> request <seq> error - RC <return code>.	
EUM0101I	CNCLD USER=<user> RQST=<num> VOL=<vol> DEV=<dev>	
EUM0117I	CNCLD USER=<user> RQST=<num> VOL=<vol> DEVPOOL=<pool>	
EUM0125I	Volume <volume name> in pool <pool name> not in inventory.	30
EUM0126E	Free pointer error for volume <vol>.	30
EUM0134E	Unauthorized <type> request by <ID>.	20
EUM0156E	Invalid index entry for volume <volume name>	30
EUM0157E	Error <action> output - RC <return code>.	30
EUM0171E	Error <return code> processing file <file>.	30
EUM0172E	Error <return code> writing file <file>.	26
EUM0174E	Volume count is negative.	30
EUM0175E	Volume count is not numeric.	30
EUM0176E	Index error processing <req#> request.	30
EUM0181I	Volume <vol> not processed - invalid index.	30
EUM0187E	Invalid file info passed for pool <pool>.	30
EUM0188I	File info is <text>.	N/A
EUM0210I	No active mount request was found.	
EUM0211W	Cannot cancel request <req> - ID <att id> device <rdev> status <stat>.	
EUM0212E	Unauthorized cancel attempt by <user1> of mount request <cancel_id> issued by <request_id>.	20
EUM0213I	ID <cancel_id> has cancelled mount request <req#> issued by <request_id>.	8
EUM0221E	<type> request <req#> from <rqstID> was rejected by the installation exit processing.	20
EUM0312E	Found multiple mounts - a request number is required.	24
EUM0328I	No cancellable mount requests were found.	
EUM0329E	<msg>	N/A
EUM0333E	The <parm> parameter is not valid with the <parm2> parameter.	24
EUM0349E	Request <req#> could not be processed by the installation command exit.	20
EUM0352E	<req> request <reqnum> from <rqstID> was rejected because the response from the installation command exit timed out.	20
EUM0355E	A request number is required when FORCE is specified.	24
EUM0373E	The <cmnd> command requires operations or admin authority.	20

Table 45. TAPEREQ messages (continued)

Message number	Message text	Return code
EUM0493E	A <reqtype> request is only valid for a manual scratch mount.	24
EUM0494E	Request <reqnum> is not in a mount pending state.	24
EUM0495I	A NOVOL MODIFY was issued for volume <volser>.	
EUM0592I	No enqueues were found.	
EUM0622E	The <parm> parameter is not valid for a generic scratch mount.	24
EUM0722E	<req> request <req#> could not be sent to node <name>.	26
EUM0734E	The <req> command was not accepted because catalog node <name> is quiesced.	20
EUM0735E	The <req> command was not accepted because local node <name> is quiesced.	20
EUM0736E	The <req> command was not accepted because Tape Manager is quiesced.	20
EUM0812E	The <req> command was not accepted because External Security Manager authorizations cannot be performed – RC <rc>.	20
EUM0817E	User <reqID> failed the External Security Manager check for the <req> command.	N/A
EUM0831E	Unable to authorize user <reqID> for <req> request <req#> – the details were logged.	20

Return codes

The return codes for TAPEREQ are listed in the table below.

Table 46. TAPEREQ Return codes

Return code	Description
0	Finished correctly
4	Request completed with warning
20	Unauthorized request
24	Bad PLIST
26	I/O Error
28	Volume error
30	Unexpected error
32	Device error
34	Library Manager Response
1000	I/O error
2000	Logic error
3000	Syntax error
4xxx	User interface error (See note below.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

Chapter 3. Pool commands

This chapter provides details on the pool management commands and their syntax. Tape Manager provides a program, referred to as *TAPCMD*, to help with the processing of commands. When using pool commands, you must start each command with "TAPCMD" as shown in the example below:

```
TAPCMD POOLDEF pooldef parms, etc.
```

The TAPCMD program runs in the user's virtual machine and performs a variety of processes, such as translating a file mode (i.e., file mode A) to a virtual address, before sending the command to the Tape Manager. When entering a pool command, remember to begin all commands with *TAPCMD*.

Pool access privileges

The tape pool access options are ADMN, TAPE, WRITE, READ, and NONE. The access privileges are inclusive, meaning that an ADMN user has all of the privileges of TAPE, WRITE, and READ, plus administrative privileges. A TAPE user has WRITE and READ privileges, plus tape handling privileges. The table below defines the privileges.

Table 47. Tape pool access privileges

Authority	Description
ADMN	The user can alter the attributes of the pool with the POOLMOD command or delete the pool with the POOLDEL command. To define a pool, the user must be a system administrator or be granted pool definition authority by an administrator using the POOLACC SYS POOL command. When a pool is defined by a system administrator, the user defining the owner of pool is granted TAPE access by default. If the owner of the pool defines the pool, the owner is granted ADMN access by default.
TAPE	The user can utilize tape management commands for the pool. The commands include TAPEMOD, TAPEDEL, TAPEMOV, and POOLXFR.
WRITE	The user is permitted to mount tapes in the pool with WRITE access.
READ	The user can mount tapes in the pool with READ access.
NONE	The user cannot access tapes in the pool.

POOLACC

Use the POOLACC command to define access permissions to private pools, control access to volumes in the system free pool, or control the ability to create private pools. The command is valid for a Tape Manager catalog, but not for an RMM catalog.

Shared Catalog Execution

The POOLACC command can be entered on the catalog node or a request node. The command executes on the catalog node in all cases.

Authorization

To use the POOLACC command, you must have pool administration authority for private pools or be the owner of a private pool. Tape Manager Admins authority or pool administrator authority is required to alter the access permissions for a private pool. Tape Manager Admins authority is required when the SYS operand is specified.

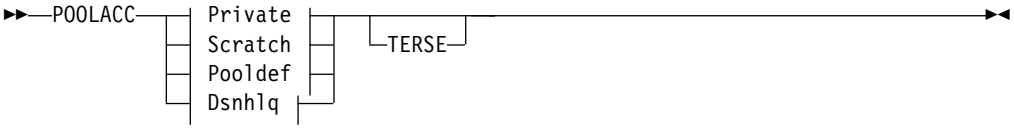
When an External Security Manager (ESM) is active, the authorization requirements may be controlled by ESM profiles:

- Pool administrator requires READ access to the pool administrator profile for the pool when `Pool_Authority` is YES.
- Tape Manager Admins authority requires READ access to the administrator profile when `Privileged_User_Authority` is YES.

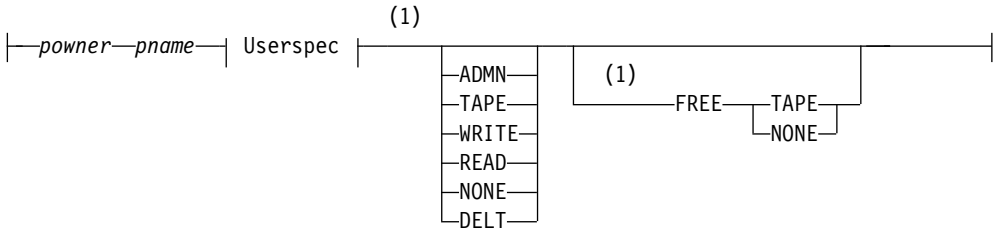
For more details, refer to the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344).

Syntax

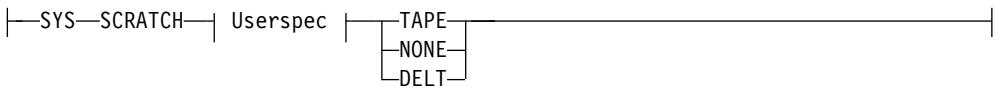
The next syntax diagram shows the POOLACC command and its operands.



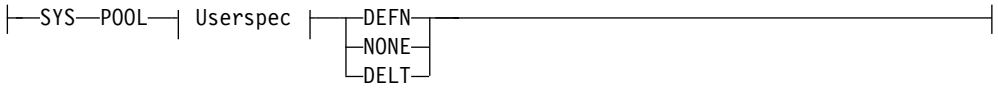
Private:



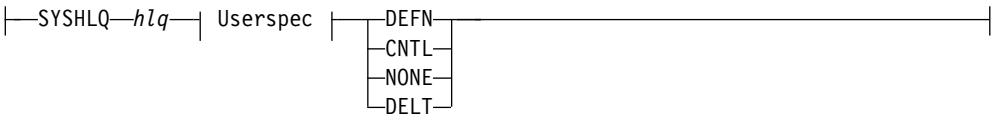
Scratch:



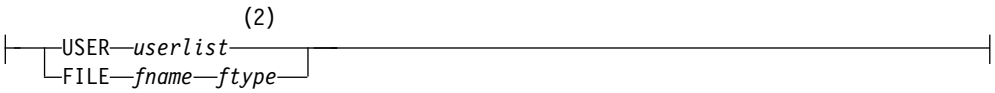
Pooldef:



Dsnhlq:



Userspec:



Notes:

1 If pool access authority is being updated, the users must be defined to the system. If only the free pool authority is being updated, the users do not need to be defined to the system because pool owners are not required to be defined to the system.

2 The default virtual address of the MDISK for the file is 191. See the help for TAPCMD for additional information pertaining to the virtual address or file mode when the FILE operand is specified.

Figure 13. Syntax diagram for POOLACC command

Operands

The table below lists all of the operands you can use with the POOLACC command.

Table 48. List of operands for POOLACC command

Operand	Description
powner	Identifies the owner of a private pool. is the owner of a private pool. This operand is not valid if External Security is active and the Private_Pool_Auth setting is YES.
pname	Identifies the name of a private pool. This operand is not valid if External Security is active and the Private_Pool_Auth setting is YES.
SYS SCRATCH	Controls access to the system free pool. This form of the command is only used to authorize private pools to use the system pool for a free pool. (See “POOLDEF” on page 113 and “POOLMOD” on page 125.) The user ID in that case must be the pool owner of the pool that will have a free pool of SYS. This operand is not valid if External Security is active and the System_Authority setting is YES.
SYS POOL	Controls the ability to create private pools. This operand is not valid if External Security is active and the System_Authority setting is YES.
SYSHLQ *hlq*	Controls the ability to create tape data sets with the specified high-level qualifier. This operand is not valid if External Security is active and the System_Authority setting is YES.
USER *userlist*	Specifies a list of one or more space-delimited existing IDs. For SYS SCRATCH, the user ID does not have to be an existing system ID because pool owners are not required to be defined to the system.

Table 48. List of operands for POOLACC command (continued)

Operand	Description
FILE *fname ftype*	Specifies a file that contains the list of user IDs where *fname* is the CMS file name and *ftype* is the CMS file type. This file exists on an accessed disk of the requestor. When the FILE operand is specified, the file can contain multiple records. Each record in the file can contain multiple, space-delimited user IDs. You can use the FM or VADDR option of the TAPCMD command to specify the location of the file.
ADMN	Grants administrative authority to a private pool.
TAPE	Grants TAPE authority to a private pool. For SYS SCRATCH, grants access to the system free pool.
WRITE	Grants WRITE authority to a private pool.
READ	Grants READ authority to a private pool.
NONE	NONE has different meaning based on how it is used: • For private pools, removes all authority to the pool. • For SYS SCRATCH, removes access to the system free pool. • For SYS POOL, revokes the authority to define private pools.
DELT	Deletes an existing permission.
FREE TAPE	Grants authority to take free tapes from this pool. This permission allows the use of this private pool as a FREEPOOL entry in a POOLDEF command issued by the grantee.
FREE NONE	Removes an existing FREE TAPE permission.
DEFN (for SYS POOL)	Grants the authority to define private pools.
DEFN (for SYSHLQ)	Grants the authority to define data sets with the high-level qualifier (HLQ) that is specified.
CNTL (for SYSHLQ)	Grants the authority to create data sets with the high-level qualifier (HLQ) or to modify permissions to create data sets with the HLQ. By default, a user ID has control (CNTL) privileges for the HLQ that matches the user ID.
TERSE	Suppresses the informational messages EUM0010I, EUM0074I, EUM0083I, EUM0084I, EUM0288I and EUM0291I for the requestor.

Usage notes

When using the POOLACC command, consider the following:

1. The pool authorities, which are ADMN, TAPE, READ, and NONE, are hierarchical; that is, the authorization priority is (from top to bottom):
   a. ADMN. Required for pool management functions.
   b. TAPE. Required for tape management functions and READ/WRITE access to tapes in the pool.
   c. READ. Required to read tapes in the pool.
   d. NONE

   If more than one of these permissions is issued for the same ID, the last permission processed will be in effect. For example, if TAPE access is granted to an ID that has ADMN authority, the result is that the ADMN authority will be removed and TAPE authority will be granted.

2. If the system is configured so that no authorization is required to access the system free pool, the system free pool permissions are recorded, but not used.
3. If the system is configured so that no authorization is required to define private pools, the system pool permissions are recorded, but not used.
4. If an ID is not defined to the system, the command fails and no permissions are changed for any other IDs targeted by the command.
5. The owner of a private pool does not require FREE permission to use that pool name as a FREEPOOL designation in a POOLDEF command.
6. A system administrator does not have permission to mount volumes in a private pool by default. System administrators, however, can move volumes to or from a private pool without additional authorization.

Messages

The following table lists the messages generated by POOLACC command.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 49. POOLACC messages

Message number	Message text	Return code
EUM0002E	Unauthorized <text> request from <reqID>.	20
EUM0007E	Error returned from <routine> - RC <return code>.	30
EUM0010I	<cmd> message <reqnum> received from <userID>.	N/A
EUM0011E	Unknown command <req> in request <req#> from <reqID>.	16
EUM0012E	Invalid null parameter for <parm>.	24
EUM0020E	ID <user> is not defined to the system.	24
EUM0022E	Pool ID <pool ID> is not a valid pool name.	24
EUM0024E	Pool ID <pool ID> does not exist.	24
EUM0031E	Required parameter <parm> not specified.	24
EUM0032E	Invalid parameter <parm | 'list'>.	24
EUM0033E	Not authorized to modify pool ID <pool>.	20
EUM0034E	Error <return code> linking <user mdisk>.	34
EUM0035E	Authorization error <return code> linking <user mdisk>.	34
EUM0036E	Error <return code> accessing <user vaddr>.	26
EUM0037E	Error <return code> locating file <filename>.	26
EUM0038E	Error <return code> reading file <filename>.	26
EUM0039E	File <filename> cannot be processed due to a version mismatch.	26
EUM0040E	File <filename> cannot be processed due to a record type error.	26
EUM0041E	Invalid delimiter for <parm>.	24
EUM0042E	No values found in file <filename>.	24
EUM0043E	Invalid value <val> found in file <file>.	24
EUM0075E	Unexpected return code from <routine> - RC <return code>.	30
EUM0080E	Invalid value <val1> detected for <val2>.	30
EUM0083I	<cmd> request <reqnum> complete - RC <rc>.	N/A
EUM0084I	<cmd> request <reqnum> error - RC <rc>.	N/A

Table 49. POOLACC messages (continued)

Message number	Message text	Return code
EUM0134E	Unauthorized <type> request by <ID>.	20
EUM0152E	Unexpected error <return code> processing <type> request.	30
EUM0172E	Error <return code> writing file <file>.	26
EUM0187E	Invalid file info passed for pool <pool>.	N/A
EUM0188I	File info is <text>.	N/A
EUM0215E	Invalid value - <val> - for the <parm> parameter.	24
EUM0221E	<type> request <req#> from <rqstID> was rejected by the installation exit processing.	20
EUM0329E	<msg>	N/A
EUM0349E	Request <req#> could not be processed by the installation command exit.	20
EUM0352E	<req> request <reqnum> from <rqstID> was rejected because the response from the installation command exit timed out.	20
EUM0408E	Not authorized to grant ADMN for pool <pool>.	20
EUM0489E	Value <val> exceeds the maximum length of <leng> for <var>.	N/A
EUM0491E	No access parameter was specified.	N/A
EUM0496W	Exception ID <ID> for pool <pool> is not defined to the system.	N/A
EUM0601E	The FILE parameter requires a file name and file type.	24
EUM0722E	<req> request <req#> could not be sent to node <name>.	26
EUM0734E	The <req> command was not accepted because catalog node <name> is quiesced.	20
EUM0735E	The <req> command was not accepted because local node <name> is quiesced.	20
EUM0736E	The <req> command was not accepted because Tape Manager is quiesced.	20
EUM0812E	The <req> command was not accepted because External Security Manager authorizations cannot be performed – RC <rc>.	20
EUM0817E	User <reqID> failed the External Security Manager check for the <req> command.	N/A
EUM0831E	Unable to authorize user <reqID> for <req> request <req#> – the details were logged.	20

Return Codes

The following table lists the return codes for POOLACC.

Table 50. POOLACC Return codes

Return code	Description
0	Finished correctly
20	Unauthorized request
24	Bad PLIST
26	I/O Error
28	Duplicate pool ID

Table 50. POOLACC Return codes (continued)

Return code	Description
30	Unexpected error
34	Link error
1000	Termination I/O error
2000	Termination logic error
3000	Termination syntax error
4xxx	User interface error (See note below.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

POOLDEF

Use the POOLDEF command to define a new tape pool. The command is valid for a Tape Manager catalog, but not for an RMM catalog.

Shared Catalog Execution

The POOLDEF command can be entered on the catalog node or a request node. The command executes on the catalog node in all cases.

Authorization

The POOLDEF command requires pool creation authority if the "owner" is the requestor. If the "owner" is not the requestor, Tape Manager Admins authority is required. If an existing pool is specified for FREEPOOL, the owner of the pool being defined must have FREE authority for that pool.

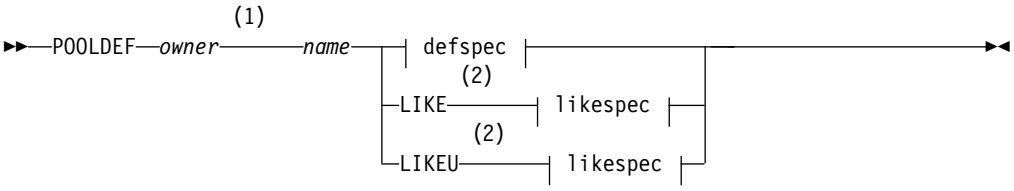
When an External Security Manager (ESM) is active, the authorization requirements may differ:

- Pool creation authority is controlled by the system pool definition profile when `System_Authority` is YES.
- The ability to specify a private free pool is controlled by the free pool profile when `Pool_Authority` is YES. The user that issues the command (rather than the pool owner of the pool being defined) must have READ access to the free pool profile of the pool specified as the free pool.
- The ability to specify the system free pool is controlled by the system scratch profile when `System_Authority` is YES. The user that issues the command must have READ access to the system scratch profile.
- Tape Manager Admins authority requires READ access to the administrator profile when `Privileged_User_Authority` is YES.

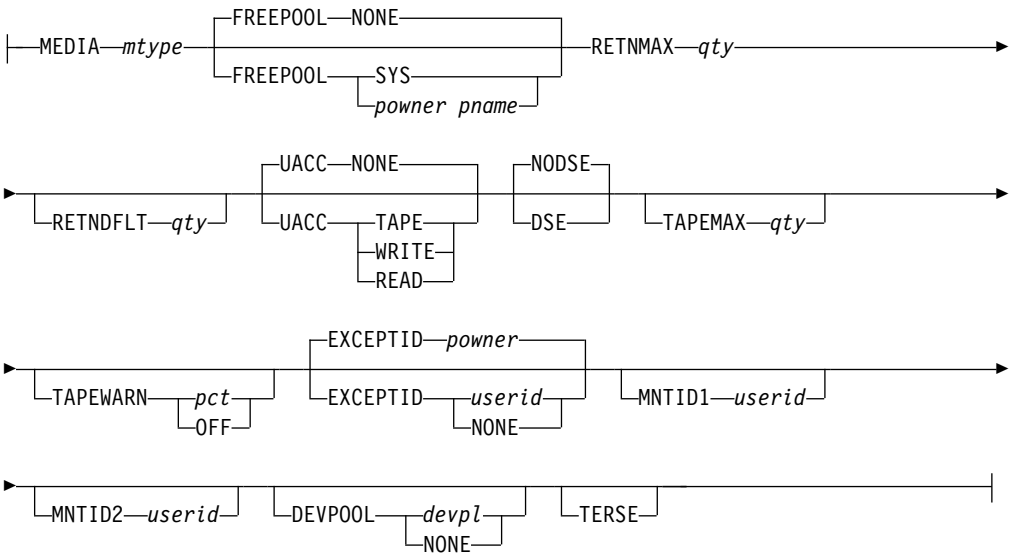
For more details, refer to the *IBM Tape Manager for z/VM Installation and Administration Guide*.

Syntax

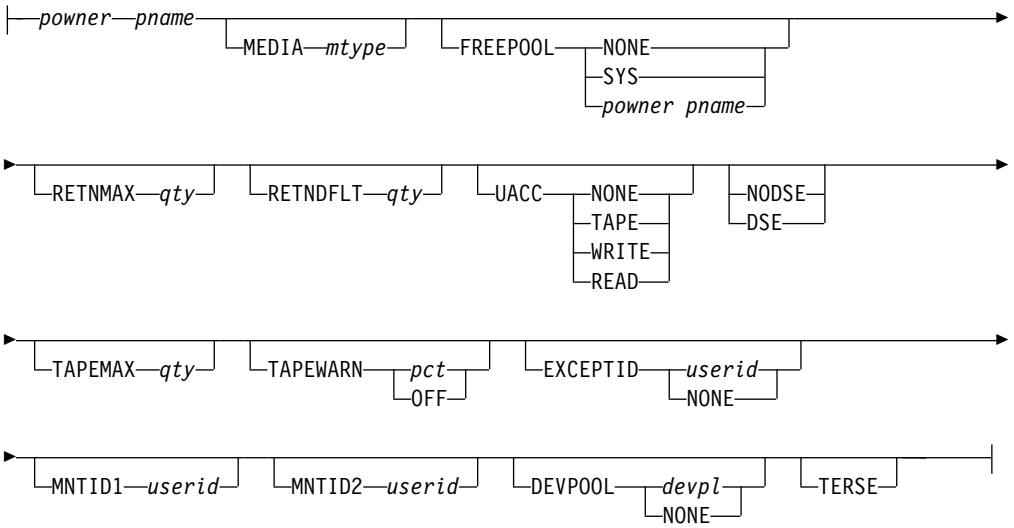
The next syntax diagram shows the POOLDEF command and its operands.



Defspec:



Likespec:



Notes:

1 SYS, SYSHLQ, and NONE are not valid for a pool owner.

2 When either LIKE or LIKEU is specified, any additional parameters are optional and must follow the pool name. Any operands not specified will be

derived from the model pool rather than the defaults. Additional operands supplied with LIKE or LIKEU will override the corresponding values of the model pool.

Figure 14. Syntax diagram for POOLDEF command

Operands

The table below lists all of the operands you can use with the POOLDEF command.

Table 51. List of operands for POOLDEF command

Operand	Description
owner	Identifies the user ID that will own the new pool. The ID must be a valid CMS file name.
name	Identifies the name of the new pool. The name must be a valid CMS file type.
LIKE *powner pname*	Specifies the name of an existing pool owner (powner) and pool name (pname) to be used as a model for this definition.
LIKEU *powner pname*	Functions the same as LIKE, but also includes the user permissions of the model pool.
MEDIA *mtype*	Identifies the media type that will be used for device compatibility checking.
FREEPOOL NONE	Specifies that the pool has no source of free tapes. Free tapes remain in the pool.
FREEPOOL SYS	Specifies that the pool can draw free tapes from the system free pool if access privileges permit. Free tapes return to the system pool.
FREEPOOL *powner pname*	Specifies the name of a private pool to be used for free tapes. Free tapes return to the private pool.
RETNMAX *qty*	Specifies a one- to five-digit integer for the maximum number of days that a tape in this pool should be retained. The value must be less than the system retention maximum.
RETNDFLT *qty*	Lists a one-to five-digit integer as the default for the number of days that a tape in this pool should be retained. The value must be less than the pool retention maximum. If a value is not specified, the values for RETNDFLT and the pool retention maximum, both found in the Tape Manager configuration file, are compared and the smaller value is used.
UACC NONE	Sets the default access privilege to NONE.
UACC ADMN	Sets the default access privilege to ADMN.
UACC TAPE	Sets the default access privilege to TAPE.
UACC WRITE	Sets the default access privilege to WRITE.
UACC READ	Sets the default access privilege to READ.
NODSE	Specifies that, by default, DSE (data security erase) processing is not required after a volume in this pool expires and before the volume is returned to scratch status.

Table 51. List of operands for POOLDEF command (continued)

Operand	Description
DSE	Specifies that, by default, DSE (date security erase) processing is required after a volume in this pool expires and before the volume is returned to scratch status. It is the responsibility of the site to ensure that the DSE processing occurs and that the DSE flag is cleared once the DSE is completed. The TMDSE utility provided in Tape Manager can be used to perform this processing and clear the flag. For more information on TMDSE, refer to "TMDSE" on page 179.
TAPEMAX *qty*	Lists a one- to seven-digit integer for the maximum number of tapes the pool can contain. If not specified, the value for POOLMAX that is specified in the Tape Manager configuration file is used.
TAPEWARN *pct*	Lists a one- to three-digit warning percentage for pool size. A warning is issued when the percentage of tapes in the pool, relative to the maximum allowed tapes in the pool, exceeds this value. If not specified, the value for POOLWARN that is specified in the Tape Manager configuration file is used.
TAPEWARN OFF	Specifies that no tape warning message is to be issued for this pool.
EXCEPTID *owner*	Specifies that the pool owner will be the user ID for the exception and the warning messages for the pool. This is the default only if the pool owner is a valid user ID.
EXCEPTID *userid*	Specifies a user ID for exception and warning messages for the pool.
EXCEPTID NONE	Indicates that there is no user ID for the pool.
MNTID1 *userid*	Specifies an alternate user ID for messages normally sent to system mount ID one.
MNTID2 *userid*	Specifies an alternate user ID for messages normally sent to system mount ID two.
DEVPOOL *devpl*	Specifies the default device pool for this pool.
DEVPOOL NONE	Indicates that there is no default device pool for this pool.
TERSE	Suppresses the informational messages EUM0010I, EUM0074I, EUM0083I, EUM0084I, EUM0288I, and EUM0291I for the requestor.

Usage notes

When using the POOLDEF command, consider the following:

1. When a FREEPOOL is specified, requests may not be satisfied if they are prevented by configuration options, access restrictions, or a lack of free tapes in the scratch pool.
2. The default access of the pool owner is TAPE if the pool is not defined by the owner and ADMN if the pool is defined by the owner. When LIKEU is specified, there are no default permissions since the permissions are copied from the LIKEU pool.
3. Refer to "Pool access privileges" on page 107 and to "POOLACC" on page 107 for additional information on access privileges.

4. When LIKE(U) is specified, and only one of RETNMAX or RETNDFLT is specified, it is possible to have a conflict with the RETN values in the LIKE pool. If the RETNDFLT value would be greater than the RETNMAX value, RETNDFLT will be set to RETNMAX.
5. When DSE is specified, an expired tape that is eligible for DSE processing will be unavailable until the security erase is performed or until the tape status is modified to reset the DSE-pending status.
6. The MAXTAPE value may be exceeded if events occur that cause volumes to be moved to the pool. Examples of these events are:
   - When a pool is deleted and a private pool is the target for the volumes from the deleted pool, the maximum tape value is not checked for the target pool.
   - When a tape is freed as a result of a TAPEMOD command or expiration date processing, and the tape resides in a pool that uses a free pool, the tape is moved to the free pool and the maximum tape value is not checked for the free pool.
   - When tapes are transferred via the POOLXFR or TAPEMOV command, the maximum tape value is not checked for the target pool.

   If the number of tapes in a pool meets or exceeds the pool maximum, any scratch mounts for the pool will fail unless they can be filled from the tapes within the pool. This is true even if tapes are available in the free pool of the tape pool for which the scratch mount was requested.
7. The EXECEPTID defaults to the pool owner only if the pool owner is an ID that is defined to the system; otherwise, the default will be NONE.
8. When a model pool is used with LIKE or LIKEU, the message ID's (EXCEPTID, MNTID1, and MNTID2) of the model pool will be used only if those ID's are defined to the system; otherwise, the default will be NONE.

Messages

The following table lists the messages generated by the POOLDEF command.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 52. POOLDEF messages

Message number	Message text	Return code
EUM0001E	Error reading <file> - RC <return code>.	26
EUM0002E	Unauthorized <text> from <reqID>.	20
EUM0005E	Invalid value - <val> - for <parm>.	24
EUM0007E	Error returned from <routine> - RC <return code>.	30
EUM0010I	<cmnd> message <reqnum> required from <userid>.	N/A
EUM0011E	Unknown command <req> in request <req#> from <reqID>.	16
EUM0020E	ID <user ID> is not defined to the system.	24
EUM0021E	Not authorized to define pool ID <pool>.	20
EUM0022E	Pool ID <pool> is not a valid pool name.	24
EUM0023E	Pool ID <pool> is a duplicate.	28
EUM0024E	Pool ID <pool> does not exist.	24
EUM0025E	Unexpected error condition.	30
EUM0026E	Logic error at <inst.> - RC <return code>.	1000

Table 52. POOLDEF messages (continued)

Message number	Message text	Return code
EUM0027E	Syntax error at <inst>.	2000
EUM0028E	Pool owner <owner> is not authorized for free pool <pool>.	20
EUM0030E	Parameter <parm> exceeds the <desc> maximum.	24
EUM0031E	Required parameter <parm> not specified.	24
EUM0032E	Invalid parameter <parm>.	24
EUM0033E	Not authorized to modify pool ID <pool>.	20
EUM0037E	Error <return code> locating file <file>.	26
EUM0038E	Error <return code> reading file <filename>.	26
EUM0039E	File <filename> cannot be processed due to a version mismatch.	26
EUM0040E	File <filename> cannot be processed due to a record type error.	26
EUM0041E	Invalid delimiter for <parm>.	24
EUM0043E	Invalid value <val> found in file <file>.	24
EUM0065E	Volume <vol> is not in the system inventory.	30
EUM0075E	Unexpected return code from <routine> - RC <return code>.	30
EUM0077E	Volume index error: INV=<invvol> VOL=<indxvol> IND=<indxnum>.	30
EUM0083I	<cmnd> request <reqnum> complete – RC <rc>.	N/A
EUM0084I	<cmnd> request <reqnum> error – RC <rc>.	N/A
EUM0125I	Volume <vol> in pool <pool> not in inventory.	30
EUM0156E	Invalid index entry for volume <vol>.	30
EUM0161I	Volume <vol> not processed - not in source pool.	N/A
EUM0171E	Error <return code> processing file <file>.	30
EUM0172E	Error <return code> writing file <file>.	26
EUM0176E	Index error processing <req#> request.	30
EUM0181I	Volume <vol> not processed - invalid index.	30
EUM0187E	Invalid file info passed for pool <pool>.	30
EUM0188I	File info is <text>.	N/A
EUM0190E	Free pool media <type> does not match pool media <type>.	24
EUM0205E	The FREEPOOL cannot be same as the pool ID.	24
EUM0221E	<type> request <req#> from <rqstID> was rejected by the installation exit processing.	20
EUM0329E	<msg>	N/A
EUM0349E	Request <req#> could not be processed by the installation command exit.	20
EUM0352E	<req> request <reqnum> from <rqstID> was rejected because the response from the installation command exit timed out.	20
EUM0373E	The <cmnd> command requires operations or admin authority.	20
EUM0392W	The used tape percentage in pool <powner pname> has reached <pct> percent of the tape <maximum/total>.	N/A
EUM0393W	The free count exceeds the tape count for pool <powner pname>.	N/A

Table 52. POOLDEF messages (continued)

Message number	Message text	Return code
EUM0395W	The tape count exceeds the tape maximum for pool <powner pname>.	N/A
EUM0396W	The <value> for pool <powner pname> is invalid.	N/A
EUM0402I	Tape pool <powner pname> has no tapes and no free pool.	N/A
EUM0403I	Tape pool <powner pname> has a maximum tape value of zero.	N/A
EUM0472W	Mount message ID <ID> for pool <pool> is not valid. The system mount message ID will be used if it is defined.	N/A
EUM0490E	Value <val> cannot be used for a pool owner.	24
EUM0496W	Exception ID <ID> for pool <pool> is not defined to the system.	N/A
EUM0517E	The system maximum for <parm> is <num> days.	24
EUM0518E	The pool maximum for <parm> is <num> days.	24
EUM0707E	The <parm> value must be a non-negative integer.	24
EUM0722E	<req> request <req#> could not be sent to node <name>.	26
EUM0734E	The <req> command was not accepted because catalog node <name> is quiesced.	20
EUM0735E	The <req> command was not accepted because local node <name> is quiesced.	20
EUM0736E	The <req> command was not accepted because Tape Manager is quiesced.	20
EUM0812E	The <req> command was not accepted because External Security Manager authorizations cannot be performed – RC <rc>.	20
EUM0817E	User <reqID> failed the External Security Manager check for the <req> command.	N/A
EUM0831E	Unable to authorize user <reqID> for <req> request <req#> – the details were logged.	20
EUM0852E	Unable to authorize user <userID> for free pool <pool>.	20

Return Codes

The following table lists the return codes for POOLDEF.

Table 53. POOLDEF Return codes

Return code	Description
0	Finished correctly
20	Unauthorized request
24	Bad PLIST
26	I/O Error
28	Duplicate pool ID
30	Unexpected error
1000	Termination I/O error
2000	Termination logic error
3000	Termination syntax error
4xxx	User interface error (See note below.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

POOLDEL

Use the POOLDEL command to delete a tape pool and expire the tapes within the pool. If the media type associated with the pool is category managed and specifies an expiration hold period, any freed volumes may not be eligible for scratch requests until the hold period has elapsed. The command is valid for a Tape Manager catalog, but not for an RMM catalog.

Shared Catalog Execution

The POOLDEL command can be entered on the catalog node or a request node. The command executes on the catalog node in all cases.

Authorization

The POOLDEL command requires administrative authority for the pool being deleted. Also refer to the following information:

- If "SYS" is specified for the target pool, Tape Manager Admins authority is required.
- If "FREE" is specified for the target pool, authority to perform the delete is sufficient.
- If a target pool is specified, TAPE authority for the target pool is required unless the requestor is the target pool's owner or has Admins authority.

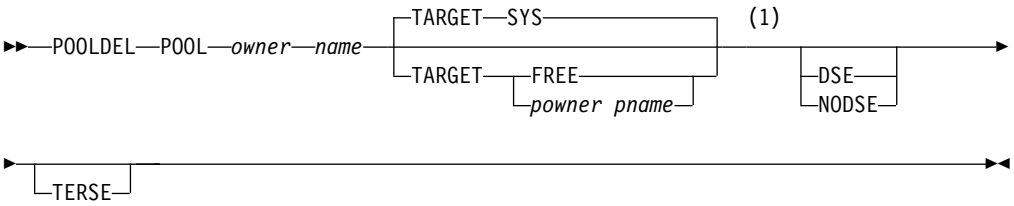
When an External Security Manager (ESM) is active, the authorities may be controlled by ESM profiles:

- When `Pool_Authority` is YES, pool administrator authority requires READ access to the pool administrator profile for the pool being deleted.
- When `Pool_Authority` is YES, TAPE authority for the target pool requires ALTER access to the pool volume profile of the target pool.
- When `Privileged_User_Authority` is YES, Tape Manager Admins authority requires READ access to the administrator profile.

For more details, refer to the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344).

Syntax

The next syntax diagram shows the POOLDEL command and its operands.



Notes:

1 The pool default applies if either the DSE or the NODSE operand is not specified.

Figure 15. Syntax diagram for POOLDEL command

Operands

The table below lists all of the operands you can use with the POOLDEL command.

Table 54. List of operands for POOLDEL command

Operand	Description
POOL *owner name*	Identifies the user ID that owns the pool and the name of the pool to be deleted.
TARGET SYS	Specifies that the tapes will be returned to the system free pool.
TARGET FREE	Specifies that the tapes will be returned to the free pool of the pool to be deleted. If no free pool is defined, an error will result.
TARGET *powner pname*	Specifies the name of the pool owner and the name of an existing pool that will receive the tapes of the deleted pool. The media type of both pools must be the same.
NODSE	Specifies that tapes from the deleted pool will not be flagged for Data Security Erase processing. If specified, NODSE overrides the pool default.
DSE	Specifies that tapes from the deleted pool will be flagged for Data Security Erase processing. If specified, DSE overrides the pool default.
TERSE	Suppresses the informational messages EUM0010I, EUM0074I, EUM0083I, EUM0084I, EUM0288I, and EUM0291I for the requestor.

Usage notes

When using the POOLDEL command, consider the following:

1. The delete command expires any tapes remaining in the pool. Use the POOLXFR command to transfer tapes between pools and preserve any expiration values.
2. If DSE or NODSE is specified, the related settings for the pool being deleted are ignored.

Messages

The following table lists the messages that may be generated by the POOLDEL command.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 55. POOLDEL messages

Message number	Message text	Return code
EUM0001E	Error reading <file> - RC <ic return code>.	26
EUM0002E	Unauthorized <text> request from <reqID>.	20
EUM0005E	Invalid value <value> for <parm>.	24
EUM0007E	Error returned from <routine> - RC <return code>.	30

Table 55. POOLDEL messages (continued)

Message number	Message text	Return code
EUM0010I	<cmd> message <reqnum> received from <userID>.	N/A
EUM0011E	Unknown command <req> in request <req#> from <reqID>.	16
EUM0022E	Pool ID <pool> is not a valid pool name.	24
EUM0024E	Pool ID <pool> does not exist	24
EUM0031E	Required parameter <parm> not specified.	24
EUM0032E	Invalid parameter <parm>.	24
EUM0037E	Error <return code> locating file <filename>.	26
EUM0038E	Error <return code> reading file <filename>.	26
EUM0039E	File <filename> cannot be processed due to a version mismatch.	26
EUM0040E	File <filename> cannot be processed due to a record type error.	26
EUM0041E	Invalid delimiter for <parm>.	24
EUM0043E	Invalid value <val> found in file <file>.	24
EUM0065E	Volume <vol> is not in the system inventory.	30
EUM0075E	Unexpected return code from <routine> - RC <return code>.	30
EUM0077E	Volume index error: INV=<invvol> VOL=<indxvol> IND=<indxnum>.	30
EUM0083I	<cmd> request <reqnum> complete - RC <return code>.	N/A
EUM0084I	<cmd> request <reqnum> error - RC <return code>.	N/A
EUM0125I	Volume <vol> in pool <pool> not in inventory.	30
EUM0146E	Source and target pool media types do not match.	24
EUM0148E	Source and target are the same pool.	24
EUM0150E	Keyword <kw1> is not valid with keyword <kw2>.	24
EUM0152E	Unexpected error <return code> processing POOLDEL request.	30
EUM0156E	Invalid index entry for volume <vol>.	30
EUM0161I	Volume <vol> not processed - not in source pool.	N/A
EUM0162I	Volume <vol> not processed - status USED is invalid for pool SYS.	N/A
EUM0163I	Volume <vol> not processed - EXTERNAL tape is invalid for pool SYS.	N/A
EUM0164I	Volume <vol> not processed - wrong media type for target pool.	N/A
EUM0165I	Volume <vol> not processed - in use.	N/A
EUM0166I	Source pool not deleted.	N/A
EUM0167I	Request completed with volume errors.	N/A
EUM0168E	Error erasing file <file>.	26
EUM0169I	No volumes found in source pool volume file.	N/A
EUM0170I	Pool <pool> has been deleted.	N/A
EUM0171E	Error <return code> processing file <file>.	30
EUM0172E	Error <return code> writing file <file>.	26
EUM0173E	Unauthorized request by <ID> for pool <pool>.	20
EUM0174E	Volume count is negative.	30

Table 55. POOLDEL messages (continued)

Message number	Message text	Return code
EUM0175E	Volume count is not numeric.	30
EUM0176E	Index error processing <req#> request.	30
EUM0178E	FREE was specified but the freepool does not exist.	24
EUM0179E	FREE was specified but the freepool is not a valid name.	24
EUM0180E	FREE was specified but no freepool is defined.	N/A
EUM0181I	Volume <vol> not processed - invalid index.	30
EUM0182I	Pool <pool> volume data has been deleted.	N/A
EUM0187E	Invalid file info passed for pool <pool>.	30
EUM0188I	File info is <text>.	N/A
EUM0221E	<type> request <req#> from <rqstID> was rejected by the installation exit processing.	20
EUM0329E	<msg>	N/A
EUM0349E	Request <req#> could not be processed by the installation command exit.	20
EUM0352E	<req> request <reqnum> from <rqstID> was rejected because the response from the installation command exit timed out.	20
EUM0373E	The <cmnd> command requires operations or admin authority.	20
EUM0392W	The used tape percentage in pool <powner pname> has reached <pct> percent of the tape <text>.	N/A
EUM0393W	The free count exceeds the tape count for pool <pool>.	N/A
EUM0395W	The tape count exceeds the tape maximum for pool <pool>.	N/A
EUM0396W	The <value> for pool <pool> is invalid.	N/A
EUM0402I	Tape pool <pool> has no tapes and no free pool.	N/A
EUM0403I	Tape pool <pool> has a maximum tape value of zero.	N/A
EUM0472W	Mount message ID <ID> for pool <pool> is not valid. The system mount message ID will be used if it is defined.	N/A
EUM0488I	<num> records processed.	N/A
EUM0490E	Value <val> cannot be used for a pool owner.	24
EUM0496W	Exception ID <ID> for pool <pool> is not defined to the system.	N/A
EUM0722E	<req> request <req#> could not be sent to node <name>.	26
EUM0734E	The <req> command was not accepted because catalog node <name> is quiesced.	20
EUM0735E	The <req> command was not accepted because local node <name> is quiesced.	20
EUM0736E	The <req> command was not accepted because Tape Manager is quiesced.	20
EUM0812E	The <req> command was not accepted because External Security Manager authorizations cannot be performed – RC <return code>.	20
EUM0817E	User <reqID> failed the External Security Manager check for the <req> command.	N/A
EUM0831E	Unable to authorize user <reqID> for <req> request <req#> – the details were logged.	20

Table 55. POOLDEL messages (continued)

Message number	Message text	Return code
EUM0935E	Event <event#> failed to set the category code for volume <vol> in library <libname> to <category> for request <req#>.	N/A
EUM0937E	Unable to verify that event <event#> set the category code for volume <vol> in library <libname> to <category> for request <req#>.	N/A
EUM0938E	Event <event#> failed to set the category code for volume <vol> in library <libname> to <cateogry> for <req#> because the volume was not in the library.	N/A
EUM0939E	An attempt to set the library category for volume <vol> to <category> failed when a message could not be sent to library server <server>.	N/A
EUM0940E	An attempt to set the library category for volume <vol> to <category> failed when a message could not be sent to library server <server> at node <name>.	N/A
EUM0941W	This is a severe error that should be reported to a Tape Manager Administrator immediately!	N/A
EUM0942E	An attempt to set the library category for volume <vol> to <category> failed because no library server was defined for library <libname>.	N/A
EUM0943E	An attempt to set the library category for volume <vol> to <value> failed because there is no local server for library <libname> and no remote server is on a node where a connection is available.	N/A
EUM0949E	VOLSTAT returned <return code> for an attempt to set the <field> to <value> for volume <vol>.	30
EUM0966I	A SETVOL attempt for request <event#> failed - RMS RC <return code> Rsn <reason>.	N/A

Return Codes

The following table lists the return codes for POOLDEL.

Table 56. POOLDEL Return codes

Return code	Description
0	Finished correctly
20	Unauthorized request
24	Bad PLIST
26	I/O Error
28	Volume error
30	Unexpected error
32	Device error
1000	I/O error
2000	Logic error
3000	Syntax error
4xxx	User interface error (See note below.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

POOLMOD

Use the POOLMOD command to modify the attributes of a private tape pool. The command is valid for a Tape Manager catalog, but not for an RMM catalog.

Shared Catalog Execution

The POOLMOD command can be entered on the catalog node or a request node. The command executes on the catalog node in all cases.

Authorization

The POOLMOD command requires administrative authority for the specified pool or Tape Manager Admins authority if MEDIA is specified. If an existing pool is specified for FREEPOOL, the owner of the pool being modified must have FREE authority to the free pool.

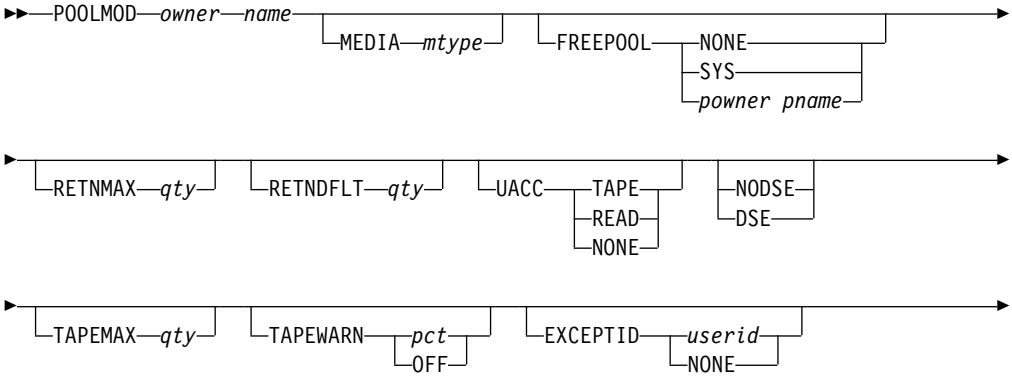
When an External Security Manager (ESM) is active, the authorization requirements may differ:

- Pool administrator requires READ access to the pool administrator profile for the pool being modified when `Pool_Authority` is YES.
- The ability to specify a private free pool is controlled by the free pool profile when `Pool_Authority` is YES. The user that issues the command (rather than the pool owner of the pool being defined) must have READ access to the free pool profile of the pool specified as the free pool.
- The ability to specify the system free pool is controlled by the system scratch profile when `System_Authority` is YES. The user that issues the command must have READ access to the system scratch profile.
- Tape Manager Admins authority requires READ access to the administrator profile when `Privileged_User_Authority` is YES.

For more details, refer to the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344).

Syntax

The next syntax diagram shows the POOLMOD command and its operands.



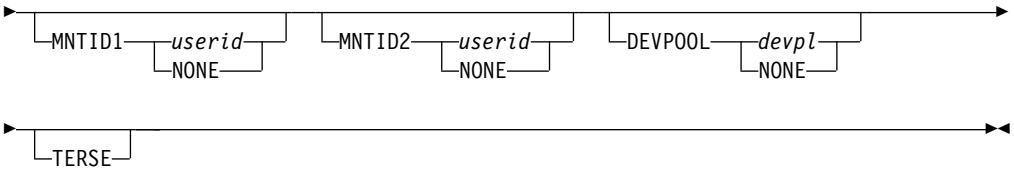


Figure 16. Syntax diagram for POOLMOD command

Operands

The table below lists all of the operands you can use with the POOLMOD command.

Table 57. List of operands for POOLMOD command

Operand	Description
owner	Specifies the ID that will own the new pool. The ID must be a valid CMS file name.
name	Identifies the name of the private pool.
MEDIA *mtype*	Identifies the media type that will be used for device compatibility checking. The media type, *mtype*, must be defined to the system.
FREEPOOL NONE	Specifies that the pool has no source of free tapes. Free tapes remain in the pool.
FREEPOOL SYS	Specifies that the pool can draw free tapes from the system free pool if access privileges permit. Free tapes return to the system free pool.
FREEPOOL *powner pname*	Specifies the name of a private pool to be used for free tapes. Free tapes return to the private pool.
RETNMAX *qty*	Lists a one- to five-digit integer for the maximum number of days that a tape in this pool should be retained.
RETNDFLT *qty*	Lists a one-to five-digit integer as the default for the number of days that a tape in this pool should be retained.
UACC TAPE	Sets the default access privilege to TAPE.
UACC READ	Sets the default access privilege to READ.
UACC NONE	Sets the default access privilege to NONE.
NODSE	Specifies that, by default, DSE (data security erase) processing is not required after a volume in this pool expires and before the volume is returned to scratch status.
DSE	Specifies that, by default, DSE (date security erase) processing is required after a volume in this pool expires and before the volume is returned to scratch status. It is the responsibility of the site to ensure that the DSE processing occurs and that the DSE flag is cleared once the DSE is completed. The TMDSE utility provided in Tape Manager for z/VM can be used to perform this processing and clear the flag. For more information on TMDSE, refer to “TMDSE” on page 179.
TAPEMAX *qty*	Lists a one- to six-digit integer for the maximum number of tapes that the pool can contain. Refer to “POOLDEF” on page 113 command and the POOLDEF “Usage notes” on page 116 for more information on the maximum number of tapes.

Table 57. List of operands for POOLMOD command (continued)

Operand	Description
TAPEWARN *pct*	Lists a one- to three-digit warning percentage for pool size. A warning is issued when the percentage of tapes in the pool, relative to the maximum allowed tapes in the pool, exceeds this value.
TAPEWARN OFF	Specifies that no tape warning message is to be issued for this pool.
EXCEPTID *userid*	Specifies a user ID to receive exception and warning messages for the pool in addition to the system administrator ID. When NONE is specified, no exception ID will be defined.
MNTID1 *userid*	Specifies an alternate user ID for messages normally sent to system mount ID one. When NONE is specified, mount ID one will not be defined.
MNTID2 *userid*	Specifies an alternate user ID for messages normally sent to system mount ID two. When NONE is specified, mount ID one will not be defined.
DEVPOOL *devp1*	Specifies the default device pool for this pool.
DEVPOOL NONE	Indicates that there is no default device pool for this pool.
TERSE	Suppresses the informational messages EUM0010I, EUM0074I, EUM0083I, EUM0084I, EUM0288I, and EUM0291I for the requestor.

Usage notes

When using the POOLMOD command, consider the following:

1. When a FREEPOOL is specified, requests may not be satisfied if they are prevented by configuration options, access restrictions, or a lack of free tapes in the scratch pool.
2. Refer to "POOLACC" on page 107 and "Pool access privileges" on page 107 for additional discussion on access privileges.
3. When DSE (data security erase) is specified, an expired tape that is eligible for DSE processing will be unavailable until the security erase is performed or until the tape status is modified to reset the DSE-pending status.
4. The free pool cannot be defined when the MEDIA type is changed because that would result in mismatched media types.
5. If the MEDIA type is changed and this pool is a free pool for another private pool, a scratch mount for the other pool will fail if it attempts to draw a free tape from this pool.
6. If message EUM0161I is generated when the MEDIA parameter is specified, there is an issue with the volume identified in the message. Specifically, this volume was listed in the pool volume file even though the system inventory indicated that the volume was not in the pool being modified. When this occurs, the operation proceeds, the corresponding volume record in the pool volume file is deleted, and the media type of the volume is not changed.

Messages

The following table lists the messages generated by the POOLMOD command.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 58. POOLMOD messages

Message number	Message text	Return code
EUM0001E	Error reading <file> - RC <return code>.	26
EUM0005E	Invalid value - <value> - for <parm>.	24
EUM0007E	Error returned from <routine> - RC <return code>.	30
EUM0010I	<cmd> message <reqnum> received from <userID>.	N/A
EUM0011E	Unknown command <req> in request <req#> from <reqID>.	16
EUM0020E	ID <user ID> is not defined to the system.	24
EUM0021E	Not authorized to define pool ID <pool ID>.	20
EUM0022E	Pool ID <pool> is not a valid pool name.	24
EUM0023E	Pool ID <pool> is a duplicate.	28
EUM0024E	Pool ID <pool> does not exist.	24
EUM0025E	Unexpected error condition.	30
EUM0026E	Logic error at <inst> - RC <return code>.	1000
EUM0027E	Syntax error at <inst>.	2000
EUM0028E	Pool owner <owner> is not authorized for free pool <pool>.	20
EUM0030E	Parameter <parm> exceeds the <desc> maximum.	24
EUM0031E	Required parameter <parm> not specified.	24
EUM0032E	Invalid parameter <parm>.	24
EUM0033E	Not authorized to modify pool ID <pool>.	20
EUM0037E	Error <return code> locating file <filename>.	26
EUM0038E	Error <return code> reading file <filename>.	26
EUM0039E	File <filename> cannot be processed due to a version mismatch.	26
EUM0040E	File <filename> cannot be processed due to a record type error.	26
EUM0041E	Invalid delimiter for <parm>.	24
EUM0043E	Invalid value <val> found in file <file>.	24
EUM0065E	Volume <vol> is not in the system inventory.	30
EUM0075E	Unexpected return code from <routine> - RC <return code>.	30
EUM0077E	Volume index error: INV=<invvol> VOL=<indxvol> IND=<indxval>.	30
EUM0083I	<cmd> request <reqnum> complete - RC <rc>.	N/A
EUM0084I	<cmd> request <reqnum> error - RC <rc>.	N/A
EUM0125I	Volume <vol> in pool <pool> not in inventory.	30
EUM0156E	Invalid index entry for volume <vol>.	30
EUM0161I	Volume <vol> not processed - not in source pool.	N/A
EUM0171E	Error <return code> processing file <file>.	30
EUM0172E	Error <return code> writing file <file>.	26
EUM0176E	Index error processing <req#> request.	30
EUM0181I	Volume <vol> not processed - invalid index.	N/A
EUM0187E	Invalid file info passed for pool <pool>.	30
EUM0188I	File info is <text>.	N/A

Table 58. POOLMOD messages (continued)

Message number	Message text	Return code
EUM0190E	Free pool media <type> does not match pool media <type>.	24
EUM0205E	The FREEPOOL cannot be the same as the pool ID.	24
EUM0221E	<type> request <req#> from <rqstID> was rejected by the installation exit processing.	20
EUM0329E	<msg>	N/A
EUM0349E	Request <req#> could not be processed by the installation command exit.	20
EUM0352E	<req> request <reqnum> from <rqstID> was rejected because the response from the installation command exit timed out.	20
EUM0373E	The <cmnd> command requires operations or admin authority.	N/A
EUM0392W	The used tape percentage in pool <powner pname> has reached <pct> percent of the tape <maximum/total>.	N/A
EUM0393W	The free count exceeds the tape count for pool <pool>.	N/A
EUM0395W	The tape count exceeds the tape maximum for pool <pool>.	N/A
EUM0396W	The <value> for pool <powner pname> is invalid.	N/A
EUM0402I	Tape pool <powner pname> has no tapes and no free pool.	N/A
EUM0403I	Tape pool <powner pname> has a maximum tape value of zero.	N/A
EUM0404E	The <parm> operand requires system administrator authority.	20
EUM0405I	Unable to change media type of volumes in pool <pool>.	N/A
EUM0406I	Pool tape count <cnt> does not match the number of pool volume records (<num>).	N/A
EUM0407I	Pools using this pool as a freepool may have a media mismatch if an attempt is made to draw a free tape from this pool.	N/A
EUM0472W	Mount message ID <ID> for pool <pool> is not valid. The system mount message ID will be used if it is defined.	N/A
EUM0490E	Value <val> cannot be used for a pool owner.	24
EUM0496W	Exception ID <ID> for pool <pool> is not defined to the system.	N/A
EUM0517E	The system maximum for <parm> is <num> days.	24
EUM0518E	The pool maximum for <parm> is <num> days.	24
EUM0707E	The <parm> value must be a non-negative integer.	24
EUM0722E	<req> request <req#> could not be sent to node <name>.	26
EUM0734E	The <req> command was not accepted because catalog node <name> is quiesced.	20
EUM0735E	The <req> command was not accepted because local node <name> is quiesced.	20
EUM0736E	The <req> command was not accepted because Tape Manager is quiesced.	20
EUM0812E	The <req> command was not accepted because External Security Manager authorizations cannot be performed – RC <rc>.	20
EUM0817E	User <reqID> failed the External Security Manager check for the <req> command.	N/A
EUM0831E	Unable to authorize user <reqID> for <req> request <req#> – the details were logged.	20

Table 58. POOLMOD messages (continued)

Message number	Message text	Return code
EUM0852E	Unable to authorize user <user> for free pool <pool>.	20

Return Codes

The following table lists the return codes for POOLMOD.

Table 59. POOLMOD Return codes

Return code	Description
0	Finished correctly
20	Unauthorized request
24	Bad PLIST
26	I/O Error
28	Duplicate pool ID
30	Unexpected error
1000	Termination I/O error
2000	Termination logic error
3000	Termination syntax error
4xxx	User interface error (See note below.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

POOLQRY

Use the POOLQRY command to query any of the following:

- the name or status of one of or more pools,
- the authorizations for the use of system scratch pools (POOL SYS SCRATCH), or
- the authorizations for pool definition (POOL SYS POOL).

The command is valid for a Tape Manager catalog, but not for an RMM catalog.

Shared Catalog Execution

The POOLQRY command can be entered on the catalog node or a request node. The command executes on the catalog in all cases.

Authorization

The POOLQRY command requires Tape Manager Admins authority if the SYS operand is specified for *owner*. Private pool queries require at least READ authority for the pool(s) specified. When SYSHLQ is specified, Tape Manager Admins authority is required unless the user ID of the requestor is also the high-level qualifier.

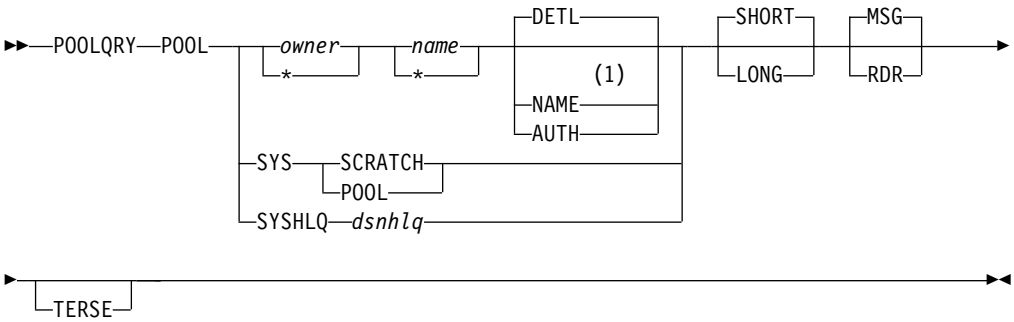
When an External Security Manager (ESM) is active, the authorities may be controlled by ESM profiles:

- When Pool_Authority is YES, the READ authority for a private pool requires at least READ access to the pool volume profiles for the pool(s) specified.
- When Pool_Authority is YES, pool administrator authority requires READ access to the pool administrator profile for the pool being deleted.
- When Privileged_User_Authority is YES, Tape Manager Admins authority requires READ access to the administrator profile.

For more details, refer to the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344).

Syntax

The next syntax diagram shows the POOLQRY command and its operands.



Notes:

1 The NAME parameter is valid only when an asterisk (*) is specified for the pool owner or the pool name.

Figure 17. Syntax diagram for POOLQRY command

Operands

The table below lists all of the operands you can use with the POOLQRY command.

Table 60. List of operands for POOLQRY command

Operand	Description
POOL	Identifies the name of the pool to be queried.
owner	Identifies the owner of the private pool. An asterisk (*) indicates any pool owner for system administrator requests; otherwise, an asterisk indicates the ID of the requestor.
name	Identifies the name of the private pool. An asterisk (*) indicates any pool name.
SYS SCRATCH	Requests the authorization list for the system scratch pool. Refer to "POOLACC" on page 107 for more information. This form is not valid when an External Security Manager is active and the System_Authority setting is YES.
SYS POOL	Requests the authorization list for pool definition authority. Refer to "POOLACC" on page 107 for more information. This form is not valid when an External Security Manager is active and the System_Authority setting is YES.

Table 60. List of operands for POOLQRY command (continued)

Operand	Description
SYSHLQ *dsnhlq*	Requests the authorization list for the data set name high-level qualifier (HLQ) specified by *dsnhlq*. Refer to "POOLACC" on page 107 for more information. The HLQ can be a complete HLQ or an abbreviation of an HLQ where one or more wild card characters are specified. Three special characters are provided: • Asterisk (*). The asterisk represents a character string of arbitrary length, including all characters that are valid in a data set name. • Percent sign (%). The percent sign represents any single character. • Pound sign (#). The pound sign represents a single numeric character. Note that when any of these characters are special to CP or CMS, an appropriate escape sequence must be entered on the command line for the character to be passed to Tape Manager. When a wild card character is specified and the requestor is not a system administrator, information will only be returned for qualifiers to which the requestor has access.
DETL	Specifies that detailed information is to be returned. This is the default.
NAME	Specifies that the name of the pool is the only status information returned.
AUTH	Specifies that the pool authorization information is to be returned. This form is not valid when an External Security Manager is active and the `Private_Pool_Authority` setting is `YES`.
MAN	Selects only volumes marked as manual library volumes.
ATL	Selects only volumes marked as ATL (automated tape library) library volumes.
SHORT	Selects the short format for detail output.
LONG	Selects the long format for detail output.
MSG	Indicates that the output will be returned as messages.
RDR	Indicates that the output will be returned as a reader file.
TERSE	Suppresses the informational messages EUM0010I, EUM0074I, EUM0083I, EUM0084I, EUM0288I, and EUM0291I for the requestor.

Usage notes

Review the notes listed under the syntax diagram. There are no additional usage considerations at this time.

Messages

The following table lists the messages generated by the POOLQRY command.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 61. POOLQRY messages

Message number	Message text	Return code
EUM0002E	Unauthorized POOLQRY request from <id>.	20
EUM0007E	Error returned from <routine> - RC <return code>.	30
EUM0010I	<cmd> message <reqnum> received from <userID>.	N/A
EUM0011E	Unknown command <req> in request <req#> from <reqID>.	16
EUM0031E	Required parameter <parm> not specified.	24
EUM0032E	Invalid parameter <parm>.	24
EUM0038E	Error <return code> reading file <filename>.	26
EUM0039E	File <filename> cannot be processed due to a version mismatch.	26
EUM0040E	File <filename> cannot be processed due to a record type error.	26
EUM0041E	Invalid delimiter for <parm>.	24
EUM0043E	Invalid value <val> found in file <file>.	24
EUM0052E	<text1> is not valid with <text2>.	24
EUM0083I	<cmd> request <reqnum> complete - RC <rc>.	N/A
EUM0084I	<cmd> request <reqnum> error - RC <rc>.	N/A
EUM0157E	Error <process> output - RC <return code>.	30
EUM0158E	Keyword <kwd> is invalid with <cond>.	24
EUM0159I	No pools found based on the pool specification.	N/A
EUM0173E	Unauthorized request by <ID> for pool <pool>.	20
EUM0221E	<type> request <req#> from <rqstID> was rejected by the installation exit processing.	20
EUM0329E	<msg>	N/A
EUM0349E	Request <req#> could not be processed by the installation command exit.	20
EUM0352E	<req> request <reqnum> from <rqstID> was rejected because the response from the installation command exit timed out.	20
EUM0373E	The <cmnd> command requires operations or admin authority.	N/A
EUM0472W	Mount message ID <ID> for pool <pool> is not valid. The system mount message ID will be used if it is defined.	N/A
EUM0496W	Exception ID <ID> for pool <pool> is not defined to the system.	N/A
EUM0850E	Unable to authorize user <user> for pool <pool>.	20
EUM0857E	An '*' can only be specified for the pool name by an administrator or when the pool owner is the same as the request ID.	N/A
EUM0865I	There are no authorized users for the requested function.	N/A

Return Codes

The following table lists the return codes for POOLQRY.

Table 62. POOLQRY Return codes

Return code	Description
0	Finished correctly

Table 62. POOLQRY Return codes (continued)

Return code	Description
20	Unauthorized request
24	Bad PLIST
26	I/O Error
28	Volume error
30	Unexpected error
32	Device error
1000	I/O error
2000	Logic error
3000	Syntax error
4xxx	User interface error (See note below.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

POOLXFR

Use the POOLXFR command to transfer all of the tapes from one pool to another and, optionally, to delete the original pool. The command is valid for a Tape Manager catalog, but not for an RMM catalog.

Shared Catalog Execution

The POOLXFR command can be entered on the catalog node or a request node. The command executes on the local node where the command is issued.

Authorization

The POOLXFR command requires Tape Manager Admins authority or the appropriate pool authority. TAPE authority is required for the target pool. If DELETE is specified as an operand when attempting to delete the source pool, pool administrator authority is required for the source pool; otherwise, TAPE authority is required for the source pool.

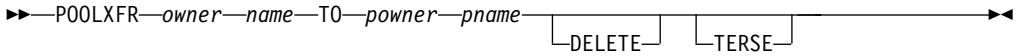
When an External Security Manager (ESM) is active, the authorities may be controlled by ESM profiles:

- When `Pool_Authority` is YES, pool administrator authority requires READ access to the pool administrator profile for the pool being deleted.
- When `Pool_Authority` is YES, TAPE authority for a private pool requires ALTER access to the pool volume profile of the private pool.
- When `Privileged_User_Authority` is YES, Tape Manager Admins authority requires READ access to the administrator profile.

For more details, refer to the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344).

Syntax

The syntax diagram below shows the POOLXFR command and its operands.



Operands

The table below lists all of the operands you can use with the POOLXFR command.

Table 63. List of operands for POOLXFR command

Operand	Description
owner name	Identifies the user ID that owns the pool from which the tapes will be transferred.
powner pname	Identifies the user ID of the owner and the name of the receiving pool.
DELETE	Specifies that the pool from which the tapes are transferred is to be deleted.
TERSE	Suppresses the informational messages EUM0010I, EUM0074I, EUM0083I, EUM0084I, EUM0288I, and EUM0291I for the requestor.

Usage notes

When using the POOLXFR command, consider the following:

1. Only the pool attribute of the tapes being transferred is changed. No other status change occurs.
2. To transfer all of the tapes from a private pool to the system pool, without deleting the private pool, use the TAPEMOD command as described below:
   a. Use the POOLMOD command to change the freepool of the private pool to SYS.
   b. Issue the TAPEMOD command specifying the private pool and STATUS FREE.

Messages

The following table lists the messages generated by the POOLXFR command.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 64. POOLXFR messages

Message number	Message text	Return code
EUM0001E	Error reading <file> - RC <return code>.	26
EUM0002E	Unauthorized <text> request from <reqID>.	20
EUM0007E	Error returned from <routine> - RC <return code>.	30
EUM0010I	<cmd> message <reqnum> received from <userID>.	N/A
EUM0011E	Unknown command <req> in request <req#> from <reqID>.	16
EUM0022E	Pool ID <pool> is not a valid pool name.	24
EUM0024E	Pool ID <pool> does not exist.	24

Table 64. POOLXFR messages (continued)

Message number	Message text	Return code
EUM0032E	Invalid parameter <parm>.	24
EUM0037E	Error <return code> locating file <filename>.	26
EUM0038E	Error <return code> reading file <filename>.	26
EUM0039E	File <filename> cannot be processed due to a version mismatch.	26
EUM0040E	File <filename> cannot be processed due to a record type error.	26
EUM0043E	Invalid value <val> found in file <file>.	24
EUM0052E	<parm> is not valid with <cmd>.	20
EUM0065E	Volume <vol ID> is not in the system inventory.	28
EUM0075E	Unexpected return code from <routine> - RC <return code>.	30
EUM0077E	Volume index error: INV=<invvol> VOL=<indxvol> IND=<indxnum>	30
EUM0083I	<cmd> request <reqnum> complete - RC <rc>.	N/A
EUM0084I	<cmd> request <reqnum> error - RC <rc>.	N/A
EUM0125I	Volume <vol> in pool <pool> not in inventory.	30
EUM0146E	Source and target pool media types do not match.	24
EUM0148E	Source and target are the same pool.	24
EUM0161I	Volume <vol> not processed - not in source pool.	N/A
EUM0162I	Volume <vol> not processed - status USED is invalid for target pool.	N/A
EUM0163I	Volume <vol> not processed - EXTERNAL tape is invalid for target pool.	N/A
EUM0164I	Volume <vol> not processed - wrong media type for target pool.	N/A
EUM0165I	Volume <vol> not processed - in use.	N/A
EUM0166I	Source pool not deleted.	N/A
EUM0167I	Request completed with volume errors.	N/A
EUM0168E	Error erasing file <file>.	30
EUM0169I	No volumes found in source pool volume file.	N/A
EUM0170I	Pool <pool> has been deleted.	N/A
EUM0171E	Error <return code> processing file <file>.	30
EUM0172E	Error <return code> writing file <file>.	26
EUM0173I	Unauthorized request by <user> for pool <pool>.	20
EUM0174I	Volume count is negative.	30
EUM0175E	Volume count is not numeric.	30
EUM0176E	Index error processing <req#> request.	30
EUM0181I	Volume <vol> not processed - invalid index.	N/A
EUM0187E	Invalid file info passed for pool <pool>.	30
EUM0188I	File info is <text>.	N/A
EUM0221E	<type> request <req#> from <rqstID> was rejected by the installation exit processing.	20
EUM0329E	<msg>	N/A

Table 64. POOLXFR messages (continued)

Message number	Message text	Return code
EUM0349E	Request <req#> could not be processed by the installation command exit.	20
EUM0352E	<req> request <reqnum> from <rqstID> was rejected because the response from the installation command exit timed out.	20
EUM0392W	The used tape percentage in pool <powner pname> has reached <pct> percent of the tape <maximum/total>.	N/A
EUM0393W	The free count exceeds the tape count for pool <powner pname>.	N/A
EUM0395W	The tape count exceeds the tape maximum for pool <powner pname>.	N/A
EUM0396W	The <value> for pool <powner pname> is invalid.	N/A
EUM0402I	Tape pool <powner pname> has no tapes and no free pool.	N/A
EUM0403I	Tape pool <powner pname> has a maximum tape value of zero.	N/A
EUM0472W	Mount message ID <ID> for pool <pool> is not valid. The system mount message ID will be used if it is defined.	N/A
EUM0618W	The data set associated with volume <vol> could not be updated with the new pool information.	N/A
EUM0722E	<req> request <req#> could not be sent to node <name>.	26
EUM0734E	The <req> command was not accepted because catalog node <name> is quiesced.	20
EUM0735E	The <req> command was not accepted because local node <name> is quiesced.	20
EUM0736E	The <req> command was not accepted because Tape Manager is quiesced.	20
EUM0812E	The <req> command was not accepted because External Security Manager authorizations cannot be performed – RC <rc>.	20
EUM0817E	User <reqID> failed the External Security Manager check for the <req> command.	N/A
EUM0831E	Unable to authorize user <reqID> for <req> request <req#> – the details were logged.	20
EUM0852E	Unable to authorize user <user> for free pool <pool>.	20

Return Codes

The following table lists the return codes for POOLXFR.

Table 65. POOLXFR Return codes

Return code	Description
0	Finished correctly
4	One or more volumes not moved
20	Unauthorized request
24	Bad PLIST
26	I/O Error
28	Volume error
30	Unexpected error

Table 65. POOLXFR Return codes (continued)

Return code	Description
32	Device error
1000	I/O error
2000	Logic error
3000	Syntax error
4xxx	User interface error (See note below.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

Chapter 4. Administrative commands

This chapter describes administrative commands you may find useful and their syntax. Tape Manager provides a program, referred to as *TAPCMD*, to help with the processing of commands. When using administrative commands, you must start each command with "TAPCMD" as shown in the example below:

```
TAPCMD CMDAUTH cmdauth_parms, etc.
```

The TAPCMD program runs in the user's virtual machine and performs a variety of processes, such as translating a file mode (i.e., file mode A) to a virtual address, before sending the command to Tape Manager. When entering a tape command, remember to begin all commands with *TAPCMD*.

CMDAUTH

Use the CMDAUTH command to add a list of user IDs to the system administrator list or the operations list. The command is valid for Tape Manager or RMM catalogs.

Shared Catalog Execution

The CMDAUTH command can be entered on the catalog node or a request node. The command executes on the local node where the command is issued.

Authorization

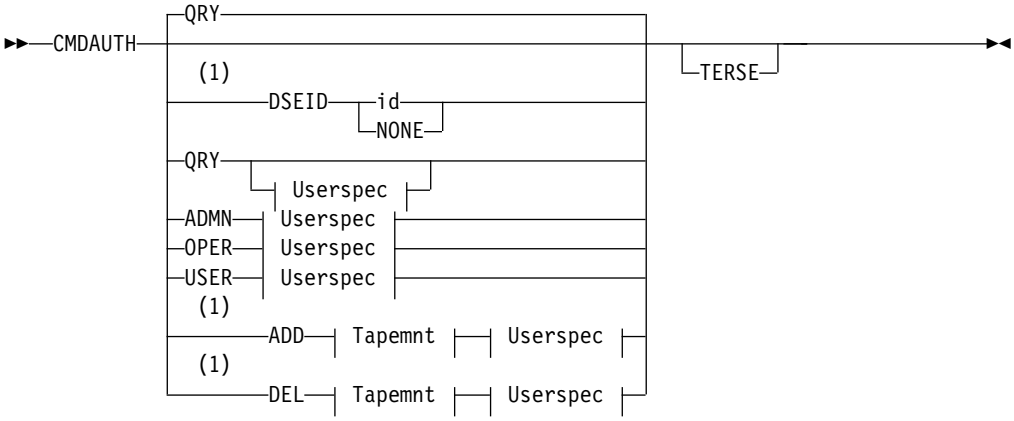
To use the CMDAUTH command, you must have Tape Manager Admins authority.

When an External Security Manager (ESM) is active, the authorization requirements may be controlled by ESM profiles. When `Privileged_User_Authority` is YES, Tape Manager Admins authority requires READ access to the administrator profile.

Refer to the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for more details.

Syntax

The following diagram shows the CMDAUTH syntax:



Userspec:

Tapemnt:

Notes:

1 The operand is not valid for request nodes.

2 The default virtual address of the MDISK for the file is 191. See the help for TAPCMD for additional information pertaining to the virtual address or file mode when the FILE operand is specified.

Figure 18. CMDAUTH Syntax

Operands

The table below describes the CMDAUTH operands.

Table 66. List of operands for CMDAUTH command

Operand	Description
DSEID *id*	Specifies the ID authorized for the Data Security Erase (DSE) utility TMDSE. This ID does not require administrative authority. The DSE ID is permitted to perform all of the functions that are required to process any expired tape that is flagged for DSE. In a Shared Catalog environment, this operand is only valid on the catalog node.
QRY	Lists the CMDAUTH user authorities for all users.
QRY *userlist*	Lists the CMDAUTH user authorities for the list of users.
QRY FILE *fname ftype*	Lists the CMDAUTH user authorities for the users specified in the file where *fname* is the CMS file name and *ftype* is the CMS file type.
ADMN *userlist*	Grants system administrator authority to a list of user IDs. This operand is not valid if External Security is active and the `Privileged_User_Authority` setting is YES.
OPER *userlist*	Grants operations authority to a list of user IDs. This operand is not valid if External Security is active and the `Privileged_User_Authority` setting is YES.
USER *userlist*	Resets the list of IDs to general user authority. This operand is not valid if External Security is active and the `Privileged_User_Authority` setting is YES.
userlist	Contains a list of user IDs to which you want to grant or reset authority.

Table 66. List of operands for CMDAUTH command (continued)

Operand	Description
FILE *fname ftype*	Specifies a file that contains the list of user IDs where *fname* is the CMS file name and *ftype* is the CMS file type. This file exists on an accessed disk of the requestor. When the FILE operand is specified, the file can contain multiple records. Each record in the file can contain multiple, space-delimited user IDs. You can use the FM or VADDR option of the TAPCMD command to specify the location of the file.
ADD TAPEMNT NL	Adds the list of users to the exempt list for the use of LABEL NL on the TAPEMNT command.
ADD TAPEMNT BLP	Adds the list of users to the exempt list for the use of LABEL BLP on the TAPEMNT command.
ADD TAPEMNT EJECT	Permits the use of the EJECT operand on the TAPEMNT command by the list of users.
ADD TAPEMNT ALL	Adds the list of users to the exempt list for the use of LABEL NL and LABEL BLP on the TAPEMNT command. Also authorizes the list of users to use the EJECT parameter on the TAPEMNT command to eject a tape from an ATL.
DEL TAPEMNT NL	Deletes the list of users from the exempt list for the use of LABEL NL on the TAPEMNT command.
DEL TAPEMNT BLP	Deletes the list of users from the exempt list for the use of LABEL BLP on the TAPEMNT command.
DEL TAPEMNT EJECT	Prevents the use of the EJECT operand on the TAPEMNT command by the list of users.
DEL TAPEMNT ALL	Performs delete processing for the list of users for TAPEMNT NL, BLP, and EJECT permissions.
TERSE	Suppresses the informational messages EUM0010I, EUM0074I, EUM0083I, EUM0084I, EUM0288I, and EUM0291I for the requestor.

Usage notes

When using the CMDAUTH command, consider the following:

1. If no ID list is entered, the command returns a list of administrative and operations IDs, the DSEID (if any), and a list of ID's that have been granted privileges for specific commands, such as TAPEMNT.
2. Administrative ID's can shut down the system and have broad authority. Operator ID's have system administrator authority only for the following commands: TAPEDEV TAPELIB TAPEREQ TAPEQRY.
3. When Tape Manager is running with nodes defined, the CMDAUTH command is executed only on the local node and only affects the authority of users on the node where the command is issued. When modifying an authority, care should be taken to modify the authority on all of the appropriate nodes.

Messages

The following table lists the messages generated by CMDAUTH.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 67. CMDAUTH messages

Message number	Message text	Return code
EUM0002E	Unauthorized <text> from <reqID>.	20
EUM0007E	Error returned from <routine> - RC <return code>.	30
EUM0010I	<cmd> message <reqnum> received from <userID>.	N/A
EUM0011E	Unknown command <req> in request <req#> from <reqID>.	16
EUM0012E	Invalid null parameter for <parm>.	24
EUM0017E	Error sending SMSG to <ID> - RC <return code>.	30
EUM0031E	Required parameter <parm> not specified.	24
EUM0032E	Invalid parameter <parm>.	24
EUM0034E	Error <return code> linking <mdsk>.	34
EUM0035E	Authorization error <return code> linking <mdsk>.	34
EUM0036E	Error <return code> accessing <vaddr>.	34
EUM0037E	Error <return code> locating file <file name>.	26
EUM0038E	Error <return code> reading file <file name>.	26
EUM0041E	Invalid delimiter for <parm>.	24
EUM0042E	No values found in file <file name>.	24
EUM0043E	Invalid value <val> found in file <file>.	24
EUM0075E	Unexpected return code from <routine> - RC <return code>.	30
EUM0080E	Invalid value <val1> detected for <val2>.	30
EUM0083I	<cmd> request <reqnum> complete - RC <rc>.	N/A
EUM0084I	<cmd> request <reqnum> error - RC <rc>.	N/A
EUM0134E	Unauthorized <type> request by <ID>.	20
EUM0157E	Error <action> output - RC <return code>.	30
EUM0172E	Error <return code> writing file <file>.	26
EUM0215E	Invalid value <val> for the <parm> parameter.	24
EUM0221E	<type> request <req#> from <rqstID> was rejected by the installation exit processing.	20
EUM0246E	The CMDAUTH command requires system administrator authority.	20
EUM0329E	<msg>	N/A
EUM0340W	ID <ID> is not defined to the system.	4
EUM0341I	ID <ID> authority is <auth>.	N/A
EUM0349E	Request <req#> could not be processed by the installation command exit.	20
EUM0352E	<req> request <reqnum> from <rqstID> was rejected because the response from the installation command exit timed out.	20
EUM0373E	The <cmd> command requires operations or admin authority.	20
EUM0427W	The changes were not saved permanently.	N/A
EUM0435I	The use of <val> is not permitted.	N/A
EUM0436I	The use of <val> is permitted for <type> users.	N/A
EUM0437I	The default setting for <val1> is <val2> and exception checking is <val3>.	N/A

Table 67. CMDAUTH messages (continued)

Message number	Message text	Return code
EUM0466I	No disk has been defined for the retention of <auth type> authorizations.	N/A
EUM0497I	The <type> ID is <desc>.	N/A
EUM0601E	The FILE parameter requires a file name and file type.	24
EUM0722E	<req> request <req#> could not be sent to node <name>.	26
EUM0734E	The <req> command was not accepted because catalog node <name> is quiesced.	20
EUM0735E	The <req> command was not accepted because local node <name> is quiesced.	N/A
EUM0736E	The <req> command was not accepted because Tape Manager is quiesced.	20
EUM0812E	The <req> command was not accepted because External Security Manager authorizations cannot be performed - RC <rc>.	20
EUM0817E	User <reqID> failed the External Security Manager check for the <req> command.	N/A
EUM0831E	Unable to authorize user <reqID> for <req> request <req#> - the details were logged.	20
EUM0888W	User ID <UserID> is not defined on the catalog node but has been accepted.	4

Return codes

The following table contains the return codes for CMDAUTH.

Table 68. Return codes

Return code	Description
0	Successful completion
4	Warning issued
24	Bad PLIST
26	I/O Error
30	Unexpected error
34	MDISK link error
36	RMM command failure
1000	I/O error
2000	Logic error
3000	Syntax error
4xxx	User interface error (See note below.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

CMDEXIT

Use the CMDEXIT command to enable or disable the exit when it is in place and to set command exit values when a command exit service machine is used. The command is valid for Tape Manager or RMM catalogs.

Shared Catalog Execution

The CMDEXIT command can be entered on the catalog node or a request node. The command executes on the local node where the command is issued.

Authorization

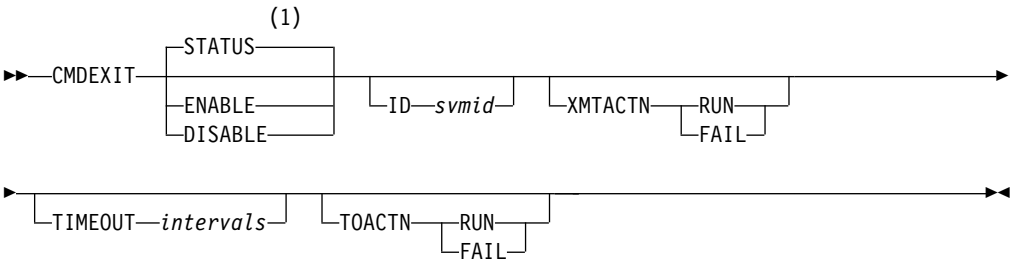
To use the CMDEXIT command, you must have Tape Manager Admins authority.

When an External Security Manager (ESM) is active, the authorization requirements may be controlled by ESM profiles. When `Privileged_User_Authority` is YES, Tape Manager Admins authority requires READ access to the administrator profile.

Refer to the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for more details.

Syntax

The next diagram shows the CMDEXIT syntax.



Notes:

1 No other parameters are valid when STATUS is specified or is the default.

Figure 19. CMDEXIT Syntax

Operands

The table below describes the CMDEXIT operands.

Table 69. List of operands for CMDEXIT command

Operand	Description
STATUS	Displays the command exit status.
ENABLE	Enables the command exit.
DISABLE	Disables the command exit.

Table 69. List of operands for CMDEXIT command (continued)

Operand	Description
ID *svmid*	Identifies the name of the command exit service machine. If the TMM ID is specified, the command exit processing occurs within the TMM assuming it is enabled and the EUMCMD EXEC is available on the TMM.
XMTACTN RUN	Specifies that a command is to be run as submitted when the transmit of the command to the command exit service machine fails.
XMTACTN FAIL	Specifies that a command is to be failed when the transmit of the command to the command exit service machine fails.
TIMEOUT *intvls*	Identifies the timeout value, which is the number of 10-second intervals that Tape Manager must wait for a command exit response when a command exit service machine is implemented.
TOACTN RUN	Indicates that a command is to be run as submitted if the response from the command exit service machines times out.
TOACTN FAIL	Specifies that a command is to be rejected if the response from the command exit service machine times out.

Usage notes

When using the CMDEXIT command, consider the following:

1. The CMDEXIT command is not passed to the command exit process.
2. A command exit EXEC named EUMCMD can be located on either the Tape Manager service machine (TMM) or the command exit service machine (CMM). If the exit is on the CMM, the Tape Manager commands can be issued from within the exit as needed to determine the disposition of a user command.

Messages

The following table lists the messages generated by CMDEXIT.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 70. CMDEXIT messages

Message number	Message text	Return code
EUM0002E	Unauthorized <text> from <reqID>.	20
EUM0007E	Error returned from <routine> - RC <return code>.	30
EUM0010I	<cmnd> message <reqnum> received from <user ID>.	N/A
EUM0011E	Unknown command <req> in request <req#> from <reqID>.	16
EUM0020E	ID <ID> is not defined to the system.	24
EUM0031E	Required parameter <parm> not specified.	24
EUM0032E	Invalid parameter <parm>.	24
EUM0041E	Invalid delimiter for <parm>.	24
EUM0083I	<cmnd> request <reqnum> complete - RC <return code>.	
EUM0084I	<cmnd> request <reqnum> error - RC <return code>.	
EUM0215E	Invalid value <val> for the <parm> parameter.	24
EUM0221E	<type> request <req#> from <rqstID> was rejected by the installation exit processing.	20

Table 70. CMDEXIT messages (continued)

Message number	Message text	Return code
EUM0329E	<msg>	N/A
EUM0337I	Command exit server <srvr> is <status>.	N/A
EUM0338I	Command exit EUMCMD was <status1> and is <status2>.	N/A
EUM0349E	Request <req#> could not be processed by the installation command exit.	20
EUM0352E	<req> request <reqnum> from <rqstID> was rejected because the response from the installation command exit timed out.	20
EUM0356I	Command exit transmit error action is <actn>.	N/A
EUM0357I	Command exit timeout is <val> seconds and timeout action is <actn>.	N/A
EUM0358I	Command exit subcommand timeout configuration value is <val>.	N/A
EUM0812E	The <req> command was not accepted because External Security Manager authorizations cannot be performed - RC <rc>.	20
EUM0817E	User <reqID> failed the External Security Manager check for the <req> command.	N/A
EUM0831E	Unable to authorize user <reqID> for <req> request <req#> - the details were logged.	20

Return codes

The following table contains the return codes for CMDEXIT.

Table 71. Return codes

Return code	Description
0	Finished correctly
20	Unauthorized request
24	Bad PLIST
30	Unexpected error
1000	I/O error
2000	Logic error
3000	Syntax error
4xxx	User interface error (See note below.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

CNFGSET

Use the CNFGSET command to display or alter specific configuration settings while Tape Manager is running. Administrators can use the command to temporarily modify the settings. Changes to the settings are activated when the command is processed, but the settings resort to the values in the Tape Manager configuration file when Tape Manager is restarted.

Modification of the configuration settings should be performed cautiously after the related documentation has been reviewed. Refer to the *IBM Tape Manager for z/VM Installation and Administration Guide* (publication SC18–9344) for detailed information on the specific configuration settings.

The command is valid for Tape Manager or RMM catalogs.

Shared Catalog Execution

The CNFGSET command can be entered on the catalog node or a request node. The command executes on the local node where the command is issued.

Authorization

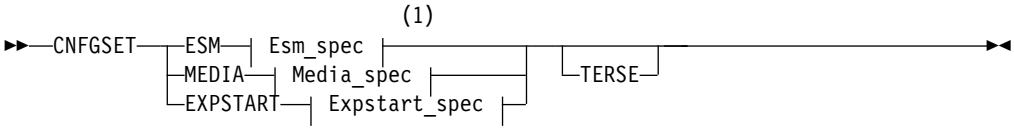
To use the CNFGSET command, you must have Tape Manager Admins authority to modify the configuration settings. The settings can be displayed with either Tape Manager Admins or Operations authority.

When an External Security Manager (ESM) is active, the authorization requirements may be controlled by ESM profiles:

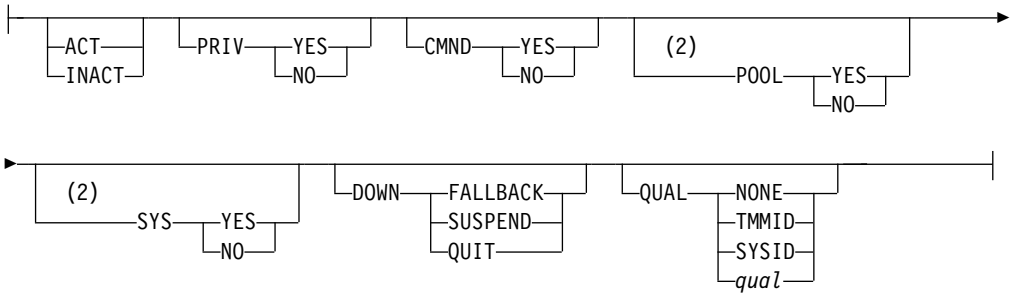
- When `Privileged_User_Authority` is YES, Tape Manager Operations authority requires READ access to the operator profile.
- When `Privileged_User_Authority` is YES, Tape Manager Admins authority requires READ access to the administrator profile.

For more details, refer to the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344).

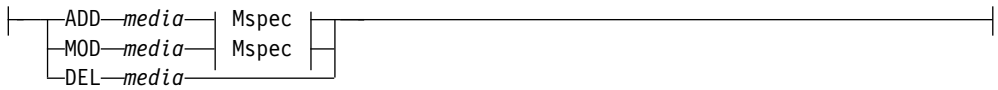
Syntax



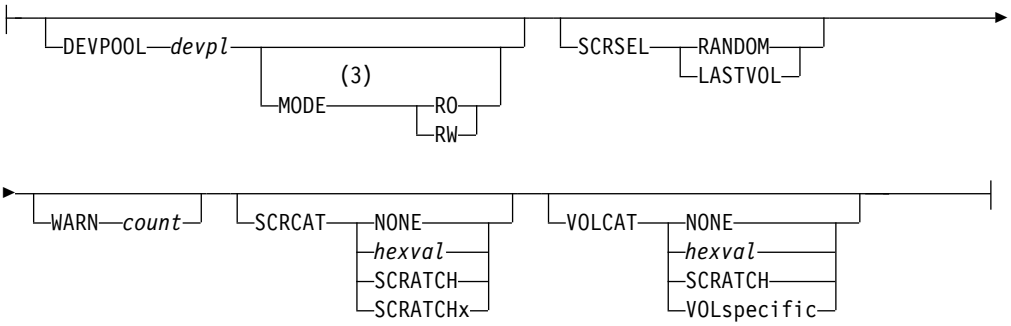
Esm_spec:



Media_spec:



Mspec:



Expstart_spec:

Notes:

1 If a keyword parameter is specified with no operands, the current settings are displayed for that parameter. The MEDIA parameter is not valid for a request node.

2 The POOL and SYS operands are not valid for a request node or when running with an RMM catalog.

3 The MODE keyword is not valid when DEVPOOL is specified with MEDIA DEL. The MODE defaults to RW when DEVPOOL is specified with MOD or ADD.

ESM operands

The table below lists all of the operands you can use with the CNFGSET ESM command. Unless otherwise stated, be sure to include "ESM" in front of these operands, such as ESM ACT, ESM ADMN YES, and so on.

Table 72. List of operands for CNFGSET ESM command

Operand	Description
ESM	If you use only "ESM" without any other parameters, this operand displays the External Security Manager settings.
ACT	Sets the configuration setting for External_Security_Manager to YES. See the “Usage notes” on page 152 for precautions.
INACT	Sets the configuration setting for External_Security_Manager to NO. See the “Usage notes” on page 152 for precautions.
PRIV YES	Sets the ESM configuration setting for Privileged_User_Authority to YES. See the “Usage notes” on page 152 for precautions.
PRIV NO	Sets the ESM configuration setting for Privileged_User_Authority to NO. See the “Usage notes” on page 152 for precautions.
CMND YES	Sets the ESM configuration setting for Command_Authority to YES.
CMND NO	Sets the ESM configuration setting for Command_Authority to NO.

Table 72. List of operands for CNFGSET ESM command (continued)

Operand	Description
POOL YES	Sets the ESM configuration setting for Pool_Authority to YES.
POOL NO	Sets the ESM configuration setting for Pool_Authority to NO.
SYS YES	Sets the ESM configuration setting for System_Authority to YES.
SYS NO	Sets the ESM configuration setting for System_Authority to NO.
DOWN FALLBACK | SUSPEND | QUIT	Sets the ESM configuration setting for ESM_Unavailable to the specified value.
QUAL NONE | SYSID | TMMID | *qual*	Sets the ESM configuration setting for Extended_Profile_Qualifier to the specified value. If a literal value is specified for *qual* it must be eight characters or less and alphanumeric. See the "Usage notes" on page 152 for precautions.

MEDIA operands

The table below lists all of the operands you can use with the CNFGSET MEDIA command. Unless otherwise stated, be sure to include "MEDIA" in front of these operands, such as MEDIA ADD *media*, MEDIA DEVPOOL, MEDIA MODE RW, and so on.

Table 73. List of operands for CNFGSET MEDIA command

Operand	Description
MEDIA	Displays the current information for all media types if no additional parameters are supplied.
MEDIA *media*	Displays the current information for the specified media type if no additional parameters are supplied.
ADD *media*	For a new media definition, creates a new media definition for the running instance of Tape Manager. For an existing media type, when DEVPOOL is also specified, creates a relationship between the media type and the device pool.
DEL *media*	For existing media definition, deletes an existing media definition from the running instance of Tape Manager. When DEVPOOL is also specified, removes the relationship between the media type and the device pool but leaves the media definition in place.
MOD *media*	Modifies the WARN, SCRSEL, device pool MODE, SCRCAT, or VOLCAT values of an existing media type for the running instance of Tape Manager. When DEVPOOL is specified, the MODE value is modified when a relationship for the device pool already exists. The device pool relationship is created and the MODE value is set when DEVPOOL is specified and there is not a previously existing relationship between the media type and the device pool.

Table 73. List of operands for CNFGSET MEDIA command (continued)

Operand	Description
DEVPOOL	Specifies a device pool. • For an ADD request, the device pool is associated with the new media type. • For a DEL request, drops the association of the device pool with an existing media type, but does not delete the media definition. • For a MOD request, modifies the access mode and/or the warn limit of an existing media and device pool combination.
MODE RW	Indicates the device pool can be used for read-write or read-only mounts.
MODE RO	Indicates the device pool can be used only for read-only mounts. If a media type is associated with both a read-only device pool and a read-write device pool, the read-only device pool takes precedence when an attempt is made to allocate a device for a read-only mount.
SCRSEL RANDOM	When mounting a scratch tape, Tape Manager picks a volume randomly from the pool of eligible scratch volumes. This option is the default and strongly recommended for real volumes. It is also suitable for virtual volumes when the SCRSEL LASTVOL explanation does not suggest otherwise. Use of this option is particularly recommended when defining category managed media types with a fast-ready scratch category.
SCRSEL LASTVOL	When mounting a scratch tape, Tape Manager uses the last volume in the chain of eligible scratch volumes when selecting a scratch volume. When Tape Manager is started, volume chains of eligible scratch VOLSERs are ordered in an ascending manner and volumes are added to the end of the chain as they become eligible scratch volumes, typically as a result of expiration processing. Because this process always selects the last volume on the chain, it is not recommended for real volumes since it can result in lower-ordered volumes being unused while higher-ordered volumes are circulated. For virtual volumes, however, the circulation of a smaller number of volumes might be desirable to reduce the number of volumes that are ultimately flushed from cache.
SCRCAT NONE	No category processing is to be performed. See the Define_Media statement in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344).
SCRCAT *hexvalue*	Specifies a four-character hexadecimal value. See the "Define_Media" statement in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for additional information.

Table 73. List of operands for CNFGSET MEDIA command (continued)

Operand	Description
SCRCAT SCRATCH	Specifies that SCRATCH will be used for the target category See the "Define_Media" statement in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for additional information.
SCRCAT SCRATCH*x*	Specifies that the target category will be SCRATCH*x*, where "*x*" is a single hexadecimal value. See the "Define_Media" statement in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for additional information.
VOLCAT NONE	No category processing is to be performed. See the Define_Media statement in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344).
VOLCAT *hexvalue*	Specifies a four-character hexadecimal value. See the "Define_Media" statement in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for additional information.
VOLCAT VOLspecific	Specifies that the target category will be VOLSPECIFIC. See the "Define_Media" statement in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344) for additional information.
WARN *count*	Specifies the warning threshold for this media type in the system free pool. If the number of eligible scratch volumes in the system free pool of this media type drops below this count, a warning will be issued when the checking is performed as part of the hourly processing. Note that held volumes and external volumes do not count as eligible scratch volumes.
TERSE	Suppresses the informational messages EUM0010I, EUM0074I, EUM0083I, EUM0084I, EUM0288I and EUM0291I for the requestor.

EXPSTART operands

The table below lists the operands (including a null operand) that you can use with CNFGSET EXPSTART. Be sure to include “EXPSTART” in front of these operands, such as `EXPSTART hh:mm:ss.`

Table 74. List of operands for CNFGSET EXPSTART command

Operand	Description
null	When the EXPSTART keyword parameter is specified with no operand, the command returns the current start time for expiration processing and the date and time when the expiration process was last performed.

Table 74. List of operands for CNFGSET EXPSTART command (continued)

Operand	Description
hh:mm:ss	When the EXPSTART keyword parameter specifies a time value in a 24-hour format (hh:mm:ss), the command sets the time at which expiration processing will start. • The value `hh` is 00 to 23. • The value `mm` is 00 to 59. • The value `ss` is 00 to 59. The new start time will remain in effect until it is changed again or until Tape Manager is restarted. When Tape Manager is restarted the start time will revert to the value specified in the Tape Manager configuration file. **Note:** The EXPSTART command can be used to start expiration processing "on demand" without modifying the value of the current expiration start time. Refer to “EXPSTART” on page 154 for more information.

Usage notes

When using the CFNGSET command, consider the following items:

1. Before ESM ACT is specified, it is recommended that the appropriate ESM commands be used to determine the users that will have administrator authority when the ESM is active and, if necessary, to grant administrator authority to ensure the ability to modify the configuration settings once the ESM is active.
2. Before ESM INACT is specified, be aware that only administrators who are defined in the active configuration file will have administrator authority. It may be necessary for those administrators to manage Tape Manager authorization settings once the ESM is inactive. Refer to the CMDAUTH, POOLACC, and POOLQRY commands for additional information on Tape Manager authorization settings.
3. If the ESM is being used for administrator authorization, before ESM QUAL is specified, it is recommended that the appropriate ESM commands be used to determine the users that will have administrator authority when the new setting is activated. If necessary, grant administrator authority using the administrator profile that will be in effect after the command is processed, to ensure the ability to modify the configuration settings once the new qualifier is activated.
4. If PRIV YES is specified, ensure that the appropriate ID's have access to the ESM administrator and operations profiles that will be in effect once the command is processed.
5. If PRIV NO is specified, be aware that only administrators and operations ID's that are defined as such in the active configuration file will have privileged authority.

Messages

The following table lists the messages generated by the CNFGSET command.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 75. CNFGSET messages

Message number	Message text	Return code
EUM0002E	Unauthorized <text> from <reqID>.	20
EUM0007E	Error returned from <routine> -- RC <return code>.	30
EUM0010I	<req> message <req#> received from <reqID>.	
EUM0011E	Unknown command <req> in request <req#> from <reqID>.	16
EUM0012E	Invalid null parameter for <parm>.	24
EUM0031E	Required parameter <parm> not specified.	24
EUM0032E	Invalid parameter <parm>.	24
EUM0046E	The length of <parm> exceeds the maximum of <max>.	24
EUM0052E	<operand> is not valid with <parm>.	24
EUM0075E	Unexpected return code from <routine> - RC <return code>.	30
EUM0084I	<cmnd> request <reqnum> error - RC <rc>.	N/A
EUM0093I	Device pool <devpool> is not configured.	N/A
EUM0134E	Unauthorized <command name> request by <requestor ID>.	20
EUM0136E	The <parm> value must be <text>.	24
EUM0157E	Error <action> output - RC <return code>.	30
EUM0215E	Invalid value <value> for the <keyword> parameter.	24
EUM0221E	<type> request <req#> from <rqstID> was rejected by the installation exit processing.	20
EUM0329E	<msg>	N/A
EUM0333E	The <parm1> parameter is not valid with the <parm2> parameter.	24
EUM0349E	Request <req#> could not be processed by the installation command exit.	20
EUM0352E	<req> request <reqnum> from <rqstID> was rejected because the response from the installation command exit timed out.	20
EUM0368E	Device pool <devpool> is not defined.	24
EUM0373E	The <cmd> command requires operations or admin authority.	20
EUM0722E	<req> request <req#> could not be sent to node <name>.	26
EUM0734E	The <req> command was not accepted because catalog node <name> is quiesced.	20
EUM0735E	The <req> command was not accepted because local node <name> is quiesced.	N/A
EUM0736E	The <req> command was not accepted because Tape Manager is quiesced.	20
EUM0776E	Invalid null value for the <parm> parameter.	24
EUM0801E	A null value is not valid for the <parm> parameter.	24
EUM0812E	The <req> command was not accepted because External Security Manager authorizations cannot be performed - RC <rc>.	20

Table 75. CNFGSET messages (continued)

Message number	Message text	Return code
EUM0817E	User <reqID> failed the External Security Manager check for the <req> command.	N/A
EUM0825I	The <name> setting has been set to <val>.	N/A
EUM0829E	<auth> authority is required to modify a <type> setting.	20
EUM0830I	The configuration file was not changed.	N/A
EUM0831E	Unable to authorize user <reqID> for <req> request <req#> - the details were logged.	20
EUM0833E	Media type <media> is not defined.	24
EUM0834E	The <parm1> parameter is not valid unless the <parm2> parameter is specified.	24
EUM0835E	The <media> media type is not associated with the <devpool> device pool.	24
EUM0836E	The <parm> parameter is not valid for a <type> node.	24
EUM0910W	The extraneous parameter - <parm> - was ignored.	4
EUM0911E	The format of the <parm> parameter must be <format>.	24
EUM0932E	If <parm1> is <value> then <parm2> must also be <value>.	24
EUM0965E	The <parm> parameter is not valid with an RMM catalog.	

Return codes

The following table lists the return codes for CNFGSET ESM.

Table 76. CNFGSET ESM return codes

Return code	Description
0	Finished correctly
4	Warning issued
20	Unauthorized request
24	Bad PLIST
26	I/O error
34	Link/access error
1000	I/O error
2000	Logic error
3000	Syntax error
4xxx	User interface error (See note below.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

EXPSTART

Use the EXPSTART command to initiate expiration processing. The command does not alter the current EXPSTART time. See the"CNFGSET" on page 146 command for information on changing the EXPSTART configuration value.

Shared Catalog Execution

The EXPSTART command can be entered on the catalog node or a request node. The command executes on the catalog node where the expiration processing is performed.

Authorization

To use the EXPSTART command, you must have either Tape Manager Admins or Operations authority.

When an External Security Manager (ESM) is active, the authorities may be controlled by ESM profiles:

- When `Privileged_User_Authority` is YES, Tape Manager Operations authority requires READ access to the operator profile.
- When `Privileged_User_Authority` is YES, Tape Manager Admins authority requires READ access to the administrator profile.

For more details, refer to the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344).

Syntax

The following diagram shows the syntax for the EXPSTART command.

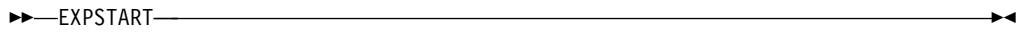


Figure 20. Syntax for EXPSTART commands

Usage notes

When using the EXPSTART command, consider the following items:

1. Depending on the size of the catalog and other performance factors, the expiration processing can run for an extended time. Other Tape Manager functions will not be performed when the expiration processing is occurring so care should be taken when using the command. A review of the Tape Manager log can provide some information about the typical length of expiration processing, but that time might not be representative of the process duration at other times of the day.
2. When expiration processing runs automatically as part of the daily cycle, a reader file that contains a log of the process is sent the ID that is configured as the Administration Message Console ID or, if that ID is not configured, the log is sent to the TMM ID. However, when the EXPSTART command is used, the log file will be sent to the user ID that issued the command. If the command was issued from a request node, the log will be transmitted to the issuing ID on the request node via the Tape Manager communications link.
3. If message EUM0007E is returned, review the TMM log to determine the reason for the failure.

Messages

The following table lists the messages generated by EXPSTART.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 77. EXPSTART messages

Message number	Message text	Return code
EUM0007E	Error returned from <routine> - RC <return code>.	30
EUM0373E	The <cmd> command requires operations or admin authority.	20
EUM0722E	<req> request <req#> could not be sent to node <name>.	26
EUM0910W	The extraneous parameter - <parm> - was ignored.	4

Return codes

The following table contains the return codes for EXPSTART.

Table 78. Return codes

Return code	Description
0	Successful completion
4	Warning issued
20	Unauthorized request
1000	I/O error
2000	Logic error
3000	Syntax error
4xxx	User interface error (See note below.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

NODECMD

The NODECMD provides several subcommands that perform different functions. The RESUME and QUIESCE forms of the command are valid for a dedicated or shared Tape Manager catalog or an RMM catalog. Other forms of the NODECMD command are only valid for a shared Tape Manager catalog.

Shared Catalog Execution

The NODECMD command can be entered on the catalog node or a request node. The command executes on the local node where the command is issued. The DEF operand is not permitted on a request node.

Subcommands

Several subcommands are available for NODECMD. These commands are described below.

QRY The QRY subcommand can be used to request information for any of the nodes that are defined to Tape Manager. If a local node is not defined, the subcommand will indicate only the Tape Manager quiesce status.

START
The START subcommand can be used to start the local node or a remote node. START will cause the status of the node to be changed to ENABLED.

- If START is issued for the *local* node, Tape Manager will set the state of the local node to ENABLED and attempt to initiate a sign-on to any remote nodes that are in an ENABLED state.
- If START is issued for a *remote* node, the state of the remote node will be set to ENABLED and a sign-on attempt will be performed for the remote node.

STOP The STOP subcommand can be used to stop the local node or a remote node. STOP will cause the status of the node to be changed to DISABLED.

- If STOP is issued for the *local* node, Tape Manager will attempt to terminate any active sessions with remote nodes.
- If STOP is issued for a *remote* node, the session for that node will be terminated and the state of the remote node will be set to DISABLED.

QUIESCE
The QUIESCE subcommand can be used whether or not a local node is defined. In either case, the use of QUIESCE will restrict commands to only users with operations or administrative authority. If the local node is a catalog node, QUIESCE will also cause Tape Manager to reject any requests from remote nodes, even if the remote request ID is defined as an administrator or operator on the local node.

The QUIESCE subcommand does not stop any sessions with remote nodes. If the local node is a catalog node, requests from remote request nodes will be rejected and a message will be sent to the requestor at the request node, indicating that the catalog node is quiesced.

RESUME
The RESUME subcommand can be used whether or not a local node is defined. In either case, the use of RESUME will allow commands from all users. If the local node is defined, RESUME will also allow requests from any remote request nodes that are STARTED.

DEF The DEF subcommand can be used to define a remote request node on the catalog node. It is recommended that node definitions be contained in the Tape Manager configuration file and that the use of DEF be restricted to adding temporary definitions of request nodes on a catalog node. When a node is defined with the DEF subcommand, the definition is temporary and the node cannot be deleted. Only the request nodes that are defined in the catalog node configuration file will be defined if the catalog node is restarted.

MOD The MOD subcommand can be used to temporarily modify some of the settings associated with a node. A node cannot be renamed and the node type cannot be changed with the MOD command. Changes made by the MOD subcommand, but not reflected in the Tape Manager configuration file, will be lost if Tape Manager is restarted.

Authorization

To use the NODECMD command, you must have authority appropriate for the subcommand you are using. Refer to the list below:

- The QRY subcommand can be used by the general user, but the sign-on password will be displayed only if the requestor has Tape Manager Admins authority.

- The QUIESCE, RESUME, STOP, and START subcommands require either Tape Manager Operations or Admins authority.
- The DEF and MOD subcommands require Tape Manager Admins authority.

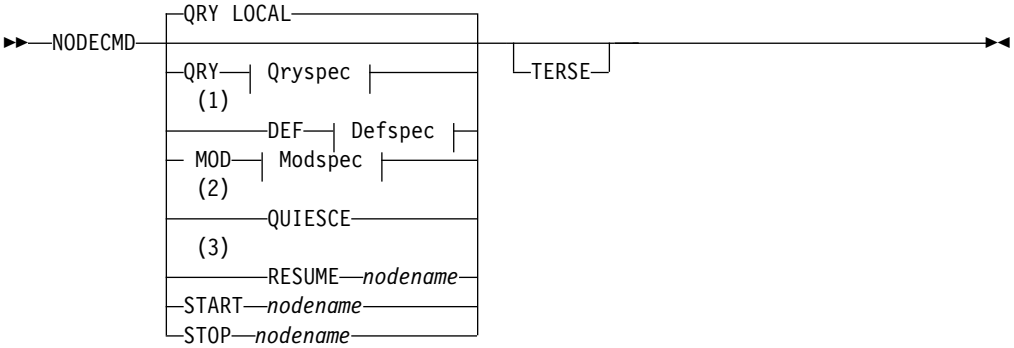
When as External Security Manager (ESM) is active, the authorities may be controlled by ESM profiles:

- When `Privileged_User_Authority` is `YES`, Tape Manager Operations authority requires READ access to the operator profile.
- When `Privileged_User_Authority` is `YES`, Tape Manager Admins authority requires READ access to the administrator profile.

For more details, refer to the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344).

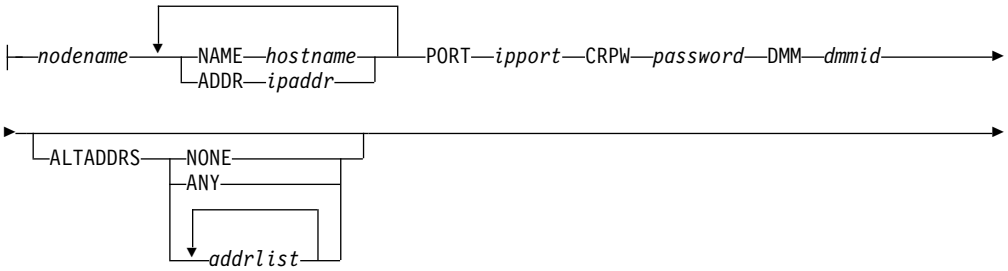
Syntax

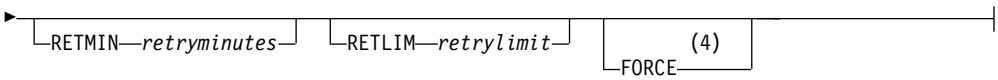
The next diagram shows the NODECMD syntax.



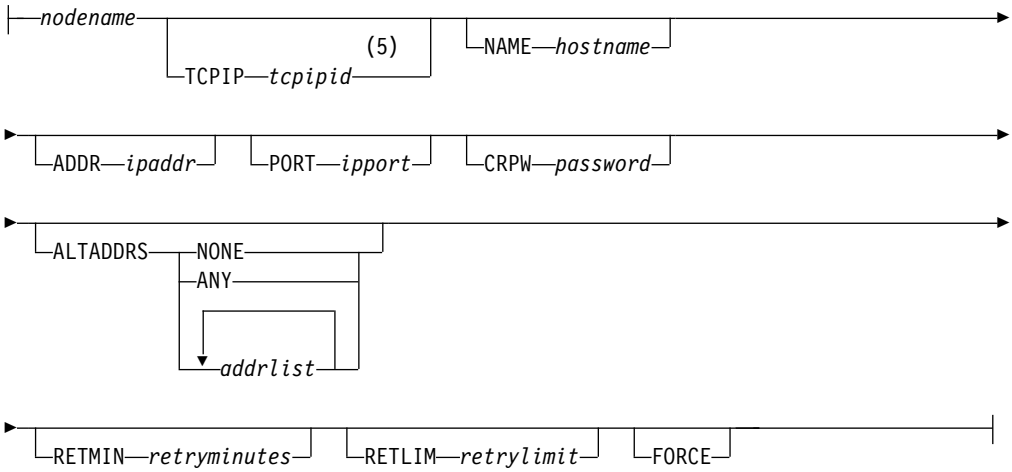
Qryspec:

Defspec:





Modspec:



Notes:

1 The DEF (define) operand can only be used to define a remote request node on the catalog node.

2 The QUIESCE operand will inhibit any commands except those issued by an administrator. When issued on a catalog node, QUIESCE will also inhibit requests from any request nodes that are started. The operand can be used when no nodes are defined, in which case either a Tape Manager dedicated catalog or an RMM catalog implementation is required. The operand can also be used when nodes are defined in a Tape Manager shared catalog implementation.

3 The RESUME operand will allow commands from general users. The operand can be used with configurations where no nodes are defined, either a Tape Manager dedicated catalog or an RMM catalog, . The operand can also be used when nodes are defined in a Tape Manager shared catalog implementation.

4 The FORCE keyword parameter is valid only when DEF or MOD is specified and at least one of ADDR or NAME or PORT is specified.

5 The TCPIP operand is only valid for the local node.

Figure 21. Syntax diagram for NODECMD command

Operands

The NODECMD operands are described in the table below.

Table 79. List of operands for NODECMD command

Operand	Description
QRY LOCAL	Returns information for the local node.

Table 79. List of operands for NODECMD command (continued)

Operand	Description
QRY ALL	Returns information for the local node and remote nodes.
QRY *nodename*	Returns information for the node specified by *nodename*.
nodename	Specifies the node name for a remote request node definition.
TCPIP *tcpipid*	Specifies the name of the TCP/IP machine for the local node.
NAME *hostname*	Specifies a host name for the node. If a host name is resolved, the resolved value will be used rather than the value of the **Host_Addr** parameter, if that parameter is also specified. The **Host_Name** parameter is optional, but either the **Host_Name** or the **Host_Addr** value must be specified.
ADDR *ipaddr*	Specifies the IPVR address of the remote node. • If both the host name and the host address are specified, the host address will be used only if the host name cannot be resolved. • For a remote node, if neither the host address nor the address resolved for the Host_Name value matches the address where the remote node is running, a connection from the node may still be established, depending on the value of the **Host_Altaddrs** parameter. • A host address of `0.0.0.0` indicates that the local default IP address will be used. Normally, the local default is used for the local node, but it will be accepted when specified for a remote node.
PORT *ipport*	Specifies the IP port number of the node. For a remote node, the port number must match the port number specified in the **Define_Local_Node** statement in the configuration file on the remote node.
FORCE	Specifies that a host name or address is to be accepted, even though it is a duplicate of the address and port combination of another node. It is recommended that the duplicate address and port combination be resolved immediately by modifying the information for the conflicting node.
CRPW *password*	Specifies a challenge response password that is used to authenticate messages between nodes. The password can be up to 64 characters, but it cannot contain spaces.
DMM *dmmid*	Specifies the name of the DMM machine on the remote request node.
ALTADDRS NONE	Specifies that connection requests from the remote node must be from the addresses that were specified or resolved from the **Host_Addr** and **Host_Name** keywords. This is the default behavior when the **Host_AltAddrs** keyword is not specified.
ALTADDRS ANY	Specifies that connection requests from the remote node can originate from any IPV4 address. A sign-on request from an alternate IP address requires a correct response to the sign-on prompt. If a correct response is received, the local node will attempt to establish a session to the remote node at the alternate connection address. The local node will not attempt to connect to an alternate address unless the remote node first attempts to connect from that address.

Table 79. List of operands for NODECMD command (continued)

Operand	Description
ALTADDRS	Specifies a list of host names and/or addresses from which the remote node can connect, in addition to the host name and/or address specified by the **Host_Addr** and **Host_Name** parameters. Either host names or addresses can be specified in the list. • An address of 0.0.0.0 indicates that the local default IP address will be used. Normally, the local default is used for the local node, but it will be accepted when specified for a remote node. • Anything in the list that is not a valid IPV4 address will be treated as a host name that needs to be resolved. • A sign-on request from an alternate address requires a correct response to the sign-on prompt. If a correct response is received, the local node will attempt to establish a session to the remote node at the alternate connection address. The local node will not attempt to connect to an alternate address unless the remote node first attempts to connect from that address.
RETMIN *retryminutes*	Specifies minutes between retries. • For the *local* node, the operand specifies the minutes between attempts to initialize the TCP/IP environment. • For a *remote* node, the operand specifies the minutes between attempts to sign-on to the remote node.
RETLIM *retrylimit*	Specifies maximum retry count. • For the *local* node, the operand specifies the maximum retry attempts to initialize the TCP/IP environment. • For a *remote* node, the operand specifies the maximum retry attempts to sign-on to the remote node. Once the retry count is exceeded, the remote node state will be "ENABLED" and the status will be "STOPPED". The "ENABLED" state will allow inbound connection requests from the remote node to be accepted.
START *nodename*	Starts the specified node.
STOP *nodename*	Stops the specified node.
TERSE	Suppresses the informational messages EUM0010I, EUM0074I, EUM0083I, EUM0084I, EUM0288I, and EUM0291I for the requestor.

Usage notes

A subset of the NODECMD subcommands are available when a local node has not been defined. In that case, the subcommands are limited to the following:

QRY Reports whether the TMM ID is active or quiesced. When the status is "active," commands are accepted from all users. When the status is "quiesced," commands are only accepted from administrators.

QUIESCE
An administrator command that sets the TMM to accept only administrative commands.

RESUME
An administrator command that sets the TMM to accept commands from all users.

Messages

The table below lists the messages generated by NODECMD.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 80. NODECMD messages

Message number	Message text	Return code
EUM0002E	Unauthorized <text> from <reqID>.	20
EUM0007E	Error returned from <routine> - RC <return code>.	30
EUM0010I	<cmd> message <reqnum> received from <userID>.	N/A
EUM0011E	Unknown command <req> in request <req#> from <reqID>.	16
EUM0012E	Invalid null parameter for <opr>.	24
EUM0020E	ID <id> is not defined to the system.	24
EUM0031E	Required parameter <opr> not specified.	24
EUM0032E	Invalid parameter <parm>.	24
EUM0046E	The length of <parm> exceeds the maximum of <max>.	24
EUM0083I	<cmd> request <reqnum> complete - RC <rc>.	N/A
EUM0084I	<cmd> request <reqnum> error - RC <rc>.	N/A
EUM0215E	Invalid value - <val> - for the <opr> parameter.	24
EUM0221E	<type> request <req#> from <rqstID> was rejected by the installation exit processing.	20
EUM0246E	The <cmd> command requires system administrator authority.	20
EUM0329E	<msg>	N/A
EUM0349E	Request <req#> could not be processed by the installation command exit.	20
EUM0352E	<req> request <reqnum> from <rqstID> was rejected because the response from the installation command exit timed out.	20
EUM0373E	The <cmd> command requires operations or admin authority.	20
EUM0640E	<val> is not a valid <desc>.	24
EUM0648I	Host name <name> resolved to <addr>.	N/A
EUM0649W	Host name <name> could not be resolved. Node <node> will use the specified host address <addr>.	N/A
EUM0651E	Node name <node> is a duplicate node name.	24
EUM0653E	The host address and port combination for node <node> is a duplicate.	24
EUM0665E	A request node cannot have multiple remote nodes configured.	24
EUM0666E	The local node is a <type> node so the node type of remote node <node> must be <type>.	24
EUM0675E	The host name for node <node> could not be resolved and no address was provided.	24
EUM0699E	The <opr> operand can have at most <num> parameters.	24
EUM0707E	The <opr> value must be a non-negative integer.	N/A
EUM0722E	<req> request <req#> could not be sent to node <name>.	26

Table 80. NODECMD messages (continued)

Message number	Message text	Return code
EUM0725E	Node support is not active because a local node has not been defined.	20
EUM0726E	The <opr> parameter exceeds the maximum value of <val>.	24
EUM0732E	Node <name> is not defined.	24
EUM0734E	The <req> command was not accepted because catalog node <name> is quiesced.	20
EUM0735E	The <req> command was not accepted because local node <name> is quiesced.	N/A
EUM0736E	The <req> command was not accepted because Tape Manager is quiesced.	20
EUM0757E	Either <op1> or <op2> must be specified.	24
EUM0812E	The <req> command was not accepted because External Security Manager authorizations cannot be performed - RC <rc>.	20
EUM0817E	User <reqID> failed the External Security Manager check for the <req> command.	N/A
EUM0831E	Unable to authorize user <reqID> for <req> request <req#> - the details were logged.	20
EUM0871E	Node <node> must be stopped before it can be started.	26

Return codes

The following table contains the return codes for NODECMD.

Table 81. Return codes

Return code	Description
0	Successful completion
4	Warning issued
20	Unauthorized request
24	Bad PLIST
26	I/O Error
30	Unexpected error
34	MDISK link error
36	RMM command failure
1000	I/O error
2000	Logic error
3000	Syntax error
4xxx	User interface error (See note below.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

QUIT/EXIT/STOP

Use either the QUIT, EXIT, or STOP command to shut down the Tape Manager system, including the service machines. The machines will be logged off.

The command is valid for Tape Manager or RMM catalogs.

Shared Catalog Execution

The QUIT, EXIT, and STOP commands can be entered on the catalog node or a request node. The command executes on the local node where the command is issued.

Authorization

To use the QUIT, EXIT, or STOP command, you must have Tape Manager Admins authority.

When an External Security Manager (ESM) is active, the authorization requirements may be controlled by ESM profiles. When `Privileged_User_Authority` is YES, then Tape Manager Admins authority requires READ access to the administrator profile.

Refer to the *IBM Tape Manager for z/VM Installation and Administration Guide* for more details.

Syntax

The following diagram shows the syntax for the QUIT, EXIT, and STOP commands.

Figure 22. Syntax for QUIT, EXIT, and STOP commands

Operands

The table below describes the operands for the QUIT, EXIT, and STOP commands.

Table 82. List of operands for QUIT, EXIT, and STOP commands

Operand	Description
ONLY	Specifies that only the TMM machine is to be logged off.

Usage notes

Note the following usage considerations:

1. A mount request is normally considered complete when the drive that was attached for the mount request is returned. To create a chain of multi-volume mounts, issue the TAPEEOV command before detaching the drive and before the next tape mount is issued. The data set name and request number must be the same as those associated with the first mount request in the chain.

2. The same DSN and PREREQ values must be supplied on subsequent TAPEMNT commands in order for the volumes to be chained.

Messages

The following table lists the messages generated by QUIT, EXIT, or STOP.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 83. QUIT, EXIT, and STOP messages

Message number	Message text	Return code
EUM0010I	<cmnd> message <reqnum> received from <user ID>.	N/A
EUM0011E	Unknown command <req> in request <req#> from <reqID>.	16
EUM0189I	<req> requested by <reqID> - shutting down.	N/A
EUM0221E	<type> request <req#> from <rqstID> was rejected by the installation exit processing.	20
EUM0329E	<msg>	N/A
EUM0349E	Request <req#> could not be processed by the installation command exit.	20
EUM0352E	<req> request <reqnum> from <rqstID> was rejected because the response from the installation command exit timed out.	20
EUM0812E	The <req> command was not accepted because External Security Manager authorizations cannot be performed - RC <rc>.	20
EUM0817E	User <reqID> failed the External Security Manager check for the <req> command.	N/A
EUM0831E	Unable to authorize user <reqID> for <req> request <req#> - the details were logged.	20

Return codes

The next table contains the return codes for the QUIT, EXIT, and STOP commands.

Table 84. Return codes

Return code	Description
0	Finished correctly
24	Bad PLIST
30	Unexpected error
36	RMM command failure
1000	I/O error
2000	Logic error
3000	Syntax error
4xxx	User interface error (See note below.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

STATUS

Use the STATUS command to request status information from the TMM machine. Administrative IDs that are defined in the configuration file, or are added to that list via CMDAUTH, can use the "CP SMSG" command to request status from the Library Manager Machine (LMM) or the Device Manager Machine (DMM). Examples combining the STATUS command with the CP SMSG command are shown below:

```
CP SMSG TMDMM STATUS
CP SMSG TMLM1 STATUS
```

The STATUS command is valid for Tape Manager and RMM catalogs.

Shared Catalog Execution

The STATUS command can be entered on the catalog node or a request node. The command executes on the local node where the command is issued.

Authorization

To use STATUS, you must have Tape Manager Admins or Operations authority. In a dedicated Tape Manager catalog or RMM environment, only users with administrator or operations authority (as defined in the configuration file) or users added by the CMDAUTH command are authorized to send SMSG STATUS commands directly to the device management and library management machines. This restriction applies regardless of any External Security Manager (ESM) settings.

In a Shared Catalog environment, only the administrators and operators defined in the catalog node configuration file are permitted to send SMSG status commands directly to the device management and library management machines on the catalog and request nodes, because those machines are managed by the TMM on the catalog node. This restriction applies regardless of any ESM settings.

When an External Security Manager (ESM) is active, the authorities may be controlled by ESM profiles:

- When `Privileged_User_Authority` is YES, Tape Manager Operations authority requires READ access to the operator profile.
- When `Privileged_User_Authority` is YES, Tape Manager Admins authority requires READ access to the administrator profile.

Refer to the *IBM Tape Manager for z/VM Installation and Administration Guide* for more details.

Syntax

The next diagram shows the syntax for the STATUS command.

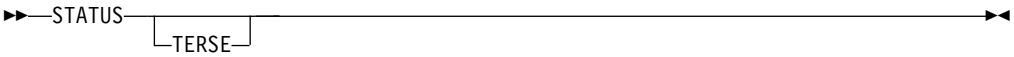


Figure 23. Syntax for STATUS command

Operands

The table below describes the only operand for the STATUS command.

Table 85. Operand for STATUS command

Operand	Description
TERSE	Suppresses the informational messages EUM0010I, EUM0074I, EUM0083I, EUM0084I, EUM0288I, and EUM0291I for the requestor.

Usage notes

There are no usage notes for the STATUS command at this time.

Messages

The following table lists the messages generated by the STATUS command.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 86. STATUS message

Message number	Message text	Return code
EUM0002E	Unauthorized <text> from <reqID>.	20
EUM0007E	Error returned from <routine> - RC <return code>.	30
EUM0010I	<cmnd> message <reqnum> received from <user ID>.	N/A
EUM0011E	Unknown command <req> in request <req#> from <reqID>.	16
EUM0032E	Invalid parameter <parm>.	24
EUM0083I	<cmnd> request <reqnum> complete - RC <return code>.	
EUM0084I	<cmnd> request <reqnum> error - RC <return code>.	
EUM0157E	Error <action> output - RC <return code>.	30
EUM0215E	Invalid value <value> for the <parm> parameter.	24
EUM0221E	<type> request <req#> from <rqstID> was rejected by the installation exit processing.	20
EUM0329E	<msg>	N/A
EUM0349E	Request <req#> could not be processed by the installation command exit.	20
EUM0352E	<req> request <reqnum> from <rqstID> was rejected because the response from the installation command exit timed out.	20
EUM0373E	The <cmnd> command requires operations or admin authority.	20
EUM0722E	<req> request <req#> could not be sent to node <name>.	26
EUM0734E	The <req> command was not accepted because catalog node <name> is quiesced.	20
EUM0735E	The <req> command was not accepted because local node <name> is quiesced.	N/A
EUM0736E	The <req> command was not accepted because Tape Manager is quiesced.	20
EUM0812E	The <req> command was not accepted because External Security Manager authorizations cannot be performed - RC <rc>.	20

Table 86. STATUS message (continued)

Message number	Message text	Return code
EUM0817E	User <reqID> failed the External Security Manager check for the <req> command.	N/A
EUM0831E	Unable to authorize user <reqID> for <req> request <req#> - the details were logged.	20

Return codes

The following table contains the return codes for the STATUS command.

Table 87. Return codes

Return code	Description
0	Successful completion
20	Unauthorized list
24	Bad PLIST
30	Unexpected error
1000	I/O error
2000	Logic error
3000	Syntax error
4xxx	User interface error (See note below.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

TAPESUM

Use the TAPESUM command to produce an inventory summary report by media type. This command is valid for a Tape Manager catalog, but not for an RMM catalog.

Shared Catalog Execution

The TAPESUM command can be entered on the catalog node or a request node. The command executes on the catalog node where the processing is performed.

Authorization

The TAPESUM command requires either Tape Manager Admins or Operations authority.

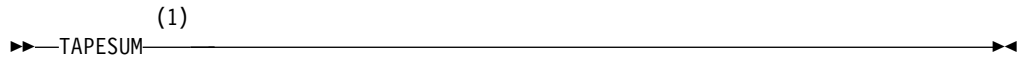
When an External Security Manager (ESM) is active, the authorization requirements may be controlled by ESM profiles:

- When `Privileged_User_Authority` is YES, Tape Manager Operations authority requires READ access to the operator profile.
- When `Privileged_User_Authority` is YES, Tape Manager Admins authority requires READ access to the administrator profile.

For more details, refer to the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344).

Syntax

The next diagram shows the TAPESUM syntax.



Notes:

1 There are no parameters for the TAPESUM command. Any parameters that are entered will be ignored.

Figure 24. Syntax diagram for TAPESUM command

Usage notes

When using the TAPESUM command, consider the following:

1. The following information is reported for each pool by media type:

   Scr Vols
   The number of eligible scratch volumes.

   Free Vols
   The number of volumes with a use-status of FREE.

   Used Vols
   The number of volumes with a use-status of USED.

   7 Day Exp
   The number of volumes due to expire within seven days.

   Total Vols
   The total number of volumes in the pool.

   The totals for each pool value above are summarized for each media type. The totals for each media type are summarized for the entire catalog.

   Volumes that are FREE are not included in the scratch count if they are on hold, external, or have a DSE action pending.

   Note: The FREE column in the POOLQRY command output is equivalent to the Scr Vols column in the TAPESUM output.

   Volumes that are USED, with an expiration data less than the seven-day range, are not included in the expiration total if they are on hold, external, or have a DSE action pending. The range includes today plus the next seven days.

   Volumes that are category managed with an Expiration Hold (i.e. volumes with SSTAT XH), which would otherwise expire, will be added to the seven-day expiration total if the expire hold period ends within the seven-day window.
2. Depending on the size of the catalog and other performance factors, the TAPESUM processing can run for an extended time. Other Tape Manager functions will not be performed when the processing is occurring, so care should be taken when using this command. A review of the Tape Manager log can provide some information about the typical length of TAPESUM processing, but that time might not be representative of the process duration at other times of the day.

Messages

The table below lists the messages generated by TAPESUM.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 88. TAPESUM messages

Message number	Message text	Return code
EUM0007E	Error returned from <routine> - RC <return code>.	30
EUM0373E	The <cmd> command requires system operator or admin authority.	20
EUM0722E	<cmd> request <req#> could not be sent to node <node>.	26
EUM0910W	The extraneous parameter - <parm> - was ignored.	4

Return codes

The return codes for TAPESUM are listed in the table below.

Table 89. TAPESUM Return codes

Return code	Description
0	Finished correctly or successful completion
4	Completed with warnings
20	Unauthorized request
1000	I/O error
2000	Logic error
3000	Syntax error
4xxx	User interface error (See note below.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

Chapter 5. Syntax for RMM commands

This chapter describes how to use the commands that are associated with Removable Media Manager (RMM) catalog operations in Tape Manager. Some commands can be used with both a Tape Manager catalog and an RMM catalog, although the syntax may be different.

Tape Manager provides a program, referred to as *TAPCMD*, to help with the processing of commands. When using RMM catalog commands, you must start each command with "TAPCMD" as shown in the example below:

```
TAPCMD RMM RMM_parms (tapcmd_options
```

The TAPCMD program runs in the user's virtual machine and performs a variety of processes, such as translating a file mode (i.e., file mode A) to a virtual address, before sending the command to Tape Manager. When entering an RMM command, remember to begin all commands with *TAPCMD*.

Commands supported for Tape Manager and RMM catalogs

The list below shows which commands are supported in both a Tape Manager catalog and an RMM catalog. The commands may have different syntax, depending upon where the catalog is located. The tape commands are described in detail in Chapter 2, “Tape commands,” on page 5. The commands beginning with "CMD" are described in Chapter 4, “Administrative commands,” on page 139.

- CMDAUTH
- CMDEXIT
- CNFGSET
- QUIT
- STATUS
- TAPEDEV
- TAPEEOV
- TAPELBL
- TAPELIB
- TAPEMNT
- TAPEREQ

RMM

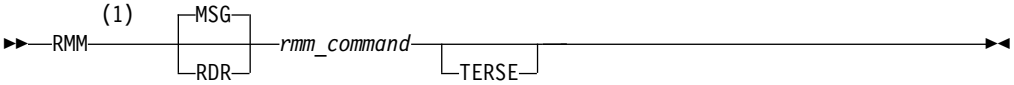
Use "RMM" to send an RMM command to the RMM agent. The command is issued by the agent with the requestor’s authority. This command is valid for an RMM catalog, but not for a Tape Manager catalog.

Authorization

For this command, the RMM agent provides authorization checking and returns the output to Tape Manager. The RMM agent returns an error message if the requestor is not authorized to use the command.

Syntax

The next syntax diagram shows the RMM command and its operands.



Notes:

1 The command is valid only for RMM catalogs. The parameters will be translated to upper case.

Figure 25. Syntax for RMM command

Operands

The table below lists all of the operands you can use with the RMM command.

Table 90. List of operands for RMM command

Operand	Description
MSG	Indicates the output will be returned as messages.
RDR	Indicates the output will be returned as a reader file. The maximum record size is 204 bytes.
rmm_command	Specifies the RMM command that will be issued by the RMM agent on behalf of the requestor.
TERSE	Suppresses the informational messages EUM0010I, EUM0074I, EUM0083I, EUM0084I, EUM0288I and EUM0291I for the requestor.

Usage notes

There are no usage notes for this command at this time.

Messages

This command is passed to RMM and the output from the command, including the return code, is returned to the requestor.

Note: For information on messages associated with the user interface, refer to "TAPCMD" on page 6.

Table 91. RMM messages

Message number	Message text	Return code
EUM0002E	Unauthorized <text> request from <reqID>.	20
EUM0007E	Error returned from <routine> - RC <return code>.	30
EUM0010I	<cmd> message <reqnum> received from <userID>.	N/A
EUM0011E	Unknown command <req> in request <req#> from <reqID>.	16
EUM0083I	<cmd> request <reqnum> complete - RC <rc>.	N/A
EUM0084I	<cmd> request <reqnum> error - RC <rc>.	N/A
EUM0215E	Invalid value <val> for the <parm> parameter.	24

Table 91. RMM messages (continued)

Message number	Message text	Return code
EUM0221E	<type> request <req#> from <rqstID> was rejected by the installation exit processing.	20
EUM0234E	Invalid sequence number in RMM request.	30
EUM0253E	Unrecognized RMM message parameter: <parm>.	30
EUM0260E	Request <req#> returned RC <return code> - <text>.	36
EUM0287E	Request sequence number <rseq#> is in use by an active request.	30
EUM0288I	RMM request <req#> sent - awaiting reply.	N/A
EUM0289I	Unable to send RMM request - request <req#> queued for retry.	N/A
EUM0290E	RMM command request <seq#> has timed out.	36
EUM0291I	RMM command request <seq#> completed successfully.	N/A
EUM0292I	RMM command request <seq#> failed - RC <return code>.	36
EUM0329E	<msg>	N/A
EUM0349E	Request <req#> could not be processed by the installation command exit.	20
EUM0352E	<req> request <reqnum> from <rqstID> was rejected because the response from the installation command exit timed out.	20
EUM0722E	<req> request <req#> could not be sent to node <name>.	26
EUM0734E	The <req> command was not accepted because catalog node <name> is quiesced.	20
EUM0735E	The <req> command was not accepted because local node <name> is quiesced.	20
EUM0736E	The <req> command was not accepted because Tape Manager is quiesced.	20
EUM0812E	The <req> command was not accepted because External Security Manager authorizations cannot be performed – RC <rc>.	20
EUM0817E	User <reqID> failed the External Security Manager check for the <req> command.	N/A
EUM0831E	Unable to authorize user <reqID> for <req> request <req#> – the details were logged.	20

Return Codes

The following table lists the return codes for RMM.

Table 92. RMM return codes

Return code	Description
0	Successful completion
24	Bad PLIST
30	Unexpected error
36	RMM command error
1000	Termination I/O error
2000	Termination logic error

Table 92. RMM return codes (continued)

Return code	Description
3000	Termination syntax error
4xxx	User interface error (See note below.)

Note: For information on return codes associated with the user interface, refer to "User Interface return codes" on page 8.

Chapter 6. Tape Manager Utilities

Tape Manager includes three utilities that you may find useful:

- TMSYNCH - Attempts to verify that any tapes expected to be in an automated tape library (ATL) are actually there, and performs corrective actions if tapes are missing.
- TMDSE - Looks for tapes that require Data Security Erase (DSE) processing and erases them.
- TMVERIFY - Scans the Tape Manager database, checking fields for a valid type, and then cross-checks the file to attempt to find discrepancies.

All of these utilities should be run from a user ID defined by the installation for that purpose. You can run all three utilities from the same user ID, define three different user IDs, or combine them in any way you want.

You can run the utilities "as needed" or on a scheduled time frame. For example, you could run the TMDSE utility every Sunday night, but run the DSE and SYNCH utilities once a month.

TMSYNCH

The TMSYNCH utility attempts to verify that tapes that are expected to be in an automated tape library (ATL) are actually there. If a tape is not in the ATL as it should be, the utility can take any of several actions (described later). It is recommend that you run this utility periodically at a time of low activity.

The process followed by the TMSYNCH authority is the following:

1. TYMSYNCH reads the configuration file.
2. For each library specified in the configuration file, TMSYNCH issues a TAPEQRY command to obtain a list of volumes that Tape Manager believes is in that library.
3. For each volume, TMSYNCH asks DFSMSrms if the tape is actually in the library. DFSMSrms will return one of several possible status responses.
4. Based on the status returned by DFSMSrms and the options set in the configuration file, the TMSYNCH utility may take one of the following actions:
   - IGNORE. Continue processing and do not issue a warning.
   - WARN. Notify the user IDs specified in the configuration file, but take no other action.
   - HOLD. Instruct Tape Manager to put the tape in system hold status.
   - RESET. Instruct Tape Manager to change the tape from "in a library" to "manual" status.

Authorization

The user ID running TMSYNCH must have ADMIN authority in Tape Manager and also be defined to DFSMSrms, which is the Removable Media Services component of DFSMS/VM, as an administrator.

Syntax

The TMSYNCH utility is invoked by using the following command format:

```
TMSYNCH filename filetype filemode
```

The variables refer to the configuration file that TMSYNCH is to read. The defaults are listed in the following table:

Table 93. TMSYNCH syntax variables

Configuration file variables	Defaults
filename	TMSYNCH
filetype	CONFIG
filemode	* (asterisk)

Modifying configuration file

An example of the TMSYNCH.CONFIG file is included in the sample files that are installed with Tape Manager. You can use this sample with some modifications or create multiple configuration files as needed. If you are a large installation with lots of big libraries and perhaps hundreds of thousands of tapes, you may want to have several configuration files defined so you can scan a few libraries on Monday, a few more on Wednesday, a few more on Friday, etc.

In addition, the configuration file includes options so you can set processing limits to control either the amount of time that you want the TMSYNCH utility to run or the number of tapes to process. These are especially useful limits to set if you anticipate that the TMSYNCH utility could take a long time to run due to the large number of tapes you have.

An example of the configuration file is shown below.

```
* This is the parameter file for the TMSYNCH EXEC, which provides
* a partial ATL synchronization facility for IBM Tape Manager for
* z/VM (5697-J08) for ATLs managed by the Removable Media Services
* component of DFSMS/VM. This exec uses the RMS CSL routines and
* so must have access to the RMS user interface (normally the
* DFSMS 1B5 minidisk, but your installation may be different).
* The CSL routines must be loaded before running this exec.
* Normally, the appropriate command is 'RTNLOAD * ( FROM FSMPPSI'
* but again consult your installation to be sure.
*
* This process may be lengthy for catalogs which contain many tapes
* in libraries, so this exec is designed to be called from a CMS
* guest at the installation's discretion, and to process without
* interfering with normal Tape Manager operation.
*
* On start up, it will read a configuration file (this file), which
* contains parameters, including names of ATLs to be processed,
* and processing limits (either maximum elapsed time to run, or
* maximum tapes to verify, or both) and optionally various other
* parameters. The name of the configuration file can be passed to
* the exec, and defaults to TMSYNCH CONFIG.
*
* (list of configuration parameters follows)
```

The parameters in the sample TMSYNCH.CONFIG file are listed in the table below. The values are specified using this format:

```
PARAMETER_NAME = VALUE
```

To specify a null value for a parameter, use this format:

```
PARAMETER_NAME =
```

Table 94. Parameters in TMSYNCH.CONFIG

Parameter	Description	Example
Max_Runtime	Indicates the maximum number of minutes TMSYNCH is allowed to run. After each tape is processed, if more time has elapsed than Max_Runtime, TMSYNCH will stop. Max_Runtime must be a positive integer. Either Max_Runtime or Max_Tapes must be specified, or both parameters may be specified.	`Max_Runtime = 20`
Max_Tapes	Indicates the maximum number of tapes TMSYNCH is allowed to process. After each tape is processed, if TMSYNCH has processed the Max_Tapes number of tapes, TMSYNCH will stop. Max_Tapes must be a positive integer. Either Max_Tapes or Max_Runtime must be specified, or both parameters may be specified.	`Max_Tapes = 20`
Errors_to	Provides a list of users to which any error messages generated by the TMSYNCH utility will be sent. User IDs are typed after the equal sign (=) and are separated by one or more blanks. The line may be continued as necessary. If this parameter is omitted or set to null, error messages will be written to the console.	`Errors_to = SAMARAK`
Error_action	Determines whether TMSYNCH will stop if an error is encountered or, if possible, skip the tape or library in question and continue. The value for Error_Action can be one of the following: • STOP • CONTINUE The default is CONTINUE.	`Error_action = CONTINUE`
TMM_Userid	Specifies the name of the Tape Manager service machine, if it is anything other than the default, which will be used when TAPCMD is invoked.	`TMM_Userid = TMTMM`
ATL_Names	(Required) Provides a list of ATLs for which the Tape Manager catalog is to be synchronized. ATL names are entered after the equal sign (=) and are separated by one or more blanks. The line may be continued as necessary.	`ATL_Names = NWAATL1 SAMATL`

Table 94. Parameters in TMSYNCH.CONFIG (continued)

Parameter	Description	Example
Action_not_in_library	Provides options that control what action TMSYNCH will take when a volume is not present in the library. Possible actions are: • IGNORE - Do nothing. • WARN - Issue a warning, but take no action. • HOLD - Issue a TAPEMOD VOL xxxxxx HSTAT HOLD for the volume. • RESET - Issue a TAPEMOV VOL xxxxxx MAN for the volume. The default is WARN.	`Action_not_in_library = WARN`
Action_inaccessible	Provides options that control what action TMSYNCH will take when the library returns a volume status of "inaccessible." Possible actions are: • IGNORE - Do nothing. • WARN - Issue a warning, but take no action. • HOLD - Issue a TAPEMOD VOL xxxxxx HSTAT HOLD for the volume. • RESET - Issue a TAPEMOV VOL xxxxxx MAN for the volume. The default is WARN.	`Action_inaccessible = WARN`
Action_ejected	Provides options that control what action TMSYNCH will take when the library returns a volume status of "queued for eject," "manually ejected," or "being ejected." Possible actions are: • IGNORE - Do nothing. • WARN - Issue a warning, but take no action. • HOLD - Issue a TAPEMOD VOL xxxxxx HSTAT HOLD for the volume. • RESET - Issue a TAPEMOV VOL xxxxxx MAN for the volume. The default is WARN.	`Action_ejected = WARN`

Table 94. Parameters in TMSYNCH.CONFIG (continued)

Parameter	Description	Example
Action_misplaced	Provides options that control what action TMSYNCH will take when the library returns a volume status of "misplaced." Possible actions are: • IGNORE - Do nothing. • WARN - Issue a warning, but take no action. • HOLD - Issue a TAPEMOD VOL xxxxxx HSTAT HOLD for the volume. • RESET - Issue a TAPEMOV VOL xxxxxx MAN for the volume. The default is WARN.	`Action_misplaced = WARN`
Action_label_damage	Provides options that control what action TMSYNCH will take when the library returns a volume status of "label missing or damaged." Possible actions are: • IGNORE - Do nothing. • WARN - Issue a warning, but take no action. • HOLD - Issue a TAPEMOD VOL xxxxxx HSTAT HOLD for the volume. • RESET - Issue a TAPEMOV VOL xxxxxx MAN for the volume. The default is WARN.	`Action_label_damage = WARN`

TMDSE

The TMDSE utility is provided for Tape Manager (non-RMM) customers to perform a Data Security Erase (DSE) when the DSE function is indicated. The utility is customer initiated and looks for tapes that have a "use" status of "FREE" and the Data Security Erase (DSE) flag set. There are three ways to set the DSE flag for a volume:

- If the DSE indicator is set for the mount pool, the DSE flag will be set for any scratch volumes mounted in that pool, unless "NODSE" is specified in the tape mount command.
- If the DSE operand is specified in the tape mount command, the DSE flag will be set for the volume being mounted. The DSE operand is not valid for read-only mounts.
- If the DSE operand is specified on a TAPEMOD command, the DSE flag will be set for the volumes specified in the command. Likewise, the NODSE operand can be specified on a TAPEMOD command to turn off the DSE flag.

A volume that has the DSE flag set will not be used to satisfy a scratch mount, even if the "use" status is "FREE." Also, a volume that, upon expiration, would otherwise return to a free pool will not be returned to the free pool until the DSE flag has been reset.

The erasing process ties up a tape drive for a relatively long time. (The amount of time varies, depending upon the media and device type.) Therefore, it is recommended that you run this utility periodically at a time of low activity.

The process followed by the TMDSE authority is the following:

1. TMDSE reads the specified TMDSE configuration file and asks Tape Manager for a list of tapes that need to be erased. For example. the tape must have a status of "FREE" and the DSE/NODSE flag must be set to "DSE."
2. If there are any tapes to erase, TMDSE attempts to mount each one in turn, verifies the volume label if it can, and erases the tape.
3. TMDSE instructs Tape Manager to reset the "erase needed" (DSE) flag on each tape it erased.

   Note:

   a. The TMDSE utility might end with an I/O error (RC 32), if the "missing interrupt timeout" value for the DSE device is not long enough for the erasure to complete. See the CP commands, QUERY MITIME and SET MITIME, for additional information.
   b. The DSE ID (i.e. the ID running the TMDSE utility) will need access to the 5697J08B 400 disk and the TMDSE CONFIG file. A sample configuration file is provided on the 5697J08B 2C2 disk.

Authorization

The ID that will run the TMDSE utility should be specified in the DSEID statement in the Tape Manager configuration file. The DSEID has the authority to mount and erase any expired tapes that have a DSE action pending. Specifying an ID in the DSEID statement provides the ID all of the authorizations required to perform a data security erase.

Note: The DSEID statement is described in the *IBM Tape Manager for z/VM Installation and Administration Guide* (SC18-9344).

When using a DSEID, consider the following:

- The DSEID does not require system administrator authority.
- The DSEID does not require any specific access permissions to the pools where expired volumes reside that have a DSE action pending.
- Only one DSEID is active at any time.

The DSEID can be set temporarily by the CMDAUTH command, overriding the value assigned by the DSEID statement in the Tape Manager configuration file (if a value was specified). However, the configuration value for DSEID will be used whenever Tape Manager is restarted.

Syntax

The TMDSE utility is invoked by using the following command format:

`TMDSE` *`filename filetype filemode`*

The variables refer to the configuration file that TMDSE is to read. The defaults are listed in the following table:

Table 95. TMDSE syntax variables

Configuration file variables	Defaults
filename	TMDSE
filetype	CONFIG
filemode	* (asterisk)

Modifying configuration file

An example of the TMDSE.CONFIG file is included in the sample files that are installed with Tape Manager. An example of the configuration file is shown below.

```
* This is the parameter file for the TMDSE EXEC, which is the Data
* Security Erase component of IBM Tape Manager for z/VM (5697-J08).
*
* For tapes which have been set to require erasure before reuse,
* when the tape expires, either normally or manually, it will be
* set to FREE status, but because the DSE flag is on it will not
* be reused until the flag has been reset.
*
* Since each DSE can tie up a virtual machine and tape drive for
* several minutes, this exec is designed to be called from a CMS
* guest at the installation's discretion, and to process without
* interfering with normal Tape Manager operation.
*
* On start up, it will read a configuration file (this file), which
* contains at least a processing limit (either a maximum number of
* tapes to DSE before stopping, or a maximum number of minutes to
* run before stopping or both), and if desired other processing
* options. The name of the configuration file can be passed to
* the exec, and defaults to TMDSE CONFIG.
*
*
* (list of configuration parameters follows)
```

The parameters in the sample TMDSE.CONFIG file are listed in the table below. The values are specified using this format:

```
PARAMETER_NAME = VALUE
```

To specify a null value for a parameter, use this format:

```
PARAMETER_NAME =
```

Table 96. Parameters in TMDSE.CONFIG

Parameter	Description	Example
Max_Runtime	Indicates the maximum number of minutes TMDSE is allowed to run. At the end of each DSE process, if more time has elapsed than Max_Runtime, TMDSE will stop. Max_Runtime must be a positive integer. Either Max_Runtime or Max_Tapes must be specified, or both parameters may be specified.	`Max_Runtime = 20`
Max_Tapes	Indicates the maximum number of tapes TMDSE is allowed to process. At the end of each DSE process, if TMDSE has processed the Max_Tapes number of tapes, TMDSE will stop. Max_Tapes must be a positive integer. Either Max_Tapes or Max_Runtime must be specified, or both parameters may be specified.	`Max_Tapes = 20`

Table 96. Parameters in TMDSE.CONFIG (continued)

Parameter	Description	Example
Errors_to	Provides a list of users to which any error messages generated by the TMDSE utility will be sent. User IDs are typed after the equal sign (=) and are separated by one or more blanks. The line may be continued as necessary. If this parameter is omitted or set to null, error messages will be sent to the console.	`Errors_to = SAMARAK`
Error_action	Determines whether TMDSE will stop if an error is encountered or, if possible, skip the tape in question and continue. The value for Error_Action can be one of the following: • STOP • CONTINUE The default is CONTINUE.	`Error_action = CONTINUE`
NL_Tapes	Controls whether DSE processing will be done on tapes that do not have a valid internal volume label (VOL1 record is the first physical record on the tape.). The TMDSE utility cannot verify that the tape mounted is the tape to be DSE'ed unless the tape has a valid VOL1 record. Therefore, the NL_Tapes parameter allows you to defer DSEs of NL (non-labeled) tapes to a manual process, while still using TMDSE to process SL tapes. Valid values or YES or NO. The default is NO.	`NL_Tapes = NO`
TMM_Userid	Specifies the name of the Tape Manager Machine that will be used when TMDSE is invoked. TMTMM is the default. If your Tape Manager Machine is not TMTMM, change the TMM_Userid to your machine's ID.	`TMM_Userid = TMTMM`
Action	Selects the action to be taken for each tape that has the DSE flag set. Possible actions are: • IGNORE – Verifies the authority of the ID to issue the command. • WARN – This is the default. WARN is intended for use while setting up and verifying the DSE process. The WARN action attempts to mount each tape in turn and perform label verification, but does not actually erase the tape or reset the DSE flag in Tape Manager. When the process is working as desired, you can change the action from WARN to ERASE. • ERASE – Actually erases the tapes and resets the DSE flag.	ACTION = WARN

TMVERIFY

TMVERIFY is a diagnostic utility and should be run only if there is a potential integrity problem with the Tape Manager database. ***It is strongly recommended that you do not run this utility unless instructed to do so by IBM Technical Support.***

The utility options must be set correctly or serious problems could occur. The TMVERIFY utility can only be run when Tape Manager is shut down.

The process followed by the TMVERIFY diagnostic utility is the following:

1. TMVERIFY reads through the various Tape Manager database files:
   - the tape inventory (SYS TAPE) on the 200 disk
   - the pool inventories on the 200 disk
   - the pool volume files on the 210 disk
   - (optionally) the SYS CONFIG file `Define_Media` statements.

   Note: The disk addresses are the defaults, but may be different for your installation.
2. TMVERIFY attempts to verify that the data in many of the fields is of the right type. For example, if the field is supposed to be a date field, the contents must be numeric, the month cannot exceed 12 and the day cannot exceed 31. When possible, TMVERIFY will also verify that the data is consistent with the contents of other files.
3. TMVERIFY issues a warning (unless you instruct it not to) if a problem is found.
4. If you have contacted IBM Technical Support and they instructed you to run TMVERIFY with any option set to CORRECT, the TMVERIFY utility will attempt to correct the errors that it is able to correct.

   WARNING: Do not run the TMVERIFY utility with any option set to CORRECT unless you have been instructed to do so by IBM Technical Support. Unpredictable results could occur if not used as instructed.

Authorization

This utility runs when Tape Manager is down, so no specific authority within Tape Manager is required. However, TMVERIFY must be able to link to the Tape Manager mini-disks to read the configuration files:

- In WARN mode, TMVERIFY links as read only.
- In CORRECT mode, TMVERIFY must be able to link as read-write. TMVERIFY will not be able to do this if Tape Manager is still up.

Syntax

The TMVERIFY utility is invoked by using the following command format:

`TMVERIFY` *`filename filetype filemode`*

The variables refer to the configuration file that TMVERIFY is to read. The defaults are listed in the following table:

Table 97. TMDSE syntax variables

Configuration file variables	Defaults
filename	TMVERIFY

Table 97. TMDSE syntax variables (continued)

Configuration file variables	Defaults
filetype	CONFIG
filemode	* (asterisk)

Modifying configuration file

An example of the TMVERIFY.CONFIG file is included in the sample files that are installed with Tape Manager. An example of the configuration file is shown below.

```
* This is the parameter file for the TMVERIFY EXEC, which provides
* a database verification function for IBM Tape Manager for
* z/VM (5697-J08).
*
* Caution: the database verification is intended as a diagnostic tool,
* to be run only when problems with the tape database integrity are
* suspected, and with the Tape Manager main server shut down. For large
* inventories, the process may be lengthy, and the userid running TMVERIFY
* may require large amounts of virtual storage (100M or more). This is
* because the entire tape inventory is read, verified, and indexed in
* storage.
*
* On start up, it will read a configuration file (this file), to obtain
* the parameters for the run.
*
*
*
* (list of configuration parameters follows)
```

The parameters in the sample TMVERIFY.CONFIG file are listed in the table below. The values are specified using this format:

```
PARAMETER_NAME = VALUE
```

To specify a null value for a parameter, use this format:

```
PARAMETER_NAME =
```

Table 98. Parameters in TMVERIFY.CONFIG

Parameter	Description	Example
Errors_to	Provides a list of users to which any error messages generated by the TMVERIFY utility will be sent. User IDs are typed after the equal sign (=) and are separated by one or more blanks. The line may be continued as necessary. If this parameter is omitted or set to null, error messages will be sent to the console.	`Errors_to = SAMARAK`
Error_action	Determines whether TMVERIFY will stop if an error is encountered or, if possible, skip the tape in question and continue. The value for Error_Action can be one of the following: • STOP • CONTINUE The default is CONTINUE.	`Error_action = CONTINUE`

Table 98. Parameters in TMVERIFY.CONFIG (continued)

Parameter	Description	Example
Verbosity	Determines how much informational output will be produced. Note that all warning output is always produced unless those warnings have been suppressed by an IGNORE for the section in which they occur. Verbosity may be one of the following: • HIGH • MEDIUM (default) • LOW **Note:** Using HIGH adds at least one line of output for every tape in the inventory. Be cautious about using HIGH if you have a large tape inventory.	`Verbosity = Medium`
TM_Userid	(Required) Identifies the user ID that owns the disks to which TMVERIFY will link in order to access and verify the Tape Manager database. Normally this is the Tape Manager main server user ID.	`TM_userid = XMTMM`
Database_disk_1	(Required) Identifies the virtual address of the TM_Userid to which TMVERIFY will link to access the Tape Manager database files. Usually this address is 200.	`Database_disk_1 = 200`
Database_disk_2	(Required) Identifies the virtual address of the TM_Userid to which TMVERIFY will link to access the Tape Manager database files. Usually this address is 210.	`Database_disk_2 = 210`
Config_disk	(Optional, but recommended) Identifies the virtual address of the TM_Userid to which TMVERIFY will link to access the Tape Manager SYS CONFIG file. Usually this address is 198. If this address is not provided, TMVERIFY will continue, but will not validate media types found in the tape or pool inventory files against those defined to Tape Manager in the SYS CONFIG file.	`Config_disk = 198`

The next several parameters specify the action to take when an error in a database record is found. Unless otherwise noted, the options are:

- IGNORE. Do nothing.
- WARN. Send a message to the console and to any user IDs listed in the "Error_to" parameter in the TMVERIFY.CONFIG file.
- CORRECT. Send the same message as WARN but, where possible, also attempt to correct the error.

Many errors are not correctable, and there may be implications to correcting those that are. For example, invalid date fields can be corrected to a default value, but that may potentially invalidate reporting by date. ***CORRECT should only be used in consultation with IBM Technical Support.***

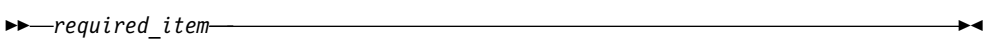
Table 99. More parameters in TMVERIFY.CONFIG

Parameter	Description
Invalid_tape_inventory_records	Specifies the action to take when an error is found in a record in the SYS TAPE file: IGNORE, WARN, or CORRECT. Example: `Invalid_tape_ inventory_records = WARN`
Invalid_pool_volume_records	Specifies the action to take when an error is found in a pool file: IGNORE, WARN, or CORRECT. Using CORRECT generally results in rebuilding this file from the SYS TAPE data. Example: `Invalid_pool_volume_records = WARN`

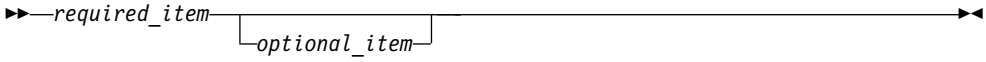
Appendix. How to read syntax diagrams

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

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



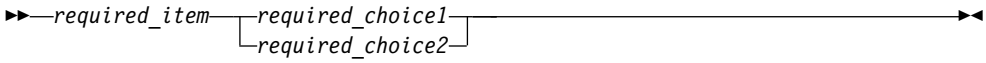
- Optional items appear below the main path.



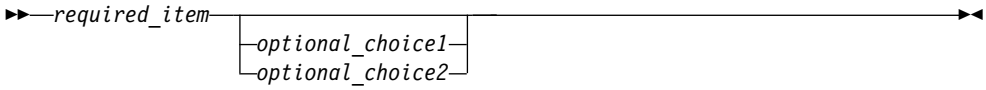
  If an optional item appears above the main path, that item has no effect on the execution of the syntax element and is used only for readability.

- If you can choose from two or more items, they appear vertically, in a stack.

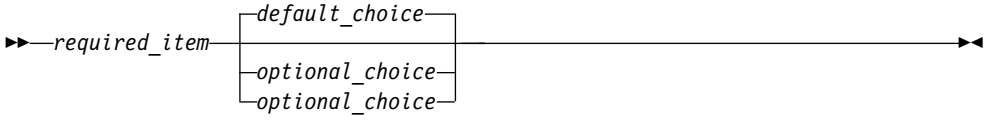
  If you *must* choose one of the items, one item of the stack appears on the main path.



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

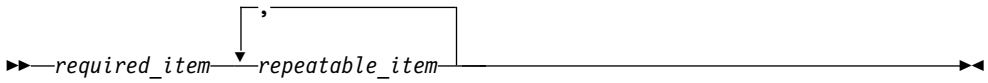


  If one of the items is the default, it appears above the main path, and the remaining choices are shown below.



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

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



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

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

A

admin commands 139
authority
  CMDAUTH 139
  CMDEXIT 144
  CNFGSET 147
  EXPSTART 155
  NODECMD 157
  POOLACC 108
  POOLDEF 113
  POOLDEL 120
  POOLMOD 125
  POOLQRY 130
  POOLXFR 134
  QUIT 164
  RMM 171
  STATUS 166
  TAPCMD 6
  TAPEADD 9
  TAPEDEL 18
  TAPEDEV 26
  TAPEDSN 31
  TAPEEOV 39
  TAPELBL 42
  TAPELIB 48
  TAPEMNT 52
  TAPEMOD 68
  TAPEMOV 81
  TAPEQRY 88
  TAPEREQ 100
  TAPESUM 168
  TMDSE 180
  TMSYNCH 175
  TMVERIFY 183

C

changes to book xiii
CMDAUTH 139
  authority 139
  considerations 141
  messages 141
  operands 140
  return codes 143
  syntax diagram 139
CMDEXIT 144
  authority 144
  considerations 145
  messages 145
  operands 144
  return codes 146
  syntax diagram 144
CNFGSET 146
  authority 147
  considerations 152
  ESM operands 148
  EXPSTART operands 151
  MEDIA operands 149
  messages 152
CNFGSET ESM
  return codes 154
  syntax diagram 147
commands
  CMDAUTH 139
  CMDEXIT 144
  CNFGSET 146
  EXPSTART 154
  NODECMD 156
  POOLACC 107
  POOLDEF 113
  POOLDEL 120
  POOLMOD 125
  POOLQRY 130
  POOLXFR 134
  QUIT 164
  RMM 171
  RMM catalog 2
  STATUS 166
  TAPCMD 5, 6
  Tape Manager catalog 2
  TAPEADD 9
  TAPEDEL 18
  TAPEDEV 26
  TAPEDSN 31
  TAPEEOV 38
  TAPELBL 42
  TAPELIB 48
  TAPEMNT 52
  TAPEMOD 68
  TAPEMOV 81
  TAPEQRY 88
  TAPEREQ 99
  TAPESUM 168
  TMDSE 179
  TMSYNCH 175
  TMVERIFY 183

D

documentation changes xiii

E

EXIT
  authority 164
  considerations 164
  messages 165
  operands 164
  return codes 165
  syntax diagram 164
EXPSTART 154
  authority 155
  considerations 155
  messages 155
  return codes 156
  syntax diagram 155
external tapes 97

H

hardware supported 2
Help menu 2

L

legal notices
  notices 189
  trademarks 191
links
  non-IBM Web sites 191

M

messages 132
  CMDAUTH 141
  CMDEXIT 145
  CNFGSET 152
  EXIT 165
  EXPSTART 155
  NODECMD 162
  POOLACC 111
  POOLDEF 117
  POOLDEL 121
  POOLMOD 127
  QUIT 165
  return codes 8
  RMM 172
  STATUS 167
  STOP 165
  TAPEADD 14
  TAPEDEL 22
  TAPEDEV 28
  TAPEDSN 34
  TAPEEOV 40
  TAPELBL 46
  TAPELIB 50
  TAPEMNT 58
  TAPEMOD 76
  TAPEMOV 85
  TAPEQRY 97
  TAPEREQ 104
  TAPESUM 169

N

NODECMD 156
  authority 157
  considerations 161
  messages 162
  operands 159
  return codes 163
  syntax diagram 158
notices 189

P

pool access privileges 107

Pool commands
syntax 107
POOLACC 107
authority 108
considerations 110
messages 111
operands 109
return codes 112
syntax diagram 108
POOLDEF 113
authority 113
considerations 116
messages 117
operands 115
return codes 119
syntax diagram 113
POOLDEL 120
authority 120
considerations 121
messages 121
operands 121
return codes 124
syntax diagram 120
POOLMOD 125
authority 125
considerations 127
messages 127
operands 126
return codes 130
syntax diagram 125
POOLQRY 130, 132
authority 130
considerations 132
messages 132
operands 131
return codes 133
syntax diagram 131
POOLXFR 134
authority 134
considerations 135
messages 135
operands 135
return codes 137
syntax diagram 135
prerequisites 2
privileges, pool access 107
product enhancements xiii

Q

QUIT 164
authority 164
considerations 164
messages 165
operands 164
return codes 165
syntax diagram 164

R

Removable Media Manager 2
return codes 8
CMDAUTH 143
CMDEXIT 146
CNFGSET ESM 154
EXIT 165
return codes *(continued)*
EXPSTART 156
NODECMD 163
POOLACC 112
POOLDEF 119
POOLDEL 124
POOLMOD 130
POOLQRY 133
POOLXFR 137
QUIT 165
RMM 173
STATUS 168
STOP 165
TAPEADD 17
TAPEDEL 26
TAPEDEV 31
TAPEDSN 37
TAPEEOV 41
TAPELBL 48
TAPELIB 51
TAPEMNT 67
TAPEMOD 81
TAPEMOV 87
TAPEQRY 99
TAPEREQ 106
TAPESUM 170
RMM
authority 171
catalog 2
command interface 2
considerations 172
messages 172
operands 172
return codes 173
syntax diagram 172
RMM catalog
supported commands 2
RMM catalog commands
CMDAUTH 139
CMDEXIT 144
EXPSTART 154
RMM 171
TAPEEOV 38
TAPELIB 48
TAPEMNT 52
TAPEREQ 99
RMM commands
list of 171
syntax 171
RMM repository 58

S

scratch tapes
system pool 96
service updates xi
software supported 2
STATUS 166
authority 166
considerations 167
messages 167
operands 167
return codes 168
syntax diagram 166
STOP
authority 164
considerations 164
STOP *(continued)*
messages 165
operands 164
return codes 165
syntax diagram 164
supported commands
list of 2
RMM 171
syntax diagram
CMDAUTH 139
CMDEXIT 144
CNFGSET ESM 147
EXIT 164
EXPSTART 155
NODECMD 158
POOLACC 108
POOLDEF 113
POOLDEL 120
POOLMOD 125
POOLQRY 131
POOLXFR 135
QUIT 164
RMM 172
STATUS 166
STOP 164
TAPCMD 6
TAPEADD 9
TAPEDEL 19
TAPEDEV 26
TAPEDSN 32
TAPEEOV 39
TAPELBL 43
TAPELIB 49
TAPEMNT 52
TAPEMOD 69
TAPEMOV 82
TAPEQRY 89
TAPEREQ 100
TAPESUM 169
TMDSE 180
TMSYNCH 176
TMVERIFY 183
syntax diagrams
how to read 187
system pool
scratch tapes 96

T

TAPCMD 5, 6, 139
authority 6
considerations 7
messages 7
options 6
syntax diagram 6
tape commands
syntax 5
Tape Manager
benefits 1
prerequisites 2
purpose 1
Tape Manager catalog
supported commands 2
Tape Manager catalog commands
CMDAUTH 139
CMDEXIT 144
CNFGSET 146

Tape Manager catalog commands *(continued)*
EXPSTART 154
NODECMD 156
POOLACC 107
POOLDEF 113
POOLDEL 120
POOLMOD 125
POOLQRY 130
POOLXFR 134
QUIT 164
STATUS 166
TAPEADD 9
TAPEDEL 18
TAPEDEV 26
TAPEDSN 31
TAPEEOV 38
TAPELBL 42
TAPELIB 48
TAPEMNT 52
TAPEMOD 68
TAPEMOV 81
TAPEQRY 88
TAPEREQ 99
TAPESUM 168
TAPEADD 9
authority 9
considerations 14
messages 14
operands 11
return codes 17
syntax diagram 9
TAPEDEL 18
authority 18
considerations 21
messages 22, 169
operands 20
return codes 26
syntax diagram 19
TAPEDEV 26
authority 26
considerations 28
messages 28
operands 27
return codes 31
syntax diagram 26
TAPEDSN 31
authority 31
considerations 34
messages 34
operands 33
return codes 37
syntax diagram 32
TAPEEOV 38
authority 39
considerations 40
messages 40
operands 39
return codes 41
syntax diagram 39
TAPELBL 42
authority 42
considerations 46
messages 46
operands 43
return codes 48
syntax diagram 43
TAPELIB 48
authority 48
considerations 50
messages 50
operands 49
return codes 51
syntax diagram 49
TAPEMNT 52
authority 52
messages 58
operands 55
return codes 67
RMM catalog 58
syntax diagram 52
usage notes 57
TAPEMOD 68
authority 68
considerations 75
messages 76
operands 70
return codes 81
syntax diagram 69
TAPEMOV 81
authority 81
considerations 84
messages 85
operands 83
return codes 87
syntax diagram 82
TAPEQRY 88
authority 88
command 91
considerations 93
messages 97
return codes 99
syntax diagram 89, 169
TAPEREQ 99
authority 100
considerations 101
messages 104
operands 101
return codes 106
syntax diagram 100
TAPESUM 168
authority 168
considerations 169
return codes 170
TMDSE
authority 180
syntax diagram 180
TMDSE configuration file 181
TMDSE utility 179
TMSYNCH
authority 175
syntax diagram 176
TMSYNCH utility 175
TMVERIFY
authority 183
syntax diagram 183
TMVERIFY EXEC 184
TMVERIFY utility 183
TMVERIFY.CONFIG file 184
trademarks 191

U

user interface messages 7
Using RMM 2

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