ADSTAR Distributed Storage Manager
for Windows NT**

Administrator's Reference

Version 2

GC35-0237-01

Note!

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

Second Edition (March 1997)

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Contents

Notices xi
Trademarks xii

Preface xv
Who Should Read This Publication xv
What You Should Know Before Reading This Publication xv
ADSTAR Distributed Storage Manager Publications xv
IBM International Technical Support Center Publications (Redbooks) xvii
Software Developer's Program xvii
Translations xvii
Do You Have Comments or Suggestions? xvii

Chapter 1. Using Syntax Diagrams 1

Chapter 2. Entering Administrative Commands 5
Command Components 5
Command Name 5
Positional Parameters 5
Keyword Parameters 5
Command Entry Rules 6
Processing Administrative Commands 7
Commands Processed in the Foreground 7
Commands Processed in the Background 7
Formatting Command Output on a Terminal 8
Using Wildcard Characters 8
Examples for Match-Any Characters 9
Examples for Match-Exactly-One Character 10
Naming Conventions 10
Naming Volumes 10
Case-Sensitivity 10
Naming Restrictions for Objects 11

Chapter 3. Using the Command-Line Interface 13
Using the Server Console Session 13
Using the Administrative Client Session 13
Console Mode 14
Mount Mode 15
Batch Mode 15
Interactive Mode 16
Using Administrative Client Options 17
Using Continuation Characters 18
Redirecting Command Output to a File in Batch and Interactive Modes 18
File Naming Conventions for Redirected Output 19
Using Macros to Issue Commands 21
Writing Commands in a Macro File 21

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Writing Comments in a Macro File 22
Using Substitution Variables in a Macro 22
Running the Commands in a Macro 23
Controlling Command Processing in a Macro 23

Chapter 4. Using Commands Based on Privilege Class 25
Commands Requiring System Privilege 25
Commands Requiring Policy Privilege 29
Commands Requiring Storage Privilege 31
Commands Requiring Operator Privilege 33
Commands Requiring Analyst Privilege 34
Commands Any Administrator Can Issue 34

Chapter 5. Using Administrator Commands 37
ACTIVATE POLICYSET (Activate a New Policy Set) 38
ASSIGN DEFMGMTCLASS (Assign a Default Management Class) 40
AUDIT LIBRARY (Verify an Automated Library's Inventory) 43
AUDIT LICENSES (Audit for Compliance with License Terms) 46
AUDIT VOLUME (Verify Database Information for a Storage Pool Volume) . . . 48
BACKUP DB (Back Up the Database) 53
BACKUP DEVCONFIG (Create Backup Copies of Device Configuration Information) 57
BACKUP STGPOOL (Back Up Primary Storage Pool to Copy Storage Pool) . . . 59
BACKUP VOLHISTORY (Save Sequential Volume History Information) 63
CANCEL PROCESS (Cancel an Administrative Process) 65
CANCEL REQUEST (Cancel One or More Mount Requests) 67
CANCEL SESSION (Cancel One or More Client Sessions) 69
CHECKIN LIBVOLUME (Check a Storage Volume into a Library) 71
CHECKOUT LIBVOLUME (Check a Storage Volume out of a Library) 76
COMMIT (Control Committing of Commands in a Macro) 79
COPY DOMAIN (Copy a Policy Domain) 81
COPY MGMTCLASS (Copy a Management Class) 83
COPY POLICYSET (Copy a Policy Set) 85
COPY SCHEDULE (Copy a Client or an Administrative Command Schedule) . . 87
Copying Client Schedules 87
Copying Administrative Command Schedules 88
DEFINE ASSOCIATION (Associate Client Nodes with a Schedule) 91
DEFINE COPYGROUP (Define a Copy Group) 94
DEFINE DBBACKUPTRIGGER (Define the Database Backup Trigger) 103
DEFINE DBCOPY (Define a Volume Copy of a Database Volume) 107
DEFINE DBVOLUME (Define a Database Volume) 109
DEFINE DEVCLASS (Define a Device Class) 111
Syntax for Defining a Device Class with a Device Type of 4MM 112
Syntax for Defining a Device Class with a Device Type of 8MM 116
Syntax for Defining a Device Class with a Device Type of DLT 119
Syntax for Defining a Device Class with a Device Type of FILE 123
Syntax for Defining a Device Class with a Device Type of GENERICTAPE . . 125
Syntax for Defining a Device Class with a Device Type of 3570 127
Syntax for Defining a Device Class with a Device Type of QIC 130

Syntax for Defining a Device Class with a Device Type of REMOVABLEFILE 133
DEFINE DOMAIN (Define a New Policy Domain) 136
DEFINE DRIVE (Define a Drive to a Library) 139
DEFINE LIBRARY (Define a Library) 142
DEFINE LOGCOPY (Define a Volume Copy of a Recovery Log Volume) 145
DEFINE LOGVOLUME (Define a Recovery Log Volume) 147
| DEFINE MACHINE (Define a Machine) 149
| DEFINE MACHNODEASSOCIATION (Associate an ADSM Node With a Machine) 152
DEFINE MGMTCLASS (Define a Management Class) 154
DEFINE POLICYSET (Define a Policy Set) 158
| DEFINE RECMEDMACHASSOCIATION (Associate Recovery Media with a
| Machine) 161
| DEFINE RECOVERYMEDIA (Define Recovery Media) 163
DEFINE SCHEDULE (Define a Client or an Administrative Command Schedule) 166
Defining Client Schedules 166
Defining Administrative Command Schedules 173
DEFINE STGPOOL (Define a Storage Pool) 182
DEFINE VOLUME (Define a Volume in a Storage Pool) 196
DELETE ASSOCIATION (Delete Node Associations with a Schedule) 199
DELETE COPYGROUP (Delete a Copy Group) 201
DELETE DBBACKUPTRIGGER (Delete the Database Backup Trigger) 204
DELETE DBVOLUME (Delete a Database Volume) 206
DELETE DEVCLASS (Delete a Device Class) 208
DELETE DOMAIN (Delete a Policy Domain) 210
DELETE DRIVE (Delete a Drive from a Library) 212
DELETE EVENT (Delete Event Records) 214
DELETE FILESPACE (Delete Client Node Data from the Server) 218
DELETE LIBRARY (Delete a Library) 222
DELETE LOGVOLUME (Delete a Recovery Log Volume) 224
| DELETE MACHINE (Delete a Machine) 226
| DELETE MACHNODEASSOCIATION (Delete Association Between a Machine and
| a Node) 228
DELETE MGMTCLASS (Delete a Management Class) 230
DELETE POLICYSET (Delete a Policy Set) 232
| DELETE RECMEDMACHASSOCIATION (Delete Association Between Recovery
| Media and a Machine) 234
| DELETE RECOVERYMEDIA (Delete Recovery Media) 236
DELETE SCHEDULE (Delete a Client or an Administrative Command Schedule) 237
Deleting Client Schedules 237
Deleting Administrative Command Schedules 237
DELETE STGPOOL (Delete a Storage Pool) 240
DELETE VOLHISTORY (Delete Sequential Volume History Information Collected
by the Server) 242
DELETE VOLUME (Delete a Storage Pool Volume) 246
DISABLE (Temporarily Prevent Client Node Access to the Server) 249
DISMOUNT VOLUME (Dismount a Volume by Volume Name) 251
ENABLE (Resume User Activity on the Server) 252
EXPIRE INVENTORY (Manually Start Inventory Expiration Processing) 254

EXPORT ADMIN (Copy Administrator Information to Sequential Media) 256
EXPORT NODE (Copy Client Node Information to Sequential Media) 260
EXPORT POLICY (Copy Policy Information to Sequential Media) 265
EXPORT SERVER (Copy Server Information to Sequential Media) 269
EXTEND DB (Increase the Assigned Capacity of the Database) 274
EXTEND LOG (Increase the Assigned Capacity of the Recovery Log) 276
GRANT AUTHORITY (Add Administrator Authority) 278
HALT (Shut Down the Server) 282
HELP (Get Help on Commands and Error Messages) 286
IMPORT ADMIN (Import Administrator Information) 289
IMPORT NODE (Import Client Node Information) 292
IMPORT POLICY (Import Policy Information) 298
IMPORT SERVER (Import the Server) 301
| INSERT MACHINE (Insert Machine Characteristics Information or Recovery
| Instructions) 306
LOCK ADMIN (Lock Out an Administrator) 308
LOCK NODE (Lock Out a Client Node) 309
MACRO (Invoke a Macro) 311
MOVE DATA (Move Files on a Storage Pool Volume) 314
| MOVE DRMEDIA (Move Disaster Recovery Media Offsite and Back Onsite) . . . 316
| Destination State/Location Determination Table: 325
| State Transition Table 326
| PREPARE (Create a Recovery Plan File) 331
QUERY ACTLOG (Search Activity Log for Messages) 338
QUERY ADMIN (Display Information on One or More Administrators) 344
QUERY ASSOCIATION (Query Client Node Associations with a Schedule) . . . 348
QUERY AUDITOCCUPANCY (Query Client Node Storage Utilization) 351
QUERY CONTENT (Query the Contents of a Storage Pool Volume) 354
QUERY COPYGROUP (Query One or More Copy Groups) 360
QUERY DB (Display Information on the Database) 365
QUERY DBBACKUPTRIGGER (Query the Database Backup Trigger) 370
QUERY DBVOLUME (Display Information on One or More Database Volumes) . 372
QUERY DEVCLASS (Display Information on One or More Device Classes) . . . 376
QUERY DOMAIN (Query One or More Policy Domains) 380
QUERY DRIVE (Display Information about a Drive) 384
| QUERY DRMEDIA (Query Disaster Recovery Media) 387
| QUERY DRMSTATUS (Query DRM System Parameters) 396
QUERY EVENT (Query Scheduled and Completed Events) 400
Querying Events for Client Schedules 400
Querying Events for Administrative Command Schedules 405
QUERY FILESPACE (Query One or More File Spaces) 415
QUERY LIBRARY (Query a Library) 419
QUERY LIBVOLUME (Query a Library Volume) 422
QUERY LICENSE (Display License Information) 424
QUERY LOG (Display Information on the Recovery Log) 428
QUERY LOGVOLUME (Display Information on One or More Log Volumes) . . . 433
| QUERY MACHINE (Query Machine Information) 437
QUERY MGMTCLASS (Query a Management Class) 442

QUERY MOUNT (Display Information on Mounted Sequential Access Volumes) . 446
QUERY NODE (Query One or More Client Nodes) 448
QUERY OCCUPANCY (Display File Space Information by Storage Pool) 453
QUERY OPTION (Query One or More Server Options) 457
QUERY POLICYSET (Query a Policy Set) 460
QUERY PROCESS (Query One or More Server Processes) 464
| QUERY RECOVERYMEDIA (Query Recovery Media) 466
QUERY REQUEST (Query One or More Pending Mount Requests) 470
QUERY SCHEDULE (Query One or More Schedules) 471
QUERY SESSION (Query One or More Client Sessions) 476
QUERY STATUS (Query System Parameters) 480
QUERY STGPOOL (Query One or More Storage Pools) 485
QUERY VOLHISTORY (Display Sequential Volume History Information) 492
QUERY VOLUME (Query One or More Storage Pool Volumes) 498
QUIT (End the Interactive Mode of the Administrative Client) 504
REDUCE DB (Decrease the Assigned Capacity of the Database) 505
REDUCE LOG (Decrease the Assigned Capacity of the Recovery Log) 507
REGISTER ADMIN (Register an Administrator) 509
REGISTER LICENSE (Register a New License) 511
REGISTER NODE (Register a Client Node) 514
REMOVE ADMIN (Delete an Administrator) 517
REMOVE NODE (Delete a Client Node) 519
RENAME ADMIN (Rename an Administrator) 521
RENAME FILESPACE (Rename a Client Filespace on the Server) 523
RENAME NODE (Rename a Client Node) 525
REPLY (Allow a Request to Continue Processing) 527
RESET BUFPOOL (Reset the Buffer Pool Statistics for the Database) 528
RESET DBMAXUTILIZATION (Reset the Utilization Statistic for the Database) . 530
RESET LOGCONSUMPTION (Reset the Cumulative Log Consumption Statistic) 531
RESET LOGMAXUTILIZATION (Reset the Utilization Statistic for the Log) 532
RESTORE STGPOOL (Restore Storage Pool Data from a Copy Pool) 533
RESTORE VOLUME (Restore Primary Volume Data from a Copy Pool) 538
REVOKE AUTHORITY (Remove Administrator Authority) 543
ROLLBACK (Rollback Uncommitted Changes in a Macro) 547
SET ACCOUNTING (Set Accounting Records On or Off) 549
SET ACTLOGRETENTION (Set the Retention Period for the Activity Log) 551
SET AUTHENTICATION (Set Password Authentication) 553
| SET DRMCHECKLABEL (Specify Label Checking) 554
| SET DRMCMDFILENAME (Specify a File Name for containing the executable
| commands) 556
| SET DRMCOPYSTGPOOL (Specify the Copy Storage Pools to be Managed by
| DRM) 558
| SET DRMCOURIERNAME (Specify the Courier Name) 560
| SET DRMDBBACKUPEXPIREDAYS (Specify Criteria for Database Backup Series
| Expiration) 561
| SET DRMFILEPROCESS (Specify File Processing) 563
| SET DRMINSTRPREFIX (Specify the Prefix for Recovery Plan Instructions
| Filenames) 565

SET DRMNOTMOUNTABLENAME (Specify the Not Mountable Location Name) 568
SET DRMPLANPREFIX (Specify a Prefix for Recovery Plan File Names) 570
SET DRMPLANVPOSTFIX (Specify Replacement Volume Names) 573
SET DRMPRIMSTGPOOL (Specify the Primary Storage Pools to be Managed by DRM) 575
SET DRMVAULTNAME (Specify the Vault Name) 577
SET EVENTRETENTION (Specify the Retention Period for Event Records) . . . 578
SET LICENSEAUDITPERIOD (Set License Audit Period) 580
SET LOGMODE (Set Mode for Saving Recovery Log Records) 582
SET MAXCMDRETRIES (Set Number of Times Scheduler Retries Commands) . 585
SET MAXSCHEDSESSIONS (Set Maximum Scheduled Sessions) 587
SET PASSEXP (Set Password Expiration Date) 589
SET QUERYSCHEDPERIOD (Set Query Period for Polling Client Nodes) 591
SET RANDOMIZE (Randomly Distribute Scheduled Start Times) 593
SET REGISTRATION (Set Open or Closed Registration) 595
SET RETRYPERIOD (Set Time between Retry Attempts) 597
SET SCHEDMODES (Select a Central Scheduling Mode) 599
SET SERVERNAME (Specify the Server Name) 601
UNLOCK ADMIN (Unlock an Administrator) 602
UNLOCK NODE (Unlock a Client Node) 603
UPDATE ADMIN (Update an Administrator) 604
UPDATE COPYGROUP (Update a Copy Group) 606
UPDATE DBBACKUPTRIGGER (Update the Database Backup Trigger) 614
UPDATE DEVCLASS (Change the Attributes of a Device Class) 617
Syntax for Updating a Device Class with a Device Type of 4MM 618
Syntax for Updating a Device Class with a Device Type of 8MM 621
Syntax for Updating a Device Class with a Device Type of DLT 624
Syntax for Updating a Device Class with a Device Type of FILE 627
Syntax for Updating a Device Class with a Device Type of GENERICTAPE . 628
Syntax for Updating a Device Class with a Device Type of 3570 630
Syntax for Updating a Device Class with a Device Type of QIC 633
Syntax for Updating a Device Class with a Device Type of REMOVABLEFILE 636
UPDATE DOMAIN (Update a Policy Domain) 639
UPDATE DRIVE (Update a Drive) 641
UPDATE LIBRARY (Update a Library) 643
UPDATE LIBVOLUME (Change the Status of a Storage Volume) 645
UPDATE MACHINE (Update Machine Information) 647
UPDATE MGMTCLASS (Update a Management Class) 650
UPDATE NODE (Update a Client Node) 654
UPDATE POLICYSET (Update a Policy Set) 657
UPDATE RECOVERYMEDIA (Update Recovery Media) 659
UPDATE SCHEDULE (Update a Client or an Administrative Command Schedule) 662
Updating Client Schedules 662
Updating Administrative Command Schedules 669
UPDATE STGPOOL (Change the Attributes of a Storage Pool) 677
UPDATE VOLHISTORY (Update Information about a Database Dump, Database Backup, or Export Volume) 690
UPDATE VOLUME (Change the Attributes of One or More Storage Pool Volumes) 692

VALIDATE POLICYSET (Verify a Policy Set) 698
VARY (Bring a Random Access Volume Online or Offline) 701

Appendix A. Miscellaneous Utilities 705
DSMFMT (Formatting Files for the Server) 706
DSMLABEL (Labeling Volumes) 708
GETIPXAD (Get the IPX/SPX Address) 711

Appendix B. Recovery Log Extension Command 713
DSMSERV EXTEND LOG (Emergency Log Extension) 714

Appendix C. Database Recovery Commands 717
DSMSERV DISPLAY DBBACKUPVOLUME (Display Database Backup Volume Information) 718
DSMSERV DISPLAY DBVOLUMES (Display Database Volume Information) . . . 721
DSMSERV DISPLAY LOGVOLUMES (Display Recovery Log Volume Information) 723
DSMSERV RESTORE DB (Restore the Database) 725

Appendix D. Database Salvage Commands 735
DSMSERV DUMPDB (Dump the Database) 736
DSMSERV INSTALL (Install the Database and Log) 741
DSMSERV LOADDB (Reload the Database) 744
DSMSERV AUDITDB (Verify Database Information) 748

Appendix E. Tailoring Server Options 753
Modifying the Server Options File 753
Setting Communication Options 753
Setting Client-Server Options 754
Setting Date, Number, Time, and Language Options 754
Setting Database and Recovery Log Options 755
Setting Group Options 755
Setting Miscellaneous Options 756
Requesting Information about Server Options 757
BUFPoolsize 757
COMMTimeout 757
DATEformat 758
DEVCONFig 758
EXPINterval 759
EXPQUiet 760
IDLETimeout 760
IPXBuffersize 761
IPXSocket 761
LANAdapter 762
LANGuage 762
LOGPoolsize 763
MAXSessions 763
MESsageformat 764
MIRRORRead 764

MIRRORWrite 765
MOVEBatchsize 766
MOVESizethresh 766
NAMEDpipename 766
NETBIOSBuffersize 767
NETBiosname 767
NETBIOSSession 768
NOAUDITStorage 768
NUMberformat 769
STAtusmsgcnt 769
TCPPort 770
TCPNodelay 770
TCPWindowsize 770
TIMEformat 771
TXNGroupmax 771
VOLumeHistory 773

Glossary 775

Index 791

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Preface

ADSTAR Distributed Storage Manager (ADSM) is a client/server program that provides storage management to customers in a multivendor computer environment.

ADSM provides an automated, centrally scheduled, policy-managed backup, archive, and space management facility for file-servers and workstations.

This publication provides reference information for administrators of ADSM.

You can define and manage ADSM processes through administrator commands or a graphical user interface.

Who Should Read This Publication

This reference is intended for anyone who has been registered as an administrator. While ADSM can be managed by a single administrator, administrative responsibilities can be divided among a number of people as an installation requires.

All of the administrator commands you need to operate and maintain ADSM can be invoked either from the server console or by using an administrative client running on a workstation connected to the server.

What You Should Know Before Reading This Publication

You should be familiar with the operating system on which the server resides and the communication protocols required for the client/server environment.

For information on product requirements for ADSM, see *ADSM Licensed Program Specifications*.

You also need to understand the storage management practices of your organization, such as how you are currently backing up your workstation files and how you are using random access media and sequential access media.

For information on installing ADSM, see *ADSM Quick Start*.

ADSTAR Distributed Storage Manager Publications

The following table lists ADSM publications.

The ADSM library is also available in softcopy on the *ADSM Online Library* CD-ROM (order number SK2T-1893).

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Short Title	Publication Title	Order Number
ADSM Messages	*ADSTAR Distributed Storage Manager: Messages*	SH35-0133
ADSM License Information	*ADSTAR Distributed Storage Manager for Windows NT: License Information*	GC35-0234
ADSM Quick Start	*ADSTAR Distributed Storage Manager for Windows NT: Quick Start*	GC35-0235
ADSM Administrator's Guide	*ADSTAR Distributed Storage Manager for Windows NT: Administrator's Guide*	GC35-0236
ADSM Using the UNIX HSM Clients	*ADSTAR Distributed Storage Manager: Using the UNIX Hierarchical Storage Management Clients*	SH26-4030
ADSM V2 Using the Apple Macintosh Backup-Archive Client	*ADSTAR Distributed Storage Manager Version 2: Using the Apple Macintosh Backup-Archive Client*	SH26-4051
ADSM Using the UNIX Backup-Archive Clients	*ADSTAR Distributed Storage Manager Version 2: Using the UNIX Backup-Archive Clients*	SH26-4052
ADSM V2 Using the OS/2 Backup-Archive Client	*ADSTAR Distributed Storage Manager Version 2: Using the OS/2 Backup-Archive Client*	SH26-4053
ADSM V2 Using the DOS Backup-Archive Client	*ADSTAR Distributed Storage Manager Version 2: Using the DOS Backup-Archive Client*	SH26-4054
ADSM V2 Using the Novell NetWare Backup-Archive Client	*ADSTAR Distributed Storage Manager Version 2: Using the Novell NetWare Backup-Archive Client*	SH26-4055
ADSM V2 Using the Microsoft Windows Backup-Archive Clients	*ADSTAR Distributed Storage Manager Version 2: Using the Microsoft Windows Backup-Archive Clients*	SH26-4056
ADSM Using the Lotus Notes Backup Agent	*ADSTAR Distributed Storage Manager: Using the Lotus Notes Backup Agent*	SH26-4047
ADSM Installing the Clients	*ADSTAR Distributed Storage Manager: Installing the Clients*	SH26-4049
ADSM Client Reference Cards	*ADSTAR Distributed Storage Manager: Client Reference Cards*	SX26-6013

IBM International Technical Support Center Publications (Redbooks)

The International Technical Support Center (ITSC) publishes redbooks, books on specialized topics such as using ADSM to back up databases. You can order publications through your IBM representative or the IBM branch office serving your locality. You can also search for and order books of interest to you by visiting the IBM Redbooks home page on the World Wide Web at this address:

http://www.redbooks.ibm.com/redbooks

Software Developer's Program

The IBM Storage Systems Division (SSD) Software Developer's Program provides a range of services to software developers who want to use the ADSM application programming interface (API). Information about the SSD Software Developer's Program is available in:

- IBMSTORAGE forum on CompuServe
- SSD Software Developer's Program Information Package

To obtain the Software Developer's Program Information Package:

1. Call 800-4-IBMSSD (800-442-6773). Outside the U.S.A., call 408-256-0000.
2. Listen for the Storage Systems Division Software Developer's Program prompt.
3. Request the Software Developer's Program Information Package.

Translations

Selected ADSM publications have been translated into languages other than American English. Contact your IBM representative for more information about the translated publications and whether these translations are available in your country.

Do You Have Comments or Suggestions?

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Chapter 1. Using Syntax Diagrams

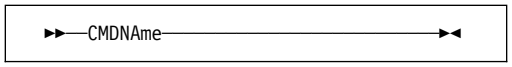
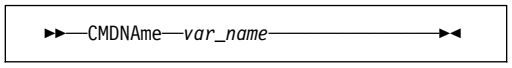
This section describes how to read the syntax diagrams included in the following sections for each administrator command.

To read a syntax diagram, follow the path of the line. Read from left to right and top to bottom.

- The ►►— symbol indicates the beginning of a syntax diagram.
- The —► symbol, at the end of a line, indicates that the syntax diagram continues onto the next line.
- The ►— symbol, at the beginning of a line, indicates that a syntax diagram continues from the previous line.
- The —►◄ symbol indicates the end of a syntax diagram.

Syntax items (for example, a keyword or variable) may be:

- Directly on the line (required)
- Above the line (default)
- Below the line (optional)

Syntax Diagram Description	Example
Abbreviations: Uppercase letters denote the shortest acceptable abbreviation. If an item appears entirely in uppercase letters, it cannot be abbreviated. You can type the item in uppercase letters, lowercase letters, or any combination. In this example, you can enter CMDNA, CMDNAM, or CMDNAME in any combination of uppercase and lowercase letters.	
Symbols: You must code these symbols exactly as they appear in the syntax diagram.	***** Asterisk **:** Colon **,** Comma **=** Equal Sign **-** Hyphen **()** Parentheses **.** Period
Variables: Highlighted lowercase items (*like this*) denote variables. In this example, *var_name* represents a variable you must specify when you code the CMDNAME command.	

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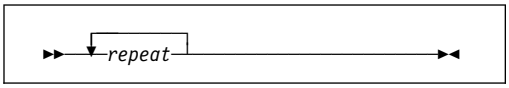
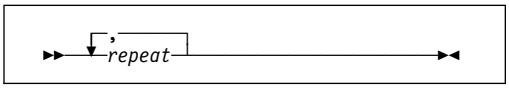
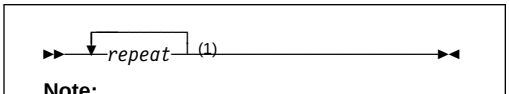
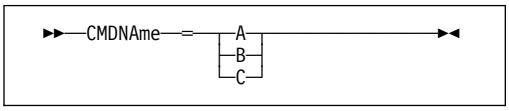
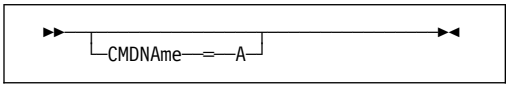
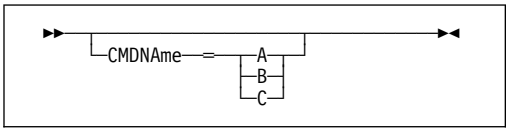
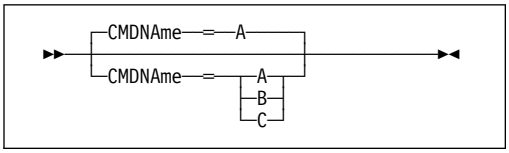
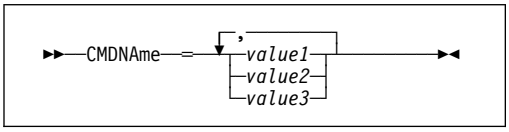
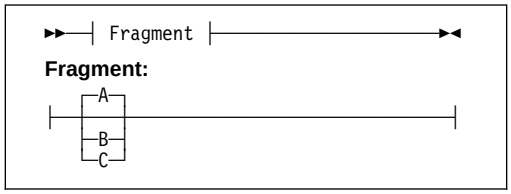
Syntax Diagram Description	Example
Repetition: An arrow returning to the left means that the item can be repeated. A character within the arrow means you must separate repeated items with that character. A footnote (1) by the arrow refers to a limit that tells how many times the item can be repeated.	   **Note:** 1 Specify *repeat* up to 5 times.
Required Choices: When two or more items are in a stack and one of them is on the line, you *must* specify one item. In this example, you must choose CMDNAME=A, CMDNAME=B, or CMDNAME=C. Do not include any blanks immediately before or after the equal sign (=).	
Optional Choice: When an item is below the line, the item is optional. In this example, you can choose CMDNAME=A or nothing at all. Do not include any blanks immediately before or after the equal sign (=). When two or more items are in a stack below the line, all of them are optional. In this example, you can choose CMDNAME=A, CMDNAME=B, CMDNAME=C, or nothing at all. Do not include any blanks immediately before or after the equal sign (=).	 
Defaults: Defaults are above the line. The system uses the default unless you override it. You can override the default by coding an option from the stack below the line. In this example, CMDNAME=A is the default. You can also code CMDNAME=A, CMDNAME=B or CMDNAME=C. Do not include any blanks before or after the equal sign (=).	
Repeatable Choices: A stack of items followed by an arrow returning to the left means that you can select more than one item or, in some cases, repeat a single item. In this example, you can choose more than one value, with each name delimited with a comma. Do not include any blanks before or after the equal sign (=).	

Syntax Diagram Description	Example
Syntax Fragments: Some diagrams, because of their length, must fragment the syntax. The fragment name appears between vertical bars in the diagram. The expanded fragment appears in the diagram after all other parameters or at the bottom of the diagram. The expanded fragment is identified by a heading with the fragment name. Commands appearing directly on the line are required. In this example, the fragment is named “Fragment.”	

Chapter 2. Entering Administrative Commands

This section includes the following information about entering ADSTAR Distributed Storage Manager (ADSM) commands:

- Descriptions of the components of a command
- Rules for entering administrative commands
- How ADSM processes administrative commands
- How ADSM formats command output
- Instructions for using wildcard characters
- Naming conventions for ADSM objects

Command Components

An administrative command can include one or more of these attributes:

- Command name
- Positional parameters
- Keyword parameters

The attributes of administrative commands are also discussed in Chapter 1, “Using Syntax Diagrams” on page 1.

Command Name

The first component of a command is the command name. The command name is the unique identifier for the command. It can consist of a single action word, such as HALT or ENABLE, or it can consist of an action word and an object for the action, such as DEFINE DOMAIN.

You can enter the entire command name or the abbreviation specified in the syntax diagram for the command.

Positional Parameters

Some commands have required or optional positional parameters. Positional parameters must be entered in the order indicated in the syntax diagram for a command.

For example, to copy a policy set, enter the name of the policy domain to which the policy set belongs, the name of the policy set you want to copy, and the name you want to assign to the copy, in that order:

```
COPy POlicyset domain1 oldset newset
```

Keyword Parameters

Some commands have required or optional keyword parameters. When included in a command, a keyword parameter must follow any positional parameters in the command. A keyword parameter consists of a keyword, followed by an equal sign, followed by a value. Do not include any blanks immediately before or after the equal

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sign (=). A keyword parameter can, for example, provide a description of an object, identify an object (such as a storage pool or policy domain), or specify a setting for an option.

For example, to include a description for a new policy domain, enter:

```
DEFine DOmain acctg DESCription="Accounting department"
```

You can enter either the entire keyword, or the abbreviation identified in the syntax diagram for the command.

Command Entry Rules

The following are general rules for entering ADSM administrative commands:

- Enter a command in any column of the input line.
- Unless otherwise noted, commands can be specified in any combination of uppercase and lowercase characters.
- If a parameter allows a list of values, enter the values immediately following the equal sign and delimit the value with a comma. For example,

  ```
  CLasses=policy,storage
  ```

- If a description value (a string of text) for a parameter begins with a single or double quote or contains any embedded blanks or equal signs, you must surround the value in either single (') or double (") quotation marks. The opening and closing quotation marks must be the same type of quotation marks. For example, if the opening quotation is a single quotation mark, the closing quotation mark must also be a single quotation mark. See the following table for details on how to enter description values.

  For example, to register a new client node named Louie, with a password of secret, and with his title included as contact information, enter:

  ```
  REGister Node louie secret CONtact="manager of Dept. ABC"
  ```

  The following table presents ways of entering a description value for the CONtact parameter, using the REGISTER NODE command as an example. The value can contain quotation marks, embedded blanks, or equal signs.

For this description	Enter this
manager	CONtact=manager
manager's	CONtact="manager's" **or** CONtact='manager''s'
"manager"	CONtact='"manager"' **or** CONtact="""manager"""
manager's report	CONtact="manager's report" **or** CONtact='manager''s report'
manager's "report"	CONtact='manager''s "report"'
manager=Dept. ABC	CONtact='manager=Dept. ABC'
manager reports to Dept. DEF	CONtact='manager reports to Dept. DEF' **or** CONtact="manager reports to Dept. DEF"

Processing Administrative Commands

ADSM processes administrator commands in one of two ways:

Foreground
Background

ADSM sends you a message indicating:

- Whether the command completed successfully (in the case of a foreground process)
- Whether the command has been sent to the server to be processed (in the case of a background process)
- A confirmation message, in the case of commands that affect the availability of the server or data managed by the server. (Unless the command is issued from the server console or from an administrative client with the NOCONFIRM option.)

Commands Processed in the Foreground

Foreground processing means that each command you issue must complete before you can issue another command. For example, when you enter a query command, the information you request is sent to your screen. You cannot issue another command until this happens. It is possible for additional commands to be issued from different administrative clients while your command is processed.

You cannot cancel commands that are processed in the foreground. When you issue a QUERY command from the administrative client, multiple screens of output may be generated. If this occurs and additional output is not needed, the administrator can cancel the display of output to the client workstation. While canceling does not end the processing of the command, it ends any further display of command output.

Commands Processed in the Background

Background processing permits you to enter commands while the server is processing a previously issued command.

When you enter a command that creates a background process, ADSM submits a request to the server to perform the task identified in the command. The following is a list of commands that can generate background processes:

AUDIT LIBRARY	EXPORT NODE
AUDIT LICENSE	EXPORT POLICY
AUDIT VOLUME	EXPORT SERVER
BACKUP DB	EXTEND LOG
BACKUP STGPOOL	IMPORT ADMIN
CHECKIN LIBVOLUME	IMPORT NODE
CHECKOUT LIBVOLUME	IMPORT POLICY
DEFINE DBCOPY	IMPORT SERVER
DEFINE LOGCOPY	MOVE DATA
DELETE DBVOLUME	PREPARE
DELETE FILESPACE	REDUCE DB
DELETE LOGVOLUME	REDUCE LOG
DELETE VOLUME	RESTORE STGPOOL
EXPIRE INVENTORY	RESTORE VOLUME
EXPORT ADMIN	VARY

Each background process is assigned a process number. You can cancel commands that generate background processes using this process number.

Table 1 identifies the commands you use to obtain the status and process number of a background process and how to cancel a background process. If a background process is active when you cancel it, the server stops the process. Any changes that are uncommitted are rolled back, however, changes that are committed are not rolled back.

Table 1. Querying and Canceling a Process

Command	Description
QUERY PROCESS	Displays information about one or all background server processes.
CANCEL PROCESS	Cancels a background server process.

Formatting Command Output on a Terminal

ADSM formats command output according to your screen or window width. If the width of your screen or window is not wide enough to display the output horizontally, ADSM arranges and displays the information vertically.

Using Wildcard Characters

In some commands, such as the query commands, you can use wildcard characters to create a pattern-matching expression that specifies more than one object. Using wildcard characters makes it easier to tailor a command to your needs.

The wildcard characters you use depend on the operating system from which you issue commands. For example, you can use wildcard characters such as an asterisk (*) to

match any (0 or more) characters or you can use a question mark (?), or a percent sign (%) to match exactly one character.

Table 2 provides references to wildcard characters for some operating systems. Use wildcard characters appropriate for your system.

Table 2. Wildcard Characters by Environment

Environment	Match-Any	Match-Exactly-One
AIX/UNIX	*	?
HP-UX	*	?
AS/400	*	%
CMS	*	%
DOS	*	?
OS/2	*	?
SunOS	*	?
TSO	*	%
Windows	*	?

For example, if you want to query all the management classes whose names begin with DEV in all the policy sets in DOMAIN1, and your system uses an asterisk as the *match-any* character, you can enter:

```
Query MGmtclass domain1 * dev*
```

Or, if you want to query the first nine management classes in POLICYSET1 in DOMAIN1, and POLICYSET1 contains twelve management classes named MC1 through MC12, and your system uses a question mark as the match-one character, you can enter:

```
Query MGmtclass domain1 policyset1 mc?
```

ADSM displays information about management classes named MC1 through MC9.

Examples for Match-Any Characters

Table 3 shows additional examples using wildcard characters to match any characters.

Table 3. Match-Any Character

Pattern	Matches	Does Not Match
ab*	ab, abb, abxxx	a, b, aa, bb
ab*rs	abrs, abtrs, abrsrs	ars, aabrs, abrss
ab*ef*rs	abefrs, abefghrs	abefr, abers

Examples for Match-Exactly-One Character

Table 4 shows additional examples using wildcard characters to match exactly one character. The question mark (?) can be replaced by a percent sign (%) if your platform uses that character instead of ?.

Table 4. Match-Exactly-One Character

Pattern	Matches	Does Not Match
ab?	abc	ab, abab, abzzzz
ab?rs	abfrs	abrs, abllrs
ab?ef?rs	abdefjrs	abefrs, abdefrs, abefjrs
ab??rs	abcdrs, abzzrs	abrs, abjrs, abkkkrs

Naming Conventions

This section provides information about naming conventions for ADSM objects.

Naming Volumes

When you use DEFINE commands to define volumes for the database, recovery log and storage pools, the volume name is dependent on the type of sequential access media or random access media you are using. This publication provides the command syntax and rules to follow when naming these volumes. For a detailed discussion on setting up these volumes, see *ADSM Administrator's Guide*.

Case-Sensitivity

When referring to file space names, you must specify the file space name using the exact capitalization that is used by ADSM. Use the QUERY FILESPACE command to find out the correct capitalization.

Naming Restrictions for Objects

ADSM restricts the number and type of characters that you can use to name ADSM objects.

Note: ADSM object names cannot contain any embedded blanks or equal signs.

Maximum Length

The following list shows the maximum length permitted for naming objects in ADSM:

Type of Name	Maximum Length
Administrators	64
Device classes	30
Management classes	30
Nodes	64
Passwords	64
Policy domains	30
Policy sets	30
Schedules	30
Server name	64
Storage pools	30

Valid Characters

The following characters are available to you for defining ADSM object names:

Characters	Character Names
A–Z	Any letter, A through Z
0–9	Any number, 0 through 9
_	Underscore
.	Period
-	Hyphen
+	Plus
&	Ampersand

Chapter 3. Using the Command-Line Interface

This chapter provides information about:

- Using the server console session
- Using the administrative client session
- Using administrative client options
- Using continuation characters to issue long commands
- Redirecting command output to a file
- Using macros to issue commands

Using the Server Console Session

ADSM provides an administrative user ID named SERVER_CONSOLE that allows you to administer the server from the server console after ADSM is installed. At installation, SERVER_CONSOLE is automatically registered as an administrator and is given system authority. You can use the SERVER_CONSOLE administrative ID to issue ADSM administrative commands.

Because the SERVER_CONSOLE administrative ID is provided with ADSM, there are certain functions you cannot complete against this user ID. These include:

- Registering or updating SERVER_CONSOLE
- Locking or unlocking SERVER_CONSOLE from ADSM
- Renaming SERVER_CONSOLE
- Removing SERVER_CONSOLE

The SERVER_CONSOLE administrative ID does *not* receive a confirmation message when issuing commands that affect the availability of the server or data managed by the server. For more information on how to issue commands from the SERVER_CONSOLE administrative ID, see the *ADSM Quick Start*.

Using the Administrative Client Session

The administrative command-line client is a program that allows administrators to control and monitor the server from a remote workstation rather than from the server console.

The administrative client program can be installed on a workstation, personal computer, or terminal running in one of the following environments:

- Digital Equipment Corporation (DECstation)
- Hewlett Packard HP-UX for HP 9000, Series 700 and Series 800
- IBM Advanced Interactive Executive (AIX) for the RISC System/6000
- IBM Disk Operating System (DOS)
- IBM MVS Time Sharing Option (TSO)
- IBM Operating System/2 (OS/2)
- IBM VM CMS
- Microsoft Windows

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- Microsoft Windows NT
- Santa Cruz Operation (SCO)
- Sun Microsystems SunOS

You can start an administrative client session by using any of the following modes:

- Console
- Batch
- Mount
- Interactive

Console Mode

Use the console mode from an administrative client to monitor ADSM activities. While the system is running in console mode, you cannot enter any administrative commands from the client session.

In console mode, you can monitor basic server activities as they occur or you can capture processing messages to an output file. For example, you can monitor migration processes and clients logging on to ADSM.

Starting an Administrative Client Session in Console Mode

For example, to start an administrative client session in console mode on an OS/2 client:

1. Enter the DSMADMC command with the consolemode option:

   ```
   dsmadmc -consolemode
   ```

2. Enter your ADSM administrator ID.
3. Enter your ADSM administrator password.

   You are prompted for a password if authentication is turned on for the server. If you do not want to be prompted for your user ID and password, enter the DSMADMC command with the ID and PASSWORD options.

   To have ADSM write all terminal output to a file, specify the OUTFILE option with a destination file name. To write output to the SAVE.OUT file, enter:

   ```
   dsmadmc -id=sullivan -password=secret -consolemode -outfile=save.out
   ```

For more information about the ID, PASSWORD, CONSOLEMODE, and OUTFILE options, see “Using Administrative Client Options” on page 17.

Ending an Administrative Client Session in Console Mode

To end an administrative client session in console mode, use one of the following keyboard break sequences:

Environment	Break Sequence
AIX and UNIX-based clients	Ctrl+C
CMS	HX
DOS	Ctrl+C, Ctrl+Break
OS/2	Ctrl+C, Ctrl+Break
SunOS	Ctrl+C

Environment	Break Sequence
TSO	ATTN
Windows and Windows NT	Ctrl+C, Ctrl+Break

Mount Mode

Use the mount mode from an administrative client to monitor ADSM removable-media mount activities. While the system is running in mount mode, you cannot enter any administrative commands from the client session.

Starting an Administrative Client Session in Mount Mode

For example, to start an administrative client session in mount mode on an OS/2 client:

1. Enter the DSMADMC command with the MOUNTMODE option:

   ```
   dsmadmc -mountmode
   ```

2. Enter your ADSM administrator ID.
3. Enter your ADSM administrator password.

   You are prompted for a password if authentication is turned on for the server. If you do not want to be prompted for your user ID and password, enter the DSMADMC command with the ID and PASSWORD options.

   To have ADSM write all terminal output to a file, specify the OUTFILE option with a destination file name. On OS/2, for example, enter:

   ```
   dsmadmc -id=sullivan -password=secret -mountmode -outfile=save.out
   ```

   For more information on the ID, PASSWORD, MOUNTMODE, and OUTFILE options, see “Using Administrative Client Options” on page 17.

Ending an Administrative Client Session in Mount Mode

To end an administrative client session in mount mode, use the Ctrl+C keyboard break sequence.

Batch Mode

Use batch mode for your administrative client session to enter a single administrator command or a MACRO command.

To start an administrative client session in batch mode, a server session must be available. Your administrative client session automatically ends when the command or macro has executed.

To start an administrative client session in batch mode, enter the DSMADMC command with your user ID and password, using the ID and PASSWORD options, respectively. On OS/2, for example, to issue the ENABLE command, enter:

```
dsmadmc -id=sullivan -password=secret enable
```

You can enter any of the other DSMADMC command options (*except* CONSOLEMODE or MOUNTMODE) that you want to use.

In batch mode, you must enter the complete command on one line. If a command does not fit on one line, enter the command by using a macro file. If you specify a parameter with a string of text using batch mode, enclose the text in single quotation marks (' ') in the macro file. Double quotes are not allowed in batch mode. For more information about using macro files, see “Using Macros to Issue Commands” on page 21.

Interactive Mode

Use the interactive mode from an administrative client to enter a series of administrative commands. To start an administrative client session in interactive mode, a server session must be available. To ensure the availability of server sessions for both administrative and client node sessions, the interactive mode of the administrative client is disconnected if one or more of the following conditions is true:

- The server was stopped using the HALT command.
- The administrative client session did not issue any commands for the length of time (in minutes) specified in the server options file.
- The administrative client session was canceled with the CANCEL SESSION command.

You can automatically restart your administrative client session by entering another command.

Starting an Administrative Client Session in Interactive Mode

For example, to start an administrative client session in interactive mode on an OS/2 client:

1. Enter `dsmadmc`
2. Enter your ADSM administrator ID.
3. Enter your ADSM administrator password.

   You are prompted for a password if authentication is turned on for the server. If you do not want to be prompted for your user ID and password, enter the DSMADMC command with the ID and PASSWORD options. On OS/2, for example, enter:

   ```
   dsmadmc -id=sullivan -password=secret
   ```

   In addition to the ID and PASSWORD options, you can use any of the administrative client options (except CONSOLEMODE or MOUNTMODE). For more information on the administrative client options, see “Using Administrative Client Options” on page 17.
4. Enter an administrative command each time ADSM displays the **adsm>** prompt.

When command processing is complete, the **adsm>** will appear and the administrator can then perform additional work. Command processing can be stopped by either canceling the existing client session or stopping the client program.

You can use continuation characters in the interactive mode of the administrative client. For more information, see “Using Continuation Characters” on page 18.

Ending an Administrative Client Session in Interactive Mode

Use the QUIT command to end an administrative client session in interactive mode.

Using Administrative Client Options

In all administrative client modes, the administrative client options modify your administrative client session responses.

The following administrative client options are valid from an administrative client session only:

-ID=*userid*
Specifies the ADSM administrator's user ID.

-PAssword=*password*
Specifies the ADSM administrator's password.

-NOConfirm
Specifies that ADSM does not request confirmation before executing commands that affect the availability of the server or data managed by the server.

-Quiet
Specifies that ADSM does not display standard output messages to your screen. However, when you use this option, certain error messages still appear.

-CONsolemode
Specifies that ADSM runs in console mode. All unsolicited server console output is echoed to your screen. You cannot enter any administrator commands while ADSM is running in console mode.

-MOUNTmode
Specifies that ADSM runs in mount mode. All server removable-media mount messages are echoed to your screen. You cannot enter any administrator commands while running in mount mode.

-Itemcommit
Specifies that ADSM commits commands inside a macro as each command is executed. For more information, see “Controlling Command Processing in a Macro” on page 23.

-OUTfile=*filename*
Specifies that ADSM writes all output to a specified file. In interactive or console modes, the output displays on your screen. In batch mode, output is written to the specified file only.

-OUTfile
Specifies that ADSM writes all output from a command to the standard output, which is usually your screen, in the same format that redirection characters (> or >>) format output in interactive mode. This option is only available in batch

mode, and is primarily used to redirect output from a command. For more information, see “Redirecting Command Output to a File in Batch and Interactive Modes” on page 18.

Besides the options listed here, you can also specify any option that is in the client options file. Each option must preceded with a hyphen and delimited with a space.

Using Continuation Characters

You can use continuation characters in the interactive mode (loop) of the administrative client or in a macro file. Continuation characters are useful when you want to execute a command that is longer than your screen or window width. You can:

- Enter a dash or a back slash at the end of the line you want to continue.

  For example:

  ```
  REGister Admin pease mypasswd -
  CONtact="David, ext1234"
  ```

  The maximum number of characters you can enter without a continuation character is 256. The maximum number of characters you can enter with continuation characters is 1500.

- Continue a list of values by entering a dash or a back slash, with no preceding blank spaces, after the last comma of the list that you enter on the first line. Then, enter the remaining items in the list on the next line with no preceding blank spaces. For example:

  ```
  STGpools=stg1,stg2,stg3,-
  stg4,stg5,stg6
  ```

- Continue a string of values enclosed in quotation marks by entering the first part of the string enclosed in quotation marks, followed by a dash or a back slash at the end of the line. Then, enter the remainder of the string on the next line enclosed in the *same* type of quotation marks.

  For example:

  ```
  CONtact="DAVID PEASE, BLDG. 100, ROOM 2B, SAN JOSE,"-
  "EXT. 1234, ALTERNATE CONTACT-NORM PASS, EXT. 2345"
  ```

  ADSM concatenates the two strings with no intervening blanks. You must use *only* this method to continue a quoted string of values across more than one line.

Redirecting Command Output to a File in Batch and Interactive Modes

Some platforms support redirection of output via special characters like >, >>, and |. You can save the output from a command by entering ADSM administrative client redirection characters at the end of the command. Redirection characters (>, >>, and |) direct the output of a command to a file you specify instead of to your screen.

This type of redirecting output is an alternative to using the -OUTfile=*filename* option. You can redirect output with the OUTfile option if you do not specify a destination filename. This option is only available in batch mode. ADSM formats the redirected

output as if you redirected the output in interactive mode. Redirection is only available from the administrative client in the batch and interactive modes. Redirection can also be used in console and mode modes in environments that support redirection natively.

You can use console or mount mode for your administrative client session to redirect command output to a program. This allows you to write your own programs to automate operations. For example:

```
dsmadmc -console -id=admin -pa=xxx | filter.exe
```

would redirect all output going to the administrative client in console mode to a program called filter.exe. The program then monitors the output for individual messages as they occur and takes appropriate action, such as sending mail to another user.

A single greater than sign (>) indicates that ADSM writes the output to a new file or writes over an existing file. For example, to write the output of a QUERY DOMAIN command to a new file, enter:

```
query domain acctg  > dominfo.acc
```

Double greater than signs (>>) indicates that ADSM appends the output to the end of an existing file. For example, to append the output of a QUERY DOMAIN command to the end of an existing file in interactive mode, enter:

```
query domain acctg  >> dominfo.acc
```

To append the output of a QUERY DOMAIN command to the end of an existing file in batch mode, enter:

```
dsmadmc query domain acctg  -outfile >> dominfo.acc
```

Redirection characters must be preceded by and followed by at least one blank space. If a file with the name you specify does *not* exist, ADSM creates a new file with that name.

You can redirect output from any command. However, the most common use for redirecting output is to save the output from query commands. The output from some query commands can be quite lengthy, and it can be easier for you to browse the contents of a file or, in some cases, print the contents of the file.

Normally, ADSM formats query output according to your screen or window width. If the data does not fit across the screen, then separate lines will be used for each output field. When you redirect the output of a query command, it is written to the output file with a line width of about 500 characters. This means that the output from query commands can format differently in redirected output. However, only the format of the output changes, the content is not modified.

File Naming Conventions for Redirected Output

When redirecting output to a file, follow the naming conventions of the administrative client running on your operating system. The naming conventions for some operating systems are presented below:

- On AIX- and UNIX-based operating systems, a file name is case-sensitive and can contain as many as 64 alphanumeric characters, with unlimited use of periods (.) for delimiting the file name.
- On DOS and Windows operating systems, a file name is not case-sensitive. You can specify an 8-character, alphanumeric file name with an optional 3-character, alphanumeric extension.
- On a Windows NT 3.5 operating system:
  - For high-performance file system (HPFS), a file name is not case-sensitive and can contain as many as 255 characters.
  - For file allocation table (FAT) file systems, a file name is not case-sensitive. You can specify an 8-character, alphanumeric file name with an optional 3-character, alphanumeric extension.
  - For NT file system (NTFS), a file name can contain as many as 255 characters (including spaces and periods).
- On a Windows NT 4.0 operating system:
  - For file allocation table (FAT) file systems, a file name is not case-sensitive. You can specify an 8-character, alphanumeric file name with an optional 3-character, alphanumeric extension.
  - For NT file system (NTFS), a file name can contain as many as 255 characters (including spaces and periods).
- On an OS/2 operating system:
  - For file allocation table (FAT) file systems, a file name is not case-sensitive. You can specify an 8-character, alphanumeric file name with an optional 3-character, alphanumeric extension.
  - For high-performance file system (HPFS), a file name is not case-sensitive and can contain as many as 255 characters.
- On a VM operating system, a file name is not case-sensitive. You can specify an 8-character, alphanumeric file name with an 8-character, alphanumeric file type.

  You can delimit the file name and file type with a period (fn.ft), or you can delimit them with a blank space. If you delimit them with a blank space, the file name and file type must be enclosed in matching quotation marks (`'fn ft'`).
- On an MVS operating system, a file name is not case-sensitive. You can specify a sequential file name, or a member of a PDS or PDSE that is from 1 to 44 alphanumeric characters. You can delimit the name with periods, using no more than 8 characters between each period. Each set of 8 characters must start with a letter, A through Z.

  In TSO, the normal TSO data set prefix rules apply. In general, the user ID is added only if the file name is not enclosed in quotation marks.

Using Macros to Issue Commands

A macro is a file that contains one or more ADSM administrative commands. You can only issue macros from the administrative client in batch or interactive modes.

The name for a macro file must follow the naming conventions of the administrative client running on your operating system. See "File Naming Conventions for Redirected Output" on page 19 for details.

A macro invoked from the **adsm>** prompt is called a high-level macro. Any macros invoked from within the high-level macro are called *nested* macros. You can include the MACRO command within a macro file to invoke other macros up to ten levels deep.

Creating a macro file to enter commands can be especially helpful when you want to issue commands that are used repeatedly. For example, you can create a macro file that contains a command to define a storage pool. By using variables for the keyword values in the file, you can define a storage pool without having to type all the keyword parameters.

You can also enter commands in a macro file to process related commands in a specific order. For example, you could create a macro file that contains commands to define a new schedule and to associate client nodes to that schedule. Or, you could create a macro file that contains commands to define a new policy set, validate it, and make it the active policy set for a policy domain.

In a macro that contains several commands, you can use the COMMIT and ROLLBACK commands to control command processing within the macro. See "Controlling Command Processing in a Macro" on page 23 for information about using those commands.

Writing Commands in a Macro File

When you write administrator commands in a macro, use the general rules stated in Chapter 2, "Entering Administrative Commands" on page 5. ADSM ignores any blank lines included in your macro. However, a completely blank line terminates a command that is continued (with continuation characters).

Refer to "Using Macros to Issue Commands" for information about how to name a macro file.

Here is an example of a macro called REG.MAC that registers and grants authority to a new administrator:

```
REGister Admin pease mypasswd        -
  CONtact='David Pease, x1234'
GRant AUTHority pease                -
  CLasses=Policy,STorage             -
  DOmains=domain1,domain2            -
  STGpools=stgpool1,stgpool2
```

This example uses continuation characters in the macro file to issue the commands. For more information on continuation characters, see “Using Continuation Characters” on page 18.

After you create a macro file, you can update the information it contains and use it again, or you can copy the macro file, make changes to the copy, and then run the copy.

Writing Comments in a Macro File

You can add comments to your macro file to document its purpose and functions.

To write a comment, write a slash and an asterisk (/*) to indicate the beginning of the comment, write the comment, and then write an asterisk and a slash (*/) to indicate the end of the comment. You can put a comment on a line by itself, or put it on a line that contains a command or part of a command.

For example, to use a comment to identify the purpose of a macro, write the following:

```
/* AUTH.MAC-Register new nodes  */
```

Or, to write a comment to explain something about a command or part of a command, write:

```
DOmain=domain1            /*Assign node to DOMAIN1  */
```

Comments cannot be nested and cannot span lines. Every line of a comment must contain the comment delimiters.

Using Substitution Variables in a Macro

You can use substitution variables in a macro to supply values for commands when you run the macro. When you use substitution variables, you can use a macro again and again, whenever you need to perform the same task for different objects or with different parameter values.

A substitution variable consists of a percent sign (%), followed by a number that indicates the number of the substitution variable. When you run the file with the MACRO command, you must replace the numbered substitution variable with a string.

For example, to create a macro named AUTH.MAC to register new nodes, write it as follows:

```
/* Register new nodes */
REGister Node %1 %2 -      /*  userid password                  */
  CONtact=%3 -             /* 'name, phone number'              */
  DOMain=%4                /*  policy domain                    */
```

Then, when you run the macro, you enter the values you want to pass to the server to process the command.

If your system uses the percent sign as a wildcard character, a pattern-matching expression in a macro where the percent sign is immediately followed by a numeric digit is interpreted by the administrative client as a substitution variable.

You cannot enclose a substitution variable in quotation marks. However, a value you supply as a substitution for the variable can be a quoted string.

For example, to register the node named DAVID with a password of DAVIDPW, with his name and phone number included as contact information, and assign him to the DOMAIN1 policy domain, enter:

```
MACRO auth.mac david davidpw "David Pease, x1234" domain1
```

Running the Commands in a Macro

You can enter the MACRO command in batch or interactive mode.

If the macro does not contain substitution variables, (such as the REG.MAC macro described in the “Writing Commands in a Macro File” on page 21), to run the macro simply enter the MACRO command with the name of the macro file. For example:

```
MACRO reg.mac
```

If the macro contains substitution variables, (such as the AUTH.MAC macro described in “Using Substitution Variables in a Macro” on page 22), include the values that you want to supply after the name of the macro. Each value is delimited by a space. For example:

```
MACRO auth.mac pease mypasswd "david pease, x1234" domain1
```

If you enter fewer values than there are substitution variables in the macro, ADSM replaces the remaining variables with null strings.

If you want to omit one or more values between values, enter a null string ("") for each omitted value. For example, if you omit the contact information in the previous example, you must enter:

```
MACRO auth.mac pease mypasswd "" domain1
```

Controlling Command Processing in a Macro

When you issue a MACRO command, the server processes all commands in the macro file in order, including commands contained in any nested macros. The server commits all commands in a macro after successfully completing processing for the highest-level macro. If an error occurs in any command in the macro or in any nested macro, the server terminates processing and rolls back any changes caused by all previous commands.

If you specify the ITEMCOMMIT option when you enter the DSMADMC command, the server commits each command in a macro individually, after successfully completing processing for each command. If an error occurs, the server continues processing and only rolls back changes caused by the failed command.

You can control precisely when commands are committed with the COMMIT command. If an error occurs while processing the commands in a macro, the server terminates processing of the macro and rolls back any uncommitted changes (commands that have been processed since the last COMMIT). Make sure your administrative client session is *not* running with the ITEMCOMMIT option if you want to control command processing with the COMMIT command.

Note: Commands that start background processes cannot be rolled back. For a list of commands that can start background processes, see "Commands Processed in the Background" on page 7.

You can test a macro before implementing it by using the ROLLBACK command.

You can enter the commands (except the COMMIT command) you want to issue in the macro, and enter ROLLBACK as the last command. Then, you can run the macro to verify that all the commands process successfully. Any changes to the database caused by the commands are rolled back by the ROLLBACK command you have included at the end. Remember to remove the ROLLBACK command before you make the macro available for actual use. Also, make sure your administrative client session is *not* running with the ITEMCOMMIT option if you want to control command processing with the ROLLBACK command.

If you have a series of commands that process successfully via the command line, but are unsuccessful when issued within a macro, there are probably dependencies between commands. It is possible that a command issued within a macro cannot be processed successfully until a previous command, that is issued within the same macro, is committed. Either of the following actions allow successful processing of these commands within a macro:

- Insert a COMMIT command before the command dependent on a previous command. For example, if COMMAND C is dependent upon COMMAND B you would insert a COMMIT command before COMMAND C. An example of this macro is:

  ```
  COMMAND A
  COMMAND B
  COMMIT
  COMMAND C
  ```

- Start the administrative client session using the ITEMCOMMIT option. This causes each command within a macro to be committed before the next command is processed.

Chapter 4. Using Commands Based on Privilege Class

In ADSM, there are five administrator privilege classes:

- System
- Policy
- Storage
- Operator
- Analyst

The authority granted to an administrator determines the administrative commands that the administrator can issue. After an administrator has been registered via the REGISTER ADMIN command, the administrator can issue a limited set of commands, including all query commands.

When you install ADSM, the server console is defined as a system administrator named SERVER_CONSOLE and is granted system privilege. For information on how to issue commands from the SERVER_CONSOLE administrative ID, refer to *ADSM Quick Start*.

The following sections describe each type of administrator privilege and the commands that can be issued by an administrator who has been granted the corresponding authority.

Commands Requiring System Privilege

An administrator with system privilege has the highest level of authority in ADSM. With system privilege an administrator can issue any administrative command and has authority to manage all policy domains and all storage pools.

Table 5 lists the commands that only administrators with system privilege can issue.

Table 5 (Page 1 of 4). System Privilege Commands

Command	Description
AUDIT LICENSES	Checks for compliance with defined licenses.
CANCEL PROCESS	Cancels a background server process.
COPY DOMAIN	Creates a copy of an existing policy domain.
COPY SCHEDULE (See note.)	Creates a copy of an existing schedule.
DEFINE DOMAIN	Defines a policy domain that can be assigned to one or more clients.
DEFINE DOMAIN	Defines a policy domain that can be assigned to one or more clients.
DEFINE MACHINE	Defines a machine for DRM.
DEFINE MACHNODEASSOCIATION	Associates an ADSM node with a machine.
DEFINE RECMEDMACHASSOCIATION	Associates recovery media with a machine.

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Table 5 (Page 2 of 4). System Privilege Commands

Command	Description
DEFINE RECOVERYMEDIA	Defines the media required to recover a machine.
DEFINE SCHEDULE (See note.)	Defines a schedule for a client operation or an administrative command.
DEFINE STGPOOL	Defines a storage pool as a named collection of server storage media.
DELETE DOMAIN	Deletes a policy domain along with any policy objects in the policy domain.
DELETE MACHINE	Deletes an existing machine.
DELETE MACHNODEASSOCIATION	Deletes association between a machine and node.
DELETE RECMEDMACHASSOCIATION	Deletes association between recovery media and a machine.
DELETE RECOVERYMEDIA	Deletes existing recovery media.
DELETE SCHEDULE (See note.)	Deletes a schedule from the database.
DELETE STGPOOL	Deletes a storage pool from server storage.
EXPIRE INVENTORY	Manually starts inventory expiration processing.
EXPORT ADMIN	Copies administrative information to external media.
EXPORT NODE	Copies client node information to external media.
EXPORT POLICY	Copies policy information to external media.
EXPORT SERVER	Copies all or part of the server to external media.
GRANT AUTHORITY	Assigns one or more privilege classes to an administrator.
IMPORT ADMIN	Restores administrative information from external media.
IMPORT NODE	Restores client node information from external media.
IMPORT POLICY	Restores policy information from external media.
IMPORT SERVER	Restores all or part of the server from external media.
INSERT MACHINE	Inserts machine characteristics or recovery instructions into the ADSM database.
LOCK ADMIN	Prevents an administrator from accessing ADSM.

Table 5 (Page 3 of 4). System Privilege Commands

Command	Description
PREPARE	Creates a recovery plan file
MOVE DRMEDIA	Moves DRM media onsite and offsite.
REGISTER ADMIN	Defines a new administrator without granting administrative authority.
REGISTER LICENSE	Registers a new license with the ADSM server.
REMOVE ADMIN	Removes an administrator from the list of registered administrators.
RENAME ADMIN	Changes an ADSM administrator's name.
REVOKE AUTHORITY	Revokes one or more privilege classes or restricts access to policy domains and storage pools.
SET ACCOUNTING	Specifies whether accounting records are created at the end of each client session.
SET ACTLOGRETENTION	Specifies the number of days to retain log records in the activity log.
SET AUTHENTICATION	Specifies whether clients are prompted for a password at the beginning of a session.
SET DRMCHECKLABEL	Specifies whether ADSM should read volume labels during MOVE DRMEDIA command processing.
SET DRMCOPYSTGPOOL	Specifies that copy storage pools are managed by DRM.
SET DRMCOURIERNAME	Specifies the name of the courier for the disaster recovery media.
SET DRMDBBACKUPEXPIREDAYS	Specifies criteria for database backup series expiration.
SET DRMFILEPROCESS	Specifies whether the MOVE DRMEDIA command processes files associated with a device type of file.
SET DRMINSTRPREFIX	Specifies the prefix portion of the path name for the recovery plan instructions.
SET DRMPLANVPOSTFIX	Specifies the replacement volume names in the recovery plan file.
SET DRMPLANPREFIX	Specifies the prefix portion of the path name for the recovery plan.
SET DRMPRIMSTGPOOL	Specifies that primary storage pools are managed by DRM.
SET DRMVAULTNAME	Specifies the name of the vault where DRM media is stored.
SET EVENTRETENTION	Specifies the number of days to retain event records.

Table 5 (Page 4 of 4). System Privilege Commands

Command	Description
SET LICENSEAUDITPERIOD	Specifies the number of days between automatic license audits.
SET LOGMODE	Sets the mode for saving records in the recovery log.
SET MAXCMDRETRIES	Specifies the maximum number of retries after a failed attempt to execute a scheduled command.
SET MAXSCHEDSESSIONS	Specifies the maximum number of client/server sessions available for processing scheduled work.
SET PASSEXP	Specifies the number of days after which a password is expired and must be changed.
SET QUERYSCHEDPERIOD	Specifies the frequency for clients to obtain scheduled work, in client-polling mode.
SET RANDOMIZE	Specifies the randomization of start times within a window for schedules in client-polling mode.
SET REGISTRATION	Specifies whether users can register themselves or must be registered by an administrator.
SET RETRYPERIOD	Specifies the time between retry attempts by the client scheduler.
SET SCHEDMODES	Specifies the central scheduling mode for the server.
SET SERVERNAME	Specifies the name by which the server is identified.
UNLOCK ADMIN	Enables a locked administrator to access ADSM.
UPDATE MACHINE	Changes the information of an existing machine.
UPDATE RECOVERYMEDIA	Changes the attributes of existing recovery media.
UPDATE ADMIN	Changes the password or contact information associated with any administrator.

Note: Indicates that this command is restricted by the authority granted to an administrator. Storage privilege is required only for administrative command schedules. Policy privilege is required for client operation schedules.

Commands Requiring Policy Privilege

An administrator with policy privilege can issue commands that relate to policy management objects such as policy domains, policy sets, management classes, copy groups, and schedules. The policy domains that an administrator can manage depend on the authority granted to them by an administrator with system privilege.

As an administrator with policy privilege, you can have unrestricted or restricted policy privilege.

Unrestricted policy privilege permits you to issue all of the administrator commands that require policy privilege. You can issue commands that affect all existing policy domains as well as any policy domains that are defined in the future. An unrestricted policy administrator cannot define, delete, or copy policy domains.

Restricted policy privilege permits you to issue administrator commands that affect one or more policy domains for which you have been explicitly granted authority. For example, the DELETE MGMTCLASS command requires you to have policy privilege for the policy domain to which the management class belongs.

Table 6 lists the commands that an administrator with policy privilege can issue.

Table 6 (Page 1 of 3). Policy Privilege Commands

Command	Description
ACTIVATE POLICYSET	Validates and activates a policy set within a policy domain.
ASSIGN DEFMGMTCLASS	Assigns an existing management class as the default for a specified policy set.
COPY MGMTCLASS	Creates a copy of an existing management class.
COPY POLICYSET	Creates a copy of an existing policy set.
COPY SCHEDULE (See note 2.)	Creates a copy of an existing schedule.
DEFINE ASSOCIATION	Associates one or more clients with a schedule.
DEFINE COPYGROUP	Defines a copy group for backup or archive processing within a specified management class.
DEFINE MGMTCLASS	Defines a management class within the policy domain and policy set specified.
DEFINE POLICYSET	Defines a policy set within the specified policy domain.
DEFINE SCHEDULE	Defines a schedule for a client operation or an administrative command.
DELETE ASSOCIATION	Deletes the association between one or more clients and a schedule.

Table 6 (Page 2 of 3). Policy Privilege Commands

Command	Description
DELETE COPYGROUP	Deletes a backup or archive copy group from a policy domain and policy set.
DELETE EVENT (See note 1.)	Deletes event records prior to a specified date and time.
DELETE FILESPACE	Deletes data associated with one or more client's filespaces.
DELETE MGMTCLASS	Deletes a management class and its copy groups from a policy domain and policy set.
DELETE POLICYSET	Deletes a policy set, including its management classes and copy groups, from a policy domain.
DELETE SCHEDULE (See note 2.)	Deletes a schedule from the database.
LOCK NODE	Prevents a client from accessing the server.
REGISTER NODE	Defines a client to the server and sets options for that user.
REMOVE NODE	Removes a client from the list of registered nodes for a specific policy domain.
RENAME FILESPACE	Renames a client filespace on the server.
RENAME NODE	Changes the name for an existing user that belongs to a specific policy domain.
UNLOCK NODE	Enables a locked user in a specific policy domain to access the server.
UPDATE COPYGROUP	Changes one or more attributes of a copy group.
UPDATE DOMAIN	Changes the attributes of a policy domain.
UPDATE MGMTCLASS	Changes the attributes of a management class.
UPDATE NODE	Changes the attributes associated with a client node.
UPDATE POLICYSET	Changes the description of a policy set.
UPDATE SCHEDULE (See note 2.)	Changes the attributes of a schedule.

Table 6 (Page 3 of 3). Policy Privilege Commands

Command	Description
VALIDATE POLICYSET	Verifies and reports on conditions the administrator must consider before activating the policy set.

Notes:

1. Indicates that this command can be restricted by policy domain. An administrator with unrestricted policy privilege or restricted policy privilege for a specified policy domain can issue this command.
2. Indicates that this command is restricted by the authority granted to an administrator. Storage privilege is required only for administrative command schedules. Policy privilege is required for client operation schedules.

Commands Requiring Storage Privilege

An administrator with storage privilege can issue commands that allocate and control storage resources for the server. The commands that an administrator can issue depend on the authority granted to them by and administrator with system privilege. As an administrator with storage privilege, you can have unrestricted or restricted storage privilege.

Unrestricted storage privilege permits you to issue all of the administrator commands that require storage privilege. You can issue commands that affect all existing storage pools as well as any storage pools that are defined in the future. You can also issue commands that affect the database and the recovery log. An unrestricted storage administrator cannot define or delete storage pools.

Restricted storage privilege permits you to issue administrator commands that only affect a storage pool for which you have been granted authority. For example, the DELETE VOLUME command only affects a storage pool volume that is defined to a specific storage pool.

Table 7 lists the commands an administrator with storage privilege can issue.

Table 7 (Page 1 of 3). Storage Privilege Commands

Command	Description
AUDIT LIBRARY	Ensures that an automated library is in a consistent state.
AUDIT VOLUME (See note.)	Compares database and storage pool information, and optionally, resolves any inconsistencies.
BACKUP DB	Backs up the ADSM database to sequential access volumes.
BACKUP DEVCONFIG	Backs up ADSM device information to a file.

Table 7 (Page 2 of 3). Storage Privilege Commands

Command	Description
BACKUP STGPOOL	Backs up a primary storage pool to a copy storage pool.
BACKUP VOLHISTORY	Records sequential volume history information in external files.
DEFINE DBBACKUPTRIGGER	Defines a trigger for automatic ADSM database backups.
CHECKIN LIBVOLUME	Checks a storage volume into an automated library.
CHECKOUT LIBVOLUME	Checks a storage volume out of an automated library.
DEFINE DBCOPY	Creates a volume copy of a database volume.
DEFINE DBVOLUME	Assigns a volume to be used for database storage.
DEFINE DEVCLASS	Defines a device class that can be used for storage pools, importing, or exporting.
DEFINE DRIVE	Assigns a drive to a library.
DEFINE LIBRARY	Defines an automated or manual library.
DEFINE LOGCOPY	Creates a volume copy of a recovery log volume.
DEFINE LOGVOLUME	Defines a disk volume to the recovery log.
DEFINE VOLUME (See note.)	Assigns a volume to be used for storage within a specified storage pool.
DELETE DBBACKUPTRIGGER	Deletes the database backup trigger.
DELETE DBVOLUME	Deletes a volume from the database.
DELETE DEVCLASS	Deletes a device class name.
DELETE DRIVE	Deletes a drive from a library.
DELETE LIBRARY	Deletes a library.
DELETE LOGVOLUME	Deletes a volume from the recovery log.
DELETE VOLHISTORY	Removes sequential volume history information from the volume history file.
DELETE VOLUME (See note.)	Deletes a volume from a storage pool.
EXTEND DB	Extends usable database storage within the volumes previously allocated for its use.
EXTEND LOG	Extends usable log storage within the volumes previously allocated for its use.
MOVE DATA (See note.)	Moves data from a specified storage pool volume to another storage pool volume.

Table 7 (Page 3 of 3). Storage Privilege Commands

Command	Description
REDUCE DB	Attempts to free up a database volume by reducing usable storage within the volumes defined.
REDUCE LOG	Attempts to free up a log volume by reducing usable storage within the volumes defined.
RESTORE STGPOOL	Restores files to a primary storage pool from copy storage pools.
RESTORE VOLUME	Restores files stored on specified volumes in a primary storage pool from copy storage pools.
UPDATE DBBACKUPTRIGGER	Changes one or more attributes of the database backup trigger.
UPDATE DEVCLASS	Changes the attributes of a device class.
UPDATE DRIVE	Changes the attributes of a drive.
UPDATE LIBRARY	Changes the attributes of a library.
UPDATE STGPOOL (See note.)	Changes the attributes of a storage pool.

Note: Indicates that this command can be restricted by storage pool. An administrator with unrestricted storage privilege or restricted storage privilege for a specified storage pool can issue this command.

Commands Requiring Operator Privilege

An administrator with operator privilege can issue commands that control the immediate operation of the server and the availability of storage media.

Table 8 lists the commands an administrator with operator privilege can issue.

Table 8 (Page 1 of 2). Operator Privilege Commands

Command	Description
CANCEL SESSION	Cancels one or all active sessions with the server.
DISABLE	Prevents new clients from accessing ADSM but permits existing sessions to continue.
DISMOUNT VOLUME	Dismounts a sequential, removable volume by the volume name.
ENABLE	Resumes server activity following the DISABLE command.
HALT	Shuts down the server immediately. (May be preceded by the DISABLE command.)
MOVE DRMEDIA	Moves DRM media onsite and offsite.
REPLY	Allows a request to continue processing.

Table 8 (Page 2 of 2). Operator Privilege Commands

Command	Description
UPDATE VOLUME	Updates the attributes of one or more storage pool volumes.
VARY	Specifies whether a disk volume is available to the server for use.

Commands Requiring Analyst Privilege

An administrator with analyst privilege can issue commands that reset the counters that track server statistics.

Table 9 lists the commands an administrator with analyst privilege can issue.

Table 9. Analyst Privilege Commands

Command	Description
RESET BUFPOOL	Resets the buffer pool statistics for the database.
RESET DBMAXUTILIZATION	Resets the maximum utilization statistic for the database.
RESET LOGCONSUMPTION	Resets the statistic on recovery log space used.
RESET LOGMAXUTILIZATION	Resets the maximum utilization statistic for the recovery log.

Commands Any Administrator Can Issue

Table 10 lists the commands any registered administrator can issue even if that administrator has not been granted any specific administrator privileges.

Table 10 (Page 1 of 3). Commands Issued by All Administrators

Command	Description
COMMIT	Makes changes to the database permanent.
HELP	Displays help for administrative commands.
MACRO	Runs a specified macro file.
QUERY ACTLOG	Searches for and displays messages from the server activity log.
QUERY ADMIN	Displays information about one or more ADSM administrators.
QUERY ASSOCIATION	Displays the clients associated with one or more schedules.

Table 10 (Page 2 of 3). Commands Issued by All Administrators

Command	Description
QUERY AUDITOCCUPANCY	Displays the server storage utilization for a client node.
QUERY CONTENT	Displays information about one or more files currently residing in a storage pool volume.
QUERY COPYGROUP	Displays the attributes of an existing copy group.
QUERY DB	Displays allocation information about the database.
QUERY DBBACKUPTRIGGER	Displays information about the database backup trigger.
QUERY DBVOLUME	Displays information about one or more database volumes.
QUERY DEVCLASS	Displays information about one or more device classes.
QUERY DOMAIN	Displays information about one or more policy domains.
QUERY DRIVE	Displays information about one or more drives.
QUERY DRMEDIA	Displays information about disaster recovery volumes.
QUERY DRMSTATUS	Displays DRM system parameters.
QUERY EVENT	Displays information about scheduled and completed events for selected clients.
QUERY FILESPACE	Displays information about data in one or more filespaces that belong to a client.
QUERY LIBRARY	Displays information about one or more libraries.
QUERY LIBVOLUME	Displays information about a library volume.
QUERY LOG	Displays allocation information about the recovery log.
QUERY LOGVOLUME	Displays information about one or more log volumes.
QUERY MACHINE	Displays information about one or more machines.
QUERY MGMTCLASS	Displays information about one or more management classes.
QUERY MOUNT	Displays information about mounted sequential access media.
QUERY NODE	Displays partial or complete information about one or more clients.
QUERY OCCUPANCY	Displays file space information by storage pool.

Table 10 (Page 3 of 3). Commands Issued by All Administrators

Command	Description
QUERY OPTION	Displays information about one or more options from the server options file.
QUERY POLICYSET	Displays information about one or more policy sets.
QUERY PROCESS	Displays information about one or all background server processes.
QUERY RECOVERYMEDIA	Displays media available for machine recovery.
QUERY REQUEST	Displays information about all pending mount requests.
QUERY SCHEDULE	Displays information about one or more schedules.
QUERY SESSION	Displays information about all active administrator and client sessions with ADSM.
QUERY STATUS	Displays the settings of server parameters, such as those selected by the SET commands.
QUERY STGPOOL	Displays information about one or more storage pools.
QUERY VOLHISTORY	Displays sequential volume history information that has been collected by the server.
QUERY VOLUME	Displays information about one or more storage pool volumes.
QUIT	Ends an interactive administrative client session.
ROLLBACK	Discards any uncommitted changes to the database since the last COMMIT was executed.

Chapter 5. Using Administrator Commands

This chapter describes the ADSM administrator commands.

Information for each command includes:

- A description of the tasks a command performs
- The administrator privilege class required to use the command
- A syntax diagram that identifies the required and optional parameters for the command
- Descriptions of each parameter of the command
- Usage notes (when appropriate)
- Examples of using the command
- A list of related commands

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ACTIVATE POLICYSET (Activate a New Policy Set)

Use the ACTIVATE POLICYSET command to specify an existing policy set as the ACTIVE policy set for a policy domain.

The ACTIVATE POLICYSET command will fail if the following conditions exist:

- A copy group within the policy set specifies a copy storage pool as a destination.
- A management class specifies a copy pool as the destination for space-managed files.
- A default management class is not defined.

When a policy set is activated, the contents of the policy set are copied to a policy set that has the reserved name ACTIVE. Once activated, there is no real relationship between the policy set that has been activated (copied to ACTIVE) and the contents of the ACTIVE policy set. The original policy set can still be modified, but the copied definitions in the ACTIVE policy set can only be modified by activating another policy set.

Because of this copying process, you should not assume that the definitions in the policy set that was last activated are the same as those in the ACTIVE policy set; the original policy set may have been modified since activation.

You can define multiple policy sets for a policy domain, but only one policy set can be active at a time. The current active policy set is replaced by the one you specify when you issue this command.

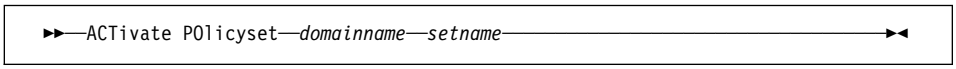
Prior to activating a policy set, issue the VALIDATE POLICYSET command. This command verifies that a policy set is complete and valid prior to activation.

You can use the QUERY DOMAIN command to find out which policy set was last activated.

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the policy domain to which the policy set belongs.

Syntax



Parameters

domainname
Specifies the name of the policy domain for the policy set you want to activate. This parameter is required.

setname
Specifies the name of policy set you want to activate. This parameter is required.

Examples

Task

Activate the VACATION policy set in the EMPLOYEE_RECORDS policy domain.

Command: `activate policyset employee_records vacation`

Output:

```
ANR1514I Policy set VACATION activated in policy domain
EMPLOYEE_RECORDS.
```

Related Commands

Table 11. Commands Related to ACTIVATE POLICYSET

Command	Description
COPY POLICYSET	Creates a copy of an existing policy set.
DEFINE POLICYSET	Defines a policy set within the specified policy domain.
DELETE POLICYSET	Deletes a policy set, including its management classes and copy groups, from a policy domain.
QUERY DOMAIN	Displays information about one or more policy domains.
QUERY POLICYSET	Displays information about one or more policy sets.
UPDATE POLICYSET	Changes the description of a policy set.
VALIDATE POLICYSET	Verifies and reports on conditions the administrator must consider before activating the policy set.

ASSIGN DEFMGMTCLASS (Assign a Default Management Class)

Use the ASSIGN DEFMGMTCLASS command to specify an existing management class as the default management class for a particular policy set. You must assign a default management class for a policy set before you can activate that policy set. It is recommended that the default management class contain both an archive copy group and a backup copy group.

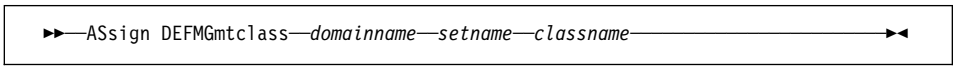
ADSM uses the default management class when:

- A user does not specify a management class in their include-exclude list. The server then uses the default management class to manage files. when they are backed up or archived.
- The management class associated with a backup copy or archived file is deleted. If the default management class does not contain a backup or archive copy group, the retention grace period for the policy domain is used.
- The backup copy group is deleted from a management class; backed up files that are bound to that management class are then managed with the default management class (assuming that the default management class contains a backup copy group). If the default management class does not contain a backup or archive copy group, the retention grace period for the policy domain is used.
- The archive copy group is deleted from a management class; archived files that are bound to that management class are then managed with the default management class (assuming that the default management class contains an archive copy group). If the default management class does not contain an archive copy group, the archive retention grace period for the policy domain is used.
- A client node is reassigned to a different policy domain, and the active policy set does not contain management classes with the same name as that to which the node's backed up files were bound. The files are bound to the default management class if the management class contains a backup copy group or an archive copy group. If the default management class does not contain these copy groups, the retention grace period is used during expiration.

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the policy domain to which the policy set belongs.

Syntax



Parameters

domainname
Specifies the name of the policy domain to which the management class belongs. This parameter is required.

setname
Specifies the name of the policy set associated with the management class to be specified as the default management class. This parameter is required. You cannot assign a default management class to the ACTIVE policy set.

classname
Specifies the name of the management class to be specified as the default management class. This parameter is required.

Examples

Task

Assign DEFAULT1 as the default management class for policy set SUMMER in the PROG1 policy domain.

Command: `assign defmgmtclass prog1 summer default1`

Output:

```
ANR1538I Default management class set to DEFAULT1 for policy
domain PROG1, set SUMMER.
```

Related Commands

Table 12 (Page 1 of 2). Commands Related to ASSIGN DEFMGMTCLASS

Command	Description
ACTIVATE POLICYSET	Validates and activates a policy set within a policy domain.
COPY MGMTCLASS	Creates a copy of an existing management class.
DEFINE COPYGROUP	Defines a copy group for backup or archive processing within a specified management class.
DEFINE MGMTCLASS	Defines a management class within the policy domain and policy set specified.
DEFINE POLICYSET	Defines a policy set within the specified policy domain.
DELETE MGMTCLASS	Deletes a management class and its copy groups from a policy domain and policy set.
QUERY COPYGROUP	Displays the attributes of an existing copy group.

ASSIGN DEFMGMTCLASS

Table 12 (Page 2 of 2). Commands Related to ASSIGN DEFMGMTCLASS

Command	Description
QUERY MGMTCLASS	Displays information about one or more management classes.
QUERY POLICYSET	Displays information about one or more policy sets.
UPDATE COPYGROUP	Changes one or more attributes of a copy group.
UPDATE MGMTCLASS	Changes the attributes of a management class.
VALIDATE POLICYSET	Verifies and reports on conditions the administrator must consider before activating the policy set.

AUDIT LIBRARY (Verify an Automated Library's Inventory)

Use the AUDIT LIBRARY command to ensure that an automated library is in a consistent state with respect to the server's internal library volume inventory. If inconsistencies are detected, the server updates its inventory to reflect the current state of the library. Missing volumes are deleted and moved volumes locations are updated, new volumes are not added, they must be checked in.

Important: Audit library processing waits until all volumes have been demounted from drives within the specified library. If one or more volumes are mounted, but are in the IDLE state, you can force the volumes to be demounted by issuing the DISMOUNT VOLUME command. Otherwise, the audit library operation remains in a wait state until the idle volumes have been demounted (the idle volumes are demounted once the MOUNTRETENTION period expires).

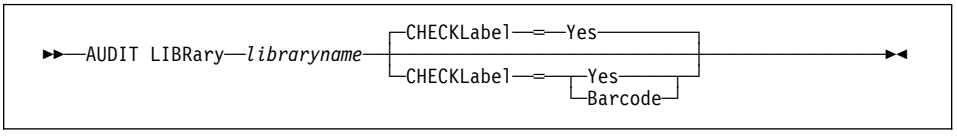
The server options file that is created during installation includes a DEVCONFIG option that specifies a default device configuration file named devcnfg.out. You can specify other device configuration files with additional DEVCONFIG options. The files you specify with this option are automatically updated with the results of this command.

This command creates a background process that can be canceled with the CANCEL PROCESS command. To display information on background processes, use the QUERY PROCESS command.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Parameters

libraryname
Specifies the name of the library to be audited. This parameter is required.

CHECKLabel=*chklblvalue*
Specifies how the storage volume label is checked during audit library processing. This parameter is optional and is only applicable to SCSI libraries. The default is YES. Possible values are:

Yes
Specifies to use the storage volume label on the tape.

Barcode
Specifies to use the barcode storage volume label. You can decrease the audit processing time by using the barcode.

Barcodes must contain six or less characters to be valid as ADSM tape volumes. This is because of the ADSM six character limit on sequential storage volumes. If a barcode is encountered that exceeds this limit, it will be rejected and the cartridge will be treated as though it has no barcode label.

To use the barcode reader for the AUDIT LIBRARY command, include the parameter CHECKLABEL=BARCODE (abbreviated as CHECKL=B) in the command following the positional parameters. For example:

```
AUDIT LIBRARY MYLIB CHECKL=B
```

This parameter will cause a low-level audit of the library, including a barcode scan of all cartridges. The AUDIT command will then use the barcode information as the label of the volume to check-in the cartridges.

This value for the CHECKLABEL parameter overrides the default value of YES, which has the result of loading each cartridge into a drive and reading the label directly from the tape media itself.

If the scanner is unable to read a given barcode label, or if a tape does not have a barcode label, the checkin will load that tape in a drive to read the label. This is consistent with the default action of these commands and is necessary for their proper operation.

It should also be noted that CHECKLABEL=NO is invalid for AUDIT LIBRARY.

Usage Notes

This command prevents any other activity with the library until the background process it starts is done. For example, no restore or retrieve requests that involve this library are processed while this command runs.

Examples

Task

Ensure that the EZLIFE automated library is in a consistent state with respect to the ADSM server's library volume inventory.

Command: `AUDIT LIBRary ezlife`

Output:

```
ANR8457I AUDIT LIBRARY: Operation for library EZLIFE
started as process 5.
ANR8461I AUDIT LIBRARY process for library EZLIFE
completed successfully.
```

Related Commands

Table 13. Commands Related to AUDIT LIBRARY

Command	Description
CANCEL PROCESS	Cancels a background server process.
DEFINE LIBRARY	Defines an automated or manual library.
DELETE LIBRARY	Deletes a library.
DISMOUNT VOLUME	Dismounts a sequential, removable volume by the volume name.
QUERY LIBRARY	Displays information about one or more libraries.
QUERY LIBVOLUME	Displays information about a library volume.
QUERY PROCESS	Displays information about one or all background server processes.
UPDATE LIBRARY	Changes the attributes of a library.

AUDIT LICENSES (Audit for Compliance with License Terms)

Use the AUDIT LICENSES command to start a background process that audits the number of registered client nodes and other supported license factors. The results of this audit are compared to the terms of the license that have been defined to the server, to determine if the current server configuration is in compliance with the license terms.

If the maximum period of 30 days has elapsed since the last license audit, the audit process will continue until complete. The ADSM administrator will not be able to cancel the background process.

After the license terms are changed via the REGISTER LICENSE command, the server does not recognize these changes until a license audit occurs. There are two ways for a license audit to occur:

- The AUDIT LICENSES command is issued from the command line
- The automatic license audit (scheduled with the SET LICENSEAUDITPERIOD command) occurs

The administrator will receive a warning message when the server does not comply with the licensing terms.

The information gathered during the audit is used to determine server compliance with license terms and is available for viewing after the audit is complete. You can view this information by issuing the QUERY LICENSE command.

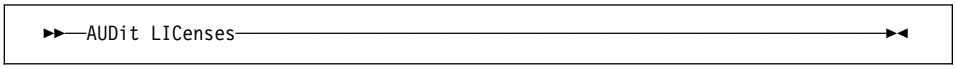
The AUDIT LICENSES command also may be used after new licenses have been registered with the REGISTER LICENSE command so that the new license terms are known to the server before the next automatic license audit is run.

This command creates a background process that can be canceled with the CANCEL PROCESS command. To display information on background processes, use the QUERY PROCESS command.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

None.

Examples

Task

Issue the AUDIT LICENSES command.

Command: `audit licenses`

Output:

```
ANR2817I AUDIT LICENSES: License audit started as
process 2.

ANR2825I License audit process 2 completed successfully -
10 nodes audited.
ANR2811I Audit License completed - Server is in compliance
with license terms.
```

Related Commands

Table 14. Commands Related to AUDIT LICENSES

Command	Description
CANCEL PROCESS	Cancels a background server process.
QUERY AUDITOCCUPANCY	Displays the server storage utilization for a client node.
QUERY LICENSE	Displays information about licenses and audits.
QUERY PROCESS	Displays information about one or all background server processes.
QUERY STATUS	Displays the settings of server parameters, such as those selected by the SET commands.
REGISTER LICENSE	Registers a new license with the ADSM server.
SET LICENSEAUDITPERIOD	Specifies the number of days between automatic license audits.

AUDIT VOLUME (Verify Database Information for a Storage Pool Volume)

Use the AUDIT VOLUME command to check for any inconsistencies between database information and a storage pool volume. During the audit process, the server sends processing information to the activity log and the server console.

While an audit process is active, clients cannot restore data from the specified volume or store new data to that volume.

This command can be used to audit a volume assigned either to a primary storage pool or to a copy storage pool. If a file on a volume is detected with integrity errors, handling of the file will depend on the type of storage pool to which the volume belongs, whether the FIX option specified on this command, and whether the file is also stored on a volume assigned to other pools.

You cannot audit a volume if the volume specified on this command is being deleted from a primary or copy storage pool.

If the AUDIT VOLUME command does not detect data-integrity errors for a file that had previously been marked as *damaged*, the state of the file is reset so that the file can be used. This provides a means for resetting the state of *damaged* files if it is determined that the errors were caused by correctable hardware problems such as a dirty tape head.

To display damaged files on a specific volume, use the QUERY CONTENT command.

Do not use the AUDIT VOLUME command with FIX=YES if a restore process (RESTORE STGPOOL or RESTORE VOLUME) is running. The AUDIT VOLUME command could cause the restore to be incomplete.

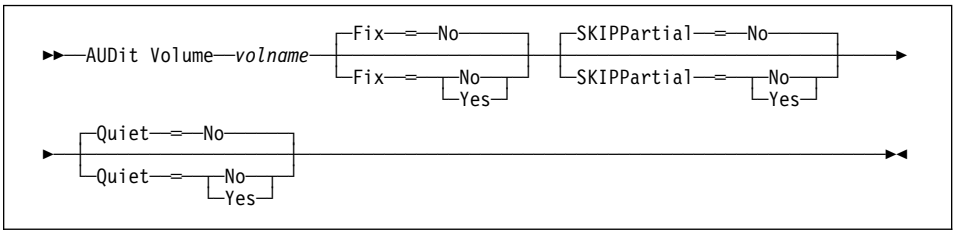
To display information about the contents of a storage pool volume, use the QUERY CONTENT command.

This command creates a background process that can be canceled with the CANCEL PROCESS command. To display information on background processes, use the QUERY PROCESS command.

Privilege Class

To issue this command, you must have system privilege, unrestricted storage privilege, or restricted storage privilege for the storage pool to which the volume is defined.

Syntax



Parameters

volname
Specifies the name of the storage pool volume you want to audit. This parameter is required.

Fix=*fixvalue*
Specifies how ADSM resolves any logical inconsistencies between the database inventory and the specified storage pool volume. This parameter is optional. The default value is NO.

The actions ADSM performs based on this parameter also depend on whether the volume is assigned to a primary or a copy storage pool.

Primary Storage Pool

For a volume in a primary storage pool, the value for the FIX parameter has the following effects.

Fix=No
ADSM reports, but does not delete, any database records that refer to files found with logical inconsistencies.

If the AUDIT VOLUME command detects a data-integrity error in a file:

- ADSM marks the file as *damaged* in the database. If a backup copy is stored in a copy storage pool, the file can be restored using the RESTORE VOLUME or RESTORE STGPOOL command.
- If the file is a cached copy, references to the file on this volume can be deleted by issuing the AUDIT VOLUME command and specifying FIX=YES.

If the AUDIT VOLUME command does not detect a data-integrity error in a file that had previously been marked as damaged, the state of the file is reset so that the file can be used. This provides a means for resetting the state of damaged files if it is determined that the errors were caused by correctable hardware problems such as a dirty tape head.

Fix=Yes
ADSM fixes any inconsistencies as they are detected.

If the AUDIT VOLUME command detects a data-integrity error in a file:

- If a backup copy is not stored in a copy storage pool, ADSM deletes all database records that refer to the file.
- If a backup copy is stored in a copy storage pool, ADSM marks the file as damaged in the database. The file can then be restored using the RESTORE VOLUME or RESTORE STGPOOL command.
- If the file is a cached copy, ADSM deletes the database records that refer to the cached file. The primary file is stored on another volume.

If the AUDIT VOLUME command does not detect a data-integrity error in a in a file that had previously been marked as damaged, ADSM resets the state of the file so that it can be used. This provides a means for resetting the state of damaged files if it is determined that the errors were caused by correctable hardware problems such as a dirty tape head.

Copy Storage Pool

For a volume in a copy storage pool, the value for the FIX parameter has the following effect if ADSM detects a file with integrity errors:

Fix=No
The error is reported and the file copy is marked as *damaged* in the database.

Fix=Yes
References to the file on the audited volume are deleted. ADSM deletes any database records that point to a file on the audited volume that does not exist.

SKIPPartial=*skipvalue*
Specifies whether ADSM ignores files that span multiple storage pool volumes (*skipped files*), when performing the audit for the specified storage pool volume. This parameter is optional. The default value is NO. When performing an audit operation on a sequential access media volume, this parameter prevents additional sequential access media mounts that may be necessary to audit any *skipped* files. Possible values are:

No
Specifies that ADSM audits files that span multiple volumes when performing an audit operation on a specified volume. For sequential access volumes, multiple volumes can be mounted.

Yes
Specifies that ADSM only audits complete files that are stored on the volume to be audited. For sequential access volumes, only the specified volume is mounted. The status of any *skipped* files is unknown.

Quiet=*quietvalue*
Specifies whether ADSM sends detailed informational messages to the activity log and the server console about irretrievable files on the volume. This parameter is optional. The default value is NO. Possible values are:

No
Specifies that ADSM sends detailed informational messages and a summary report to the activity log and the server console. Each message contains the node, file space, and client name for the file.

Yes
Specifies that ADSM only sends a summary report to the activity log and the server console.

Usage Notes

Unless you specify SKIPPARTIAL=YES, ADSM attempts to process each file stored on the volume, including files that span into and out of other volumes. In order to audit files that span multiple volumes, the following conditions must be true:

- For sequential access volumes, the additional sequential access volumes must have an access mode of *read/write* or *read-only*.
- For random access volumes, the additional volumes must be online.

Examples

Task

Verify that the database information for storage pool volume PROG2 is consistent with the data stored on the volume. ADSM fixes any inconsistencies that are found.

Command: `audit volume prog2 fix=yes`

Output:

```
ANR1199I Removable volume PROG2 is required for
Audit process.
ANR8324I 8MM volume PROG2 is expected to be
mounted (R/W).
ANR2313I Audit Volume (Inspect Only) process started
for volume PROG2 (process ID 206).
ANR2315I Audit Volume process ended for volume PROG2;
5 files inspected, 0 damaged files found and marked
as damaged.
```

AUDIT VOLUME

Related Commands

Table 15. Commands Related to AUDIT VOLUME

Command	Description
CANCEL PROCESS	Cancels a background server process.
QUERY CONTENT	Displays information about one or more files currently residing in a storage pool volume.
QUERY PROCESS	Displays information about one or all background server processes.
QUERY VOLUME	Displays information about one or more storage pool volumes.

BACKUP DB (Back Up the Database)

Use the BACKUP DB command to back up an ADSM database to sequential access storage volumes. You can use this command to run one of the following types of backup:

Full backup
Copies the entire ADSM database

Incremental backup
Copies only those database pages that have been added or changed since the last time the database was backed up

If the database is damaged or lost, you can restore it by using the DSMSERV RESTORE DB command to perform one of the following types of recovery:

Roll-forward recovery
Restores the database or a single database volume to its most current state by first loading the most recent database backup series (the last full backup and all incremental backups that apply to that full backup), and then using recovery log records to apply any changes made to the database since the last backup was created. The recovery log mode must have been set to ROLLFORWARD mode continuously from the time that the last backup series was created, until the time that the database was lost or damaged. A volume history file must be available. A device configuration file must be available or must be manually created.

Point-in-time recovery
Restores the database to the point in time when a specific backup was created by using information stored in the volume history file to locate the appropriate volumes or by using the volumes you specify.

A volume history file and a device configuration file are required for roll-forward recovery. The server options file that is created during installation includes VOLUMEHISTORY and DEVCONFIG options that specify default files named volhist.out and devcnfg.out, respectively. You can also use the BACKUP VOLHISTORY and BACKUP DEVCONFIG commands.

To help you determine how much storage space a full or incremental backup will require, use the QUERY DB command. That command displays the number of changed megabytes in the database.

Note: If the recovery log runs out of space during a database backup and the log mode is set to ROLLFORWARD, all ADSM transactions in progress are ended and rolled back. No new transactions may begin until the backup is complete and recovery log records are deleted. After the backup is successfully completed, ADSM deletes all recovery log records except those required to restore the database to its most current state when used with the backup of the database that was just created.

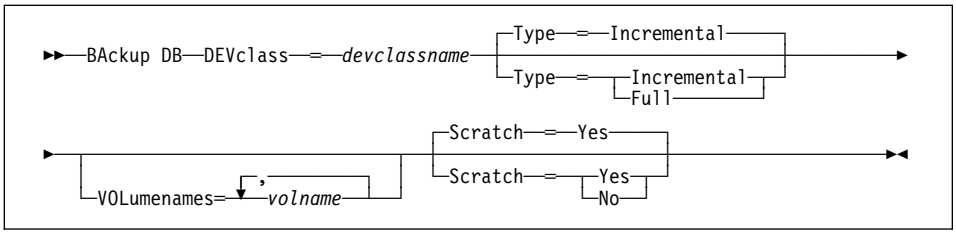
This command generates a background process that can be canceled with the CANCEL PROCESS command. If a BACKUP DB background process is canceled, some of the database may have already been backed up before the cancellation. To display information on background processes, use the QUERY PROCESS command.

BACKUP DB

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Parameters

DEVclass=*devclassname*

Specifies the name of the sequential access device class to use for the backup.

The server options file that is created during installation includes a DEVCONFIG option that specifies an external file (devcnfg.out). ADSM stores a backup copy of device class definitions in this file. If your ADSM database is damaged or lost and must be restored, the definitions created by using the DEFINE DEVCLASS command will not be available and will need to be recreated manually. This parameter is required.

If the mount limit for the device class specified has already been reached (all drives are busy) when the backup runs, ADSM automatically cancels lower priority operations, such as reclamation, to make a mount point available for the backup.

Type=*typevalue*

Specifies the type of backup to run. This parameter is optional. The default value is INCREMENTAL. Possible values are:

Incremental

Specifies that you want to run an incremental backup of the ADSM database. The maximum number of incremental backups you can run between full backups is 32.

Each incremental backup, whether run automatically by ADSM based on the settings you specify with the DEFINE DBBACKUPTRIGGER command or run by issuing the BACKUP DB command, is added to the count of incremental backups run.

You can run an incremental backup whenever a full backup is not required.

Full

Specifies that you want to run a full backup of the ADSM database. A full backup is required when any of the following conditions are true:

- The database has never been backed up.

- The database has been restored using a salvage dump created with the DSMSERV DUMPDB command and has not been backed up since it was restored.
- The maximum number of incremental backups allowed between full backups has been reached.
- The log mode was changed from NORMAL to ROLLFORWARD.
- The database was extended or reduced.

Each full backup, whether run automatically by ADSM based on the settings you specify with the DEFINE DBBACKUPTRIGGER command or run by issuing the BACKUP DB command, resets the count for incremental backups to 0.

Note: Database backups (full or incremental) are not run automatically unless both the database backup trigger is defined *and* the recovery log mode is set to ROLLFORWARD.

VOLumenames=*volname*
Specifies the volumes to use for the backup. You can specify more than one volume by separating each volume name with a comma, with no intervening spaces.

This parameter is optional. However, if you specify SCRATCH=NO, you must specify a list of volumes.

Scratch=*scratchvalue*
Specifies whether scratch volumes can be used for the backup. This parameter is optional. The default value is YES. Possible values are:

Yes
Specifies that scratch volumes can be used.

If you include a list of volumes by using the VOLUMENAMES parameter and specify SCRATCH=YES, ADSM uses scratch volumes only if not enough space is available to store the backup data on the specified volumes.

If you do not include a list of volumes by using the VOLUMENAMES parameter, you must either specify SCRATCH=YES or omit the SCRATCH parameter (to use the default).

No
Specifies that scratch volumes cannot be used.

If you specify volumes by using the VOLUMENAMES parameter and specify SCRATCH=NO, the backup will fail if not enough space is available to store the backup data on the specified volumes.

BACKUP DB

Examples

Task

Run an incremental backup of the database, using a scratch volume. Assume a device class of FILE for the backup.

Command: `BAckup DB DEVclass=file Type=Incremental`

Output:

```
ANR2281I Incremental database backup started as process 4.
```

Related Commands

Table 16. Commands Related to BACKUP DB

Command	Description
BACKUP DEVCONFIG	Backs up ADSM device information to a file.
BACKUP VOLHISTORY	Records sequential volume history information in external files.
CANCEL PROCESS	Cancels a background server process.
DEFINE DBBACKUPTRIGGER	Defines a trigger for automatic ADSM database backups.
DELETE DBBACKUPTRIGGER	Deletes the database backup trigger.
QUERY DB	Displays allocation information about the database.
QUERY DBBACKUPTRIGGER	Displays information about the database backup trigger.
QUERY PROCESS	Displays information about one or all background server processes.
SET LOGMODE	Sets the mode for saving records in the recovery log.
UPDATE DBBACKUPTRIGGER	Changes one or more attributes of the database backup trigger.

BACKUP DEVCONFIG (Create Backup Copies of Device Configuration Information)

Use the BACKUP DEVCONFIG command to specify one or more files in which to store a backup copy of the following information:

- Device class definitions created using the DEFINE DEVCLASS command
- Library definitions created using the DEFINE LIBRARY command
- Drive definitions created using the DEFINE DRIVE command

You can run this command at any time to ensure that device configuration information is available.

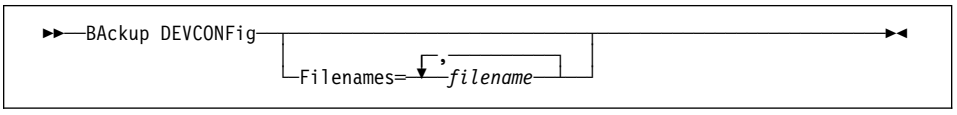
If your ADSM database is damaged or lost and must be restored using a database backup series or an offline salvage dump, device configuration information must be available before ADSM can restore the database.

The server options file that is created during installation includes a DEVCONFIG options that specifies a default device configuration file named devcnfg.out. You can specify other device configuration files with additional DEVCONFIG options. The files specified are automatically updated whenever a device class, library, or drive is defined, updated, or deleted.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Parameters

Filenames

Specifies the name of the file or data set in which to store a backup copy of device configuration information. You can specify more than one file or data set by separating each file name with a comma, with no intervening spaces. This parameter is optional.

If you do not specify a list of files, ADSM stores the information in all files specified with the DEVCONFIG option in the dsmserv.opt file.

Examples

Task

Store a backup copy of the device configuration information in a file named DEVICE.

Command: `BAckup DEVCONFig Filenames=device`

BACKUP DEVCONFIG

Output:

```
ANR2393I BACKUP DEVCONFIG: Server device configuration
information was written to device.
```

Related Commands

Table 17. Commands Related to BACKUP DEFCONFIG

Command	Description
DEFINE DEVCLASS	Defines a device class that can be used for storage pools, importing, or exporting.
DEFINE DRIVE	Assigns a drive to a library.
DEFINE LIBRARY	Defines an automated or manual library.
UPDATE DEVCLASS	Changes the attributes of a device class.
UPDATE DRIVE	Changes the attributes of a drive.
UPDATE LIBRARY	Changes the attributes of a library.

BACKUP STGPOOL (Back Up Primary Storage Pool to Copy Storage Pool)

Use the BACKUP STGPOOL command to create backup copies of files that reside in a primary storage pool, and store the backup copies in a copy storage pool. If a file is already duplicated in the specified copy storage pool, a new copy of the file is not made in that copy pool. However, if a copy of a file already exists in the copy storage pool, but the copy is marked *damaged*, a new copy will be created, provided that the primary file is not also marked *damaged*.

If this command is used to back up a random-access storage pool containing cached copies of migrated files or damaged primary files, neither cached copies nor damaged primary files are backed up.

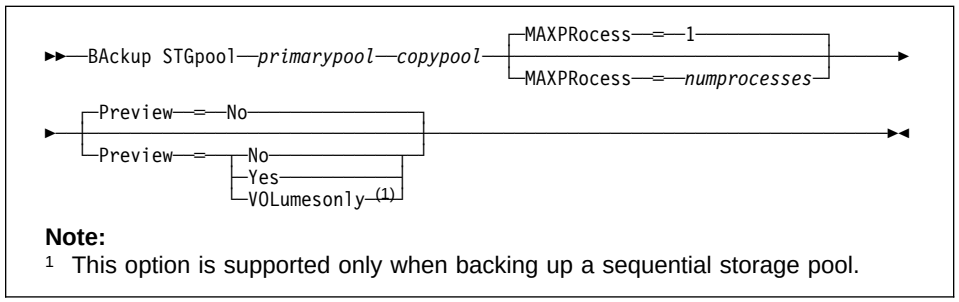
This command generates a background process that can be canceled with the CANCEL PROCESS command. If a BACKUP STGPOOL background process is canceled, some files may have already been backed up prior to the cancellation. To display information on background processes, use the QUERY PROCESS command.

Consider the hierarchy you have set up for storage pool migration when planning the backup of storage pools. If migration for a storage pool starts while that storage pool is being backed up, some files may migrate off the storage pool before they are backed up to the copy storage pool. You may want to back up storage pools that are higher in the migration hierarchy before backing up storage pools that are lower. For more information, see *ADSM Administrator's Guide*.

Privilege Class

To issue this command, you must have system privilege, unrestricted storage privilege, or restricted storage privilege for the copy storage pool in which backup copies are to be produced.

Syntax



Note:
1 This option is supported only when backing up a sequential storage pool.

Parameters

primarypool
Specifies the name of the primary storage pool that contains the files to be copied. This parameter is required.

copypool
Specifies the name of the copy storage pool in which the backup copies will be stored. This parameter is required.

MAXPRocess=*numprocesses*
Specifies the maximum number of parallel processes to use for backing up files. By using multiple, parallel processes, you may be able to improve throughput for the backup operation. This parameter is optional. You can specify a value from 1–999, inclusive. The default value is 1.

When determining the number of processes to use, consider the number of mount points and drives that can be dedicated to this operation. To access a volume in a sequential access device class, ADSM uses a mount point (a logical drive), and, if the sequential device class is not FILE, a physical drive. The number of mount points and drives available depends on other ADSM and system activity, and on the mount limits of the device classes for the sequential access storage pools that are involved in the backup operation. The maximum number of mount points for a device class is specified with the mount limit parameter, which is the number of logical drives that ADSM can use at one time to access volumes in that device class.

Each process needs a mount point for copy storage pool volumes, and, if the device class is not FILE, each process also needs a drive. If the storage pool you are backing up is a sequential storage pool, each process needs an additional mount point for primary storage pool volumes, and, if the device class is not FILE, an additional drive.

For example, suppose you specify MAXPROCESS=3 to back up a primary sequential storage pool to a copy storage pool, both assigned to the same device class. Each of the three processes requires two mount points and two drives. For all three processes to run, the device class must have a mount limit of no less than 6, and there must be at least 6 mount points and 6 drives currently available.

If you specify PREVIEW=YES or PREVIEW=VOLUMESONLY, only one process is used, regardless of the value specified for the MAXPROCESS parameter. No mount points or drives are required when you specify PREVIEW=YES or PREVIEW=VOLUMESONLY.

Preview=*value*
Specifies whether you want to preview the results of the backup operation without actually backing up the data. This parameter is optional. The default value is NO. Possible values are:

No
Specifies that the backup operation is to be performed.

Yes
Specifies that you want to preview the results of the backup operation without actually backing up the data. This option displays the number of files and the number of bytes that will be backed up if you perform the backup. For sequential primary storage pools, this option also produces a

list of primary storage pool volumes containing files that have not yet been backed up to the specified copy storage pool. These volumes must be mounted if you actually perform the backup.

Note: If you only need a list of primary storage pool volumes that must be mounted during backup, execution time for this command can be significantly reduced if you use the VOLUMESONLY option.

VOLumesonly
Specifies that you want to preview the backup operation, but only want to display a list of primary storage pool volumes containing files that have not yet been backed up to the specified copy storage pool. These volumes must be mounted if you actually perform the backup. This option is supported only for backup of sequential primary storage pools.

Examples

Task

Back up files in primary storage pool, PRIMARY_POOL to copy storage pool, COPYSTG.

Command: `backup stgpool primary_pool copystg`

Output:

```
ANR1210I Backup of primary storage pool PRIMARY_POOL to copy
storage pool COPYSTG started as process 16.
ANR1228I Removable volume /adsmfct/server/pvol1 is required
for data storage backup.
ANR8324I FILE volume /adsmfct/server/pvol1 is expected to
be mounted (R/W).
ANR2110I BACKUP STGPOOL started as process 16.
adsm>
ANR8340I FILE volume /adsmfct/server/pvol1 mounted.
ANR8340I FILE volume /adsmfct/server/fct100 mounted.
ANR4502W No files have been defined for automatically
storing sequential volume history information.
ANR1212I Backup process 16 ended for storage pool PRIMARY_POOL.
ANR1214I Backup of primary storage pool PRIMARY_POOL
to copy storage pool COPYSTG has ended.
Files Backed Up: 42, Bytes Backed Up: 7452550, Unreadable
Files: 0, Unreadable Bytes: 0.
```

Related Commands

Table 18 (Page 1 of 2). Commands Related to BACKUP STGPOOL

Command	Description
CANCEL PROCESS	Cancels a background server process.
MOVE DRMEDIA	Moves DRM media onsite and offsite.

BACKUP STGPOOL

Table 18 (Page 2 of 2). Commands Related to BACKUP STGPOOL

Command	Description
QUERY DRMEDIA	Displays information about disaster recovery volumes.
QUERY PROCESS	Displays information about one or all background server processes.
QUERY STGPOOL	Displays information about one or more storage pools.
RESTORE STGPOOL	Restores files to a primary storage pool from copy storage pools.
RESTORE VOLUME	Restores files stored on specified volumes in a primary storage pool from copy storage pools.

BACKUP VOLHISTORY (Save Sequential Volume History Information)

Use the BACKUP VOLHISTORY command to request that the server save sequential volume history information to one or more files.

Volume history information includes data such as date and time of use for the following types of volumes:

- Volumes not in storage pools:
  - Volumes used to back up an ADSM database (full or incremental)
  - Volumes used to dump an ADSM database
  - Volumes used to export administrator, node, policy, or server data
- Volumes in storage pools:
  - Sequential access volumes that have been added
  - Sequential access volumes that have been reused in storage pools through reclamation or MOVE DATA operations
  - Sequential access volumes that have been removed by using the DELETE VOLUME command or removed during reclamation of scratch volumes

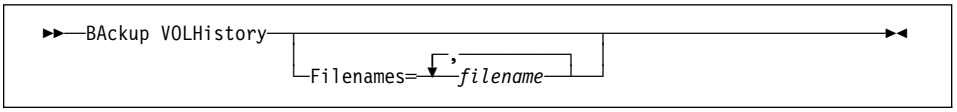
Sequential access volumes are volumes, such as tape or optical volumes, that are accessed sequentially by the ADSM server.

You can use volume history information in external files to reload server database contents and audit affected storage pool volumes. You can use the external files when the server cannot be started to query the database information collected for these volumes. You can use a server options file parameter, VOLUMEHISTORY, to specify one or more files that should automatically be updated whenever server sequential volume history information is changed.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Filenames

Specifies the names of one or more files in which to store a backup copy of volume history information. Separate each file name with a comma and no intervening spaces. This parameter is optional.

BACKUP VOLHISTORY

If you do not specify a file name, ADSM stores the information in all files specified with the VOLUMEHISTORY option in the server options file (dsmserv.opt).

Examples

Task

Back up the volume history information in a file called VOLHIST.

Command: `backup volhistory filenames=volhist`

Output:

```
ANR2462I BACKUP VOLHISTORY: Server sequential volume
history information was written to volhist.
```

Related Commands

Table 19. Commands Related to BACKUP VOLHISTORY

Command	Description
DELETE VOLHISTORY	Removes sequential volume history information from the volume history file.
DELETE VOLUME	Deletes a volume from a storage pool.
QUERY VOLHISTORY	Displays sequential volume history information that has been collected by the server.
UPDATE VOLHISTORY	Adds or changes location information for a volume in the volume history file.

CANCEL PROCESS (Cancel an Administrative Process)

Use the CANCEL PROCESS command to cancel a background process that has been started as the result of an administrative command, or from an internal server process (like migration).

To use this command, specify the process number of the process that you want to cancel. If you do not know the process number, obtain it by using the QUERY PROCESS command.

The following commands generate background processes:

AUDIT LIBRARY	EXPORT NODE
AUDIT LICENSES	EXPORT POLICY
AUDIT VOLUME	EXPORT SERVER
BACKUP DB	EXTEND LOG
BACKUP STGPOOL	IMPORT ADMIN
CHECKIN LIBVOLUME	IMPORT NODE
CHECKOUT LIBVOLUME	IMPORT POLICY
DEFINE DBCOPY	IMPORT SERVER
DEFINE LOGCOPY	MOVE DATA
DELETE DBVOLUME	MOVE DRMEDIA
DELETE FILESPACE	PREPARE
DELETE LOGVOLUME	REDUCE DB
DELETE VOLUME	REDUCE LOG
EXPIRE INVENTORY	RESTORE STGPOOL
EXPORT ADMIN	RESTORE VOLUME
	VARY

The following internal server operations generate background server processes:

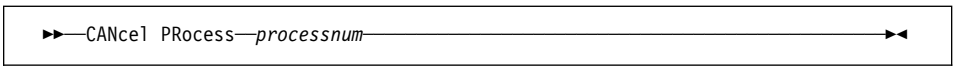
- Inventory expiration
- Migration
- Reclamation

If the process you want to cancel is currently waiting for a sequential access media volume to be mounted, the mount request is automatically cancelled.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

processnum

Specifies the number of the background process you want to cancel. This parameter is required.

CANCEL PROCESS

Usage Notes

1. If you cancel an internal server process (like migration), that process can restart immediately. For example, if you cancel a migration process, then another migration process for the same storage pool can start if additional data is stored in the storage pool (forcing migration to begin).
2. To permanently cancel a migration process, you can modify the attributes of the storage pool (NEXTSTGPOOL="" or HIGHMIG=100).
3. To permanently cancel a reclamation process, you can modify an attribute of the storage pool (RECLAIM=100).

Examples

Task

Cancel background process number 3.

Command: `cancel process 3`

Output:

```
ANR0940I Cancel request accepted for process 3.
```

Related Commands

Table 20. Command Related to CANCEL PROCESS

Command	Description
QUERY PROCESS	Displays information about one or all background server processes.

CANCEL REQUEST (Cancel One or More Mount Requests)

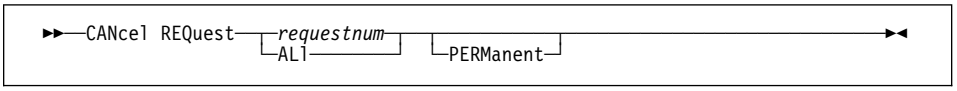
Use the CANCEL REQUEST command to cancel one or more pending media mount requests. To cancel a mount request, you need to know the request number assigned to the request. This number is included on the mount request message and can also be shown by using the QUERY REQUEST command.

By specifying the PERMANENT option, you can indicate to the server that the volume is unavailable for further mounts. This causes the server to mark the volume's status as unavailable. Volumes marked *unavailable* are not requested by the server until an UPDATE VOLUME command is issued to change the access mode.

Privilege Class

To issue this command, you must have system privilege or operator privilege.

Syntax



Parameters

requestnum

Specifies the request number of the mount request to be canceled. You must specify a request number or ALL.

ALl

Specifies that all pending mount requests are canceled. You must specify a request number or ALL.

PERManent

Specifies that you want the server to flag the volumes for which you are canceling a mount request as *unavailable*. This parameter is optional.

Examples

Task

Cancel request number 2.

Command: `cancel request 2`

Output:

```
ANR8346I No requests are outstanding.
```

CANCEL REQUEST

Related Commands

Table 21. Commands Related to CANCEL REQUEST

Command	Description
QUERY REQUEST	Displays information about all pending mount requests.
UPDATE VOLUME	Updates the attributes of one or more storage pool volumes.

CANCEL SESSION (Cancel One or More Client Sessions)

Use the CANCEL SESSION command to cancel an existing administrative or client node session. You can use this command to force an administrative or client node session off of ADSM. To prevent any future client node sessions from beginning, use the DISABLE command.

When you issue this command, any outstanding mount requests related to this session are automatically canceled.

If you cancel an administrative or client node session that is in the *idle wait* (IdleW) state, the client session automatically reconnects the next time that an action is performed.

To prevent a specific administrator or client node from accessing ADSM, use the LOCK ADMIN or LOCK NODE command. If the client is currently accessing the server, the client session must end or be canceled before that node can be locked out with the LOCK NODE command.

You must cancel administrative client sessions by session number. Use the QUERY SESSION command to display information on all sessions that can be canceled, including session numbers.

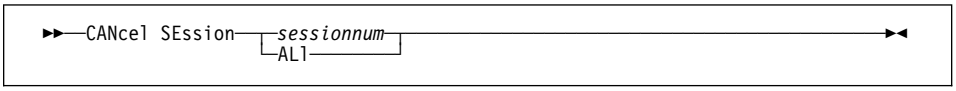
When you cancel a client node session, the client node must start a new session to resume ADSM activities. If a process, such as backup or archive, is interrupted by this command, the results of any processing up to the point of interruption are rolled back and not committed to the database.

When you cancel a client node session, the client node must start a new session to resume ADSM activities from the point of interruption. The results of any incomplete processing at the point of interruption are rolled back and not committed to the database. Processing that is complete prior to the point of interruption, however, is committed and is not rolled back.

Privilege Class

To issue this command, you must have system privilege or operator privilege.

Syntax



Parameters

sessionnum

Specifies the number of the administrative or client node session that you want to cancel. You must specify a session number or ALL.

CANCEL SESSION

ALl
Specifies that all client node sessions are canceled. You must specify a session number or ALL.

You cannot use this parameter to cancel administrative client sessions.

Examples

Task 1

Cancel the client node session with NODEP (session 3).

Command: `CANcel SEssion 3`

Output:

```
ANR0490I Canceling session 3.
```

Task 2

Cancel the administrative session with MARIE (session 5).

Command: `cancel session 5`

Output:

```
ANR0490I Canceling session 5.
```

Related Commands

Table 22. Commands Related to CANCEL SESSION

Command	Description
DISABLE	Prevents new clients from accessing ADSM but permits existing sessions to continue.
LOCK ADMIN	Prevents an administrator from accessing ADSM.
LOCK NODE	Prevents a client from accessing the server.
QUERY SESSION	Displays information about all active administrator and client sessions with ADSM.

CHECKIN LIBVOLUME (Check a Storage Volume into a Library)

Use the CHECKIN LIBVOLUME command to add a sequential access storage volume to ADSM's inventory for an automated library. The CHECKIN LIBVOLUME command informs the ADSM server that a volume is available for use. The server does not use any volumes that physically reside in an automated library until a volume has been checked in via the CHECKIN LIBVOLUME command.

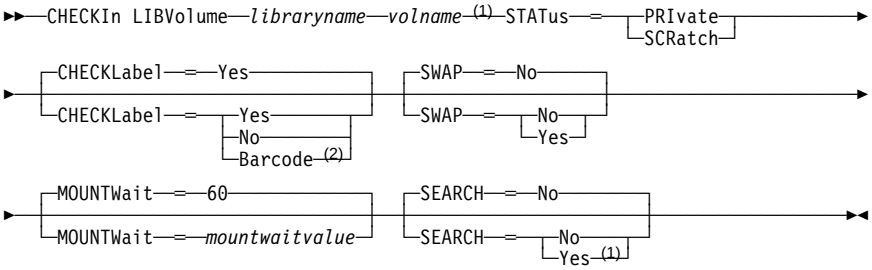
If you include the DEVCONFIG option in the dsmserv.opt file, the files you specify with that option are automatically updated with the results of this command.

This command creates a background process that can be canceled with the CANCEL PROCESS command. To display information on background processes, use the QUERY PROCESS command.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Notes:

1. Do not enter a volume name when the SEARCH parameter equals yes. If a volume name is entered under this condition, an error is issued.
2. For SCSI libraries only, usually with SEARCH=Yes and no volume name. For performance reasons it is not recommended to mix volumes with barcode labels and volumes without barcode labels in a library device.

Parameters

libraryname

Specifies the name of the library where the storage volume is to be located. This parameter is required.

volname

Specifies the volume name of the storage volume being checked in. Do not enter this parameter if the SEARCH parameter equals yes. This parameter is required under any other condition.

CHECKIN LIBVOLUME

STATus=*voltype*
Specifies the status that is to be assigned to the storage volume being checked in. This keyword is required. Possible values are:

PRIvate
Specifies that the volume is not part of the library's pool of scratch volumes. A PRIVATE volume is only mounted when its volume name is explicitly requested.

SCRatch
Specifies that the storage volume is a new scratch volume. This new scratch volume can be mounted to satisfy scratch mount requests during either data storage operations or export operations.

CHECKLabel=*checkvalue*
Specifies how or whether ADSM should read sequential media labels or bar code information of volumes during CHECKIN LIBVOLUME command processing. This parameter is optional. Setting the *checkvalue* to Barcode allows ADSM to utilize, if available, any barcode information. The default value is YES. Possible values are:

Yes
Specifies that during check-in an attempt is made to read the media label.

No
Specifies that during check-in the media label is not read. Selecting this value can result in future errors that are resolved through AUDIT LIBRARY command processing.

Barcode
Specifies to use the barcode storage volume label. You can decrease the checkin time by using the barcode.

Barcodes must contain six or less characters to be valid as ADSM tape volumes. This is because of the ADSM six character limit on sequential storage volumes. If a barcode is encountered that exceeds this limit, it will be rejected and the cartridge will be treated as though it has no barcode label.

To use the barcode reader for the CHECKIN LIBVOL (with SEARCH=YES) command, include the parameter CHECKLABEL=BARCODE (abbreviated as CHECKL=B) in the command following the positional parameters. For example:

CHECKIN LIBVOL MYLIB SEARCH=YES STATUS=SCRATCH CHECKL=B

This parameter will cause a low-level audit of the library, including a barcode scan of all cartridges. The CHECKIN command will then use the barcode information as the label of the volume to check-in the cartridges.

This value for the CHECKLABEL parameter overrides the default value of YES, which has the result of loading each cartridge into a drive and reading the label directly from the tape media itself.

If the scanner is unable to read a given barcode label, or if a tape does not have a barcode label, the checkin will load that tape in a drive to read the label. This is consistent with the default action of these commands and is necessary for their proper operation.

It should also be noted that CHECKLABEL=NO is invalid for CHECKIN (with SEARCH=YES). The above barcode information applies to SCSI libraries, but does not apply to 3494-class libraries.

SWAP=*swapvalue*

Specifies whether ADSM will initiate a swap operation when an empty library slot is not available during CHECKIN LIBVOLUME command processing. This parameter is optional. The default value is NO. Possible values are:

No

Specifies that if an empty slot is not available, the CHECKIN LIBVOLUME command is rejected.

Yes

Specifies that if an empty slot is not available, ADSM initiates a swap operation. The volume selected (target swap volume) for the swap operation is ejected from the library and replaced with the volume being checked in. ADSM determines which volume is the target swap volume by checking for (1) any available scratch volumes, and if this is not successful, then (2) the least frequently mounted volume.

You can override swap processing by selecting a volume in the library and then explicitly issuing the CHECKOUT LIBVOLUME command prior to the CHECKIN LIBVOLUME command.

MOUNTWait=*mountwaitvalue*

Specifies the maximum length of time, in minutes, to wait for a storage volume to be mounted. This parameter is optional. If the mount request is not satisfied within the specified amount of time, the mount request is canceled. The default value is 60 minutes. You can specify an integer in the range of 0 to 9999, inclusive.

SEARCH=*searchvalue*

Specifies whether ADSM searches the library to see if the volume has been previously checked in. This parameter is optional. The default value is NO. Possible values are:

No

Specifies that only the named volume is to be checked into the library. The server issues a mount request to have the volume inserted into a cartridge slot within the library or if available, inserted into the library's entry/exit port. If the cartridge slot is used, it is identified by its element address. See *ADSM Administrator's Guide* for details on element addresses.

Yes

Specifies that ADSM should search the library for volumes that can be checked in automatically. Because volume names are determined from the media label of volumes that already reside in the library, the volume name (*volname*) parameter must be omitted when this option is used.

If the library is shared between applications, be cautious when selecting this parameter. ADSM could examine a volume required by another application.

For SCSI libraries, the server scans all of the slots in the library for volumes that have not previously been checked in. If a volume meets this requirement and contains a valid volume label, it is checked in automatically.

Usage Notes

When the server cannot find a volume it needs for a client operation in an automated library, the server will request that the volume be checked in. If the volume is available, check the volume in. If the volume is not available (for example, lost or destroyed), update the access mode of the volume to UNAVAILABLE by using the UPDATE VOLUME command. Cancel the server's request for check-in by using the CANCEL REQUEST command. (To get the ID of the request to cancel, use the QUERY REQUEST command.) Do *not* cancel the client process that caused the request.

Examples

Task

Check in the volume named WPDV00 into the library named AUTO.

Command: `CHECKIn LIBVolume auto wpdv00 STATus=SCRatch`

Output:

```
ANR8422I CHECKIN LIBVOLUME: Operation for library AUTO
started as process 12.
```

Related Commands

Table 23 (Page 1 of 2). Commands Related to CHECKIN LIBVOLUME

Command	Description
AUDIT LIBRARY	Ensures that an automated library is in a consistent state.
CHECKOUT LIBVOLUME	Checks a storage volume out of an automated library.
DEFINE LIBRARY	Defines an automated or manual library.

CHECKIN LIBVOLUME

Table 23 (Page 2 of 2). Commands Related to CHECKIN LIBVOLUME

Command	Description
QUERY LIBRARY	Displays information about one or more libraries.
QUERY LIBVOLUME	Displays information about a library volume.
UPDATE LIBVOLUME	Changes the status of a storage volume.

CHECKOUT LIBVOLUME (Check a Storage Volume out of a Library)

Use the CHECKOUT LIBVOLUME command to remove a sequential access storage volume from an existing automated library.

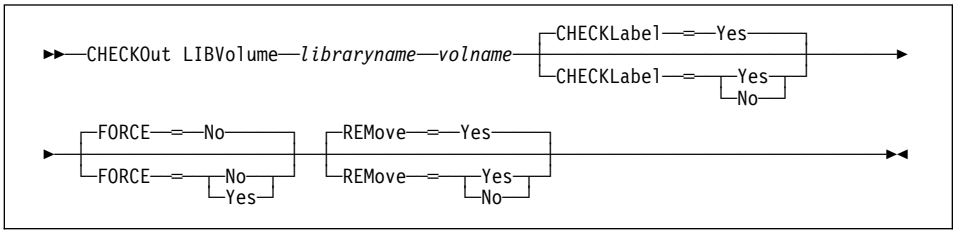
If you include the DEVCONFIG option in the dsmserv.opt file, the files you specify with that option are automatically updated with the results of this command.

This command creates a background process that can be canceled with the CANCEL PROCESS command. To display information on background processes, use the QUERY PROCESS command.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Parameters

libraryname
Specifies the name of the library where the storage volume is to be removed. This parameter is required.

volname
Specifies the volume name of the storage volume being checked out. This parameter is required.

CHECKLabel=*checkvalue*
Specifies how or whether ADSM should read sequential media labels or bar code data of volumes during CHECKOUT LIBVOLUME command processing. This parameter is optional. The default value is YES. Possible values are:

Yes
Specifies that during checkout libvolume processing an attempt is made to read the media label. Reading the media label verifies that the correct volume is being checked out.

No
Specifies that during checkout the media label is not read. This increases performance since the read process does not occur.

FORCE=*forcevalue*
Specifies whether ADSM checks out a storage volume if there is an input/output (I/O) error reading the label. This parameter is optional. The default value is NO. Possible values are:

No
Specifies that ADSM does not check out a storage volume when there is an I/O error reading the label.

Yes
Specifies that ADSM checks out the storage volume even when an I/O error reading the label occurs.

REMove=*removevalue*
Specifies whether ADSM ejects a volume from a SCSI library during CHECKOUT LIBVOLUME command processing. This parameter is optional. The default value is Yes. Possible values are:

Yes
Specifies that a volume is ejected during CHECKOUT LIBVOLUME command processing. The volume entry is deleted from the ADSM library inventory.

No
Specifies that a volume is not ejected during CHECKOUT LIBVOLUME command processing. This deletes the volume entry from the ADSM library inventory and leaves the volume in the library for use by other applications.

Usage Notes

A volume that is checked out of a library may still be defined in a storage pool. If the server attempts to access the checked out volume, a request is issued that waits for the volume to be checked in.

Examples

Task

Check out the volume named EXB004 from the library named FOREST.

Command:
```
CHECKOut LIBVolume forest exb004
```

CHECKOUT LIBVOLUME

Output:

```
ANS5104I Process number 5 started.

ANR8434I CHECKOUT LIBVOLUME: Operation for volume EXB004
in library FOREST started as process 26.
ANR8336I Verifying label of 8MM volume EXB004 in drive
DRIVE2 (mt3.0.0.0).
ANR8307I 003: Remove 8MM volume EXB004 from slot 2 of
library FOREST; REPLY when ready.
ANR8438I CHECKOUT LIBVOLUME for volume EXB004 in library
FOREST completed successfully.
```

Related Commands

Table 24. Commands Related to CHECKOUT LIBVOLUME

Command	Description
AUDIT LIBRARY	Ensures that an automated library is in a consistent state.
CANCEL PROCESS	Cancels a background server process.
CHECKIN LIBVOLUME	Checks a storage volume into an automated library.
DEFINE LIBRARY	Defines an automated or manual library.
DEFINE VOLUME	Assigns a volume to be used for storage within a specified storage pool.
QUERY LIBRARY	Displays information about one or more libraries.
QUERY LIBVOLUME	Displays information about a library volume.
QUERY PROCESS	Displays information about one or all background server processes.
UPDATE LIBVOLUME	Changes the status of a storage volume.

COMMIT (Control Committing of Commands in a Macro)

Use the COMMIT command in a macro to permanently update the database with all changes that result from the successful completion of any commands in the macro processed up to that point. This command does not generate a message when it is issued from the console mode of the administrative client.

You can control precisely when commands are committed with the COMMIT command. If an error occurs while processing the commands in a macro, the server terminates processing of the macro and rolls back any uncommitted changes (commands that have been processed since the last COMMIT).

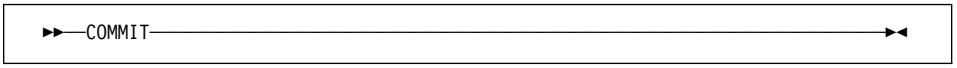
Make sure that your administrative client session is not running with the ITEMCOMMIT option if you want to control command processing with this command. After a command is committed, it cannot be rolled back.

For more information on controlling command processing in a macro, see “Controlling Command Processing in a Macro” on page 23.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

None.

Examples

Task

From the interactive mode of the administrative client, register and grant authority to new administrators using a macro named REG.ADM. Changes are committed after each administrator is registered and has been granted authority.

Macro Contents:

```
/* REG.ADM-register policy admin & grant authority*/
REGister Admin sara hobby
GRant AUTHority sara CLasses=Policy
COMMIT  /* Commits changes */
REGister Admin ken plane
GRant AUTHority ken CLasses=Policy
COMMIT  /* Commits changes */
```

COMMIT

Command: `macro reg.adm`

Output:

```
ANS5101I Server command: 'REGister Admin sara hobby'
ANR2068I Administrator SARA registered.

ANS5101I Server command: 'GRant AUTHority sara
CLasses=policy'
ANR2077I Unrestricted policy privilege granted to
administrator SARA.

ANS5101I Server command: 'COMMIT'

ANS5101I Server command: 'REGister Admin ken plane'
ANR2068I Administrator KEN registered.

ANS5101I Server command: 'GRant AUTHority ken CLasses=policy'
ANR2077I Unrestricted policy privilege granted to
administrator KEN.

ANS5101I Server command: 'COMMIT'
```

Related Commands

Table 25. Commands Related to COMMIT

Command	Description
MACRO	Runs a specified macro file.
ROLLBACK	Discards any uncommitted changes to the database since the last COMMIT was executed.

COPY DOMAIN (Copy a Policy Domain)

Use the COPY DOMAIN command to create a copy of an existing policy domain.

When you use this command, ADSM copies the following information:

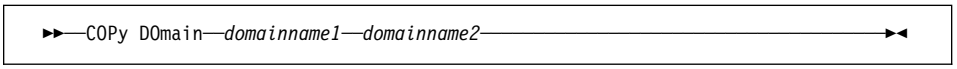
- Policy domain description
- Policy sets in the policy domain (including the ACTIVE policy set, if defined)
- Management classes in each policy set (including the default management class, if assigned)
- Copy groups in each management class

Use the UPDATE DOMAIN command to modify an existing policy domain. DEFINE, DELETE, and UPDATE commands are available for modifying management classes and copy groups.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

domainname1
Specifies the name of the existing policy domain you want to copy. This parameter is required.

domainname2
Specifies the name of the new policy domain. This parameter is required. The maximum length of this name is 30 characters.

Examples

Task

Copy the existing policy domain PROG1 to PROG2.

Command: `copy domain prog1 prog2`

Output:

```
ANR1503I Policy domain PROG1 copied to domain PROG2.
```

COPY DOMAIN

Related Commands

Table 26. Commands Related to COPY DOMAIN

Command	Description
ACTIVATE POLICYSET	Validates and activates a policy set within a policy domain.
COPY MGMTCLASS	Creates a copy of an existing management class.
DEFINE COPYGROUP	Defines a copy group for backup or archive processing within a specified management class.
DEFINE DOMAIN	Defines a policy domain that can be assigned to one or more clients.
DEFINE MGMTCLASS	Defines a management class within the policy domain and policy set specified.
DEFINE POLICYSET	Defines a policy set within the specified policy domain.
DELETE COPYGROUP	Deletes a backup or archive copy group from a policy domain and policy set.
DELETE DOMAIN	Deletes a policy domain along with any policy objects in the policy domain.
DELETE MGMTCLASS	Deletes a management class and its copy groups from a policy domain and policy set.
QUERY COPYGROUP	Displays the attributes of an existing copy group.
QUERY DOMAIN	Displays information about one or more policy domains.
QUERY MGMTCLASS	Displays information about one or more management classes.
QUERY POLICYSET	Displays information about one or more policy sets.
REGISTER NODE	Defines a client to the server and sets options for that user.
UPDATE COPYGROUP	Changes one or more attributes of a copy group.
UPDATE DOMAIN	Changes the attributes of a policy domain.
UPDATE MGMTCLASS	Changes the attributes of a management class.
UPDATE POLICYSET	Changes the description of a policy set.
VALIDATE POLICYSET	Verifies and reports on conditions the administrator must consider before activating the policy set.

COPY MGMTCLASS (Copy a Management Class)

Use the COPY MGMTCLASS command to create a copy of an existing management class within the same policy set.

When you use this command, ADSM copies the following information:

- Management class description
- Copy groups defined to the management class
- The following space management attributes, if they are specified in the management class:
  - SPACEMGTECHNIQUE
  - AUTOMIGNONUSE
  - MIGREQUIRESBKUP
  - MIGDESTINATION

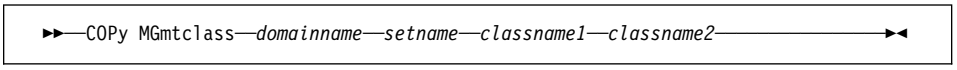
After you copy a management class, you can use the UPDATE MGMTCLASS command to change the management class description.

You cannot copy management classes across policy domains or policy sets.

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the policy domain to which the new management class belongs.

Syntax



Parameters

domainname
Specifies the name of the policy domain to which the management class belongs. This parameter is required.

setname
Specifies the name of the policy set to which the management class belongs. This parameter is required.

classname1
Specifies the name of the existing management class you want to copy. This parameter is required.

classname2
Specifies the name of the new management class. This parameter is required. The maximum length of this name is 30 characters.

COPY MGMTCLASS

Examples

Task

Copy the existing management class ACTIVEFILES to FILEHISTORY for policy set VACATION in the EMPLOYEE_RECORDS policy domain.

Command: `copy mgmtclass employee_records vacation activefiles filehistory`

Output:

```
ANR1523I Management class ACTIVEFILES copied to
class FILEHISTORY in policy domain EMPLOYEE_RECORDS,
set VACATION.
```

Related Commands

Table 27. Commands Related to COPY MGMTCLASS

Command	Description
DEFINE COPYGROUP	Defines a copy group for backup or archive processing within a specified management class.
DELETE MGMTCLASS	Deletes a management class and its copy groups from a policy domain and policy set.
QUERY COPYGROUP	Displays the attributes of an existing copy group.
QUERY MGMTCLASS	Displays information about one or more management classes.
QUERY POLICYSET	Displays information about one or more policy sets.
UPDATE COPYGROUP	Changes one or more attributes of a copy group.
UPDATE MGMTCLASS	Changes the attributes of a management class.

COPY POLICYSET (Copy a Policy Set)

Use the COPY POLICYSET command to create a copy of any existing policy set (including the ACTIVE policy set) within the same policy domain.

When you use this command, ADSM copies the following information:

- Policy set description
- Management classes in the policy set (including the default management class, if assigned)
- Copy groups in each management class

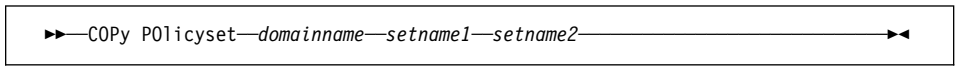
A policy set cannot be copied across policy domains.

To change the description of the new policy set, use the UPDATE POLICYSET command.

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the policy domain to which the new policy set belongs.

Syntax



Parameters

domainname
Specifies the name of the policy domain to which the policy set belongs. This parameter is required.

setname1
Specifies the name of the existing policy set you want to copy. This parameter is required.

setname2
Specifies the name of the new policy set. This parameter is required. The maximum length of this name is 30 characters.

Examples

Task

Copy the existing policy set VACATION to HOLIDAY in the EMPLOYEE_RECORDS policy domain.

COPY POLICYSET

Command: `copy policyset employee_records vacation holiday`

Output:

```
ANR1513I Policy set VACATION copied to set HOLIDAY in
policy domain EMPLOYEE_RECORDS.
```

Related Commands

Table 28. Commands Related to COPY POLICYSET

Command	Description
ACTIVATE POLICYSET	Validates and activates a policy set within a policy domain.
COPY MGMTCLASS	Creates a copy of an existing management class.
DEFINE MGMTCLASS	Defines a management class within the policy domain and policy set specified.
DELETE POLICYSET	Deletes a policy set, including its management classes and copy groups, from a policy domain.
QUERY POLICYSET	Displays information about one or more policy sets.
UPDATE POLICYSET	Changes the description of a policy set.
VALIDATE POLICYSET	Verifies and reports on conditions the administrator must consider before activating the policy set.

COPY SCHEDULE (Copy a Client or an Administrative Command Schedule)

Use the COPY SCHEDULE command to create a copy of an existing schedule. The COPY SCHEDULE command takes two forms, depending on whether the schedule applies to client operations or administrative commands. The syntax and parameters for each form are defined separately.

Copying Client Schedules

Use the COPY SCHEDULE command to create a copy of an existing schedule for client operations. You can copy a schedule within a policy domain or from one policy domain to another existing policy domain.

When you use this command, ADSM copies the following information:

- Description of the schedule
- All parameter values in the original schedule

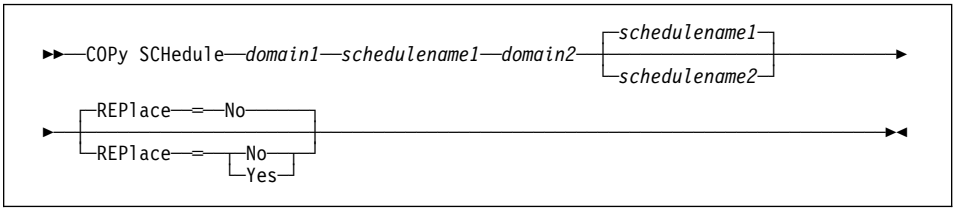
The last modification value for the new schedule is set to the time that you executed this command. Any clients associated with the original schedule are *not* associated with the new schedule. An administrator with policy privilege must use the DEFINE ASSOCIATION command to associate clients to the new schedule.

To make changes to an existing schedule, use the UPDATE SCHEDULE command.

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the policy domain to which you are copying the schedule.

Syntax for Copying Client Schedules



Parameters for Copying Client Schedules

domain1

Specifies the name of the policy domain that contains the schedule you want to copy. This parameter is required.

schedulename1

Specifies the name of the schedule you want to copy. This parameter is required.

domain2
Specifies the name of an existing policy domain to which you want to copy the new schedule. This parameter is required. You must have policy privilege for this policy domain to use this command. You must specify a new schedule name (with the SCHEDULENAME2 parameter) if you want to copy a schedule within a policy domain.

schedulename2
Specifies the name of the new schedule. This parameter is optional. The maximum length of the name is 30 characters.

If you do not specify this name, the name of the original schedule (*schedulename1*) is used.

If the schedule name is already defined in the policy domain, you must specify REPLACE=YES, or the command fails.

REPlace=*replacevalue*
Specifies whether an existing schedule can be replaced. This parameter is optional. The default value is NO.

If the new schedule name is already defined in the new policy domain, you must specify REPLACE=YES, or the command fails. Possible values are:

No
Specifies that an existing schedule cannot be replaced.

Yes
Specifies that an existing schedule can be replaced.

Copying Administrative Command Schedules

Use the COPY SCHEDULE command to create a copy of an existing administrative command schedule. You can copy an administrative command schedule to another administrative command schedule.

When you use this command, ADSM copies the following information:

- Description of the schedule
- All parameter values in the original schedule

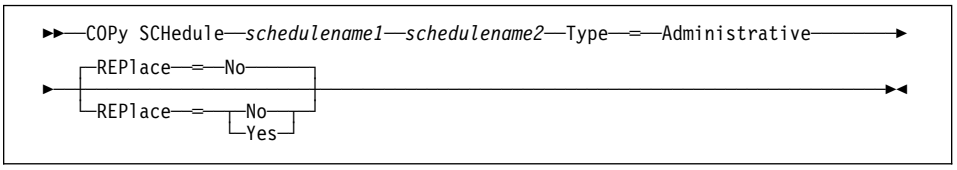
The last modification value for the new schedule is set to the time that you executed this command.

To make changes to an existing schedule, use the UPDATE SCHEDULE command.

Privilege Class

To issue this command, you must have system privilege.

Syntax for Copying Administrative Command Schedules



Parameters for Copying Administrative Command Schedules

schedulename1
Specifies the name of the schedule you want to copy. This parameter is required.

schedulename2
Specifies the name of the new schedule. This parameter is required. The maximum length of the name is 30 characters.

If the schedule name is already defined, you must specify REPLACE=YES, or the command fails.

Type=Administrative
Specifies this is a scheduled administrative command. This parameter is required.

REPlace=*replacevalue*
Specifies whether an existing schedule can be replaced. This parameter is optional. The default value is NO. Possible values are:

No
Specifies that an existing schedule cannot be replaced.

Yes
Specifies that an existing schedule can be replaced.

Examples

Task 1

Copy the WEEKLY_BACKUP schedule that belongs to policy domain EMPLOYEE_RECORDS to the PROG1 policy domain and name the new schedule WEEKLY_BACK2. If there is already a schedule with this name defined in the PROG1 policy domain, do not replace it.

Command:
```
copy schedule employee_records weekly_backup prog1 weekly_back2
```

Output:

```
ANR2503I Schedule WEEKLY_BACKUP in domain EMPLOYEE_RECORDS copied to
schedule WEEKLY_BACK2 in domain PROG1.
```

COPY SCHEDULE

Task 2

Copy the DAILYBACKUP schedule that is defined to the EMPLOYEE_RECORDS policy domain to the PROG1 policy domain. If there is already a DAILYBACKUP schedule defined to the PROG1 policy domain, it is replaced.

Command:
```
copy schedule employee_records dailybackup prog1 dailybackup
replace=yes
```

Output:

```
ANR2503I Schedule DAILYBACKUP in domain EMPLOYEE_RECORDS
copied to schedule DAILYBACKUP in domain PROG1.
```

Task 3

Copy existing administrative schedule BACKUP_ARCHIVEPOOL to a new schedule named BCKSCHED.

Command:
```
copy schedule backup_archivepool bcksched type=administrative
```

Output:

```
ANR2513I Schedule BACKUP_ARCHIVEPOOL copied to schedule
BCKSCHED.
```

Related Commands

Table 29. Commands Related to COPY SCHEDULE

Command	Description
DEFINE ASSOCIATION	Associates one or more clients with a schedule.
DEFINE SCHEDULE	Defines a schedule for a client operation or an administrative command.
DELETE SCHEDULE	Deletes a schedule from the database.
QUERY SCHEDULE	Displays information about one or more schedules.
UPDATE SCHEDULE	Changes the attributes of a schedule.

DEFINE ASSOCIATION (Associate Client Nodes with a Schedule)

Use the DEFINE ASSOCIATION command to associate one or more clients with a schedule. Client nodes that are associated with a schedule initiate backup and archive functions according to that schedule.

Note: In a macro, the server may stall if some commands (for example, REGISTER NODE and DEFINE ASSOCIATION) are not committed as soon as you issue them. You could follow each command in a macro with a COMMIT command. However, a simpler solution is to include the -ITEMCOMMIT option with the DSMADMC command.

Before associating a client to a schedule, the following conditions must be true:

- The specified schedule exists
- The client is registered to the policy domain to which the schedule applies

Any clients already associated with a specified schedule are not affected when you associate new clients with that schedule.

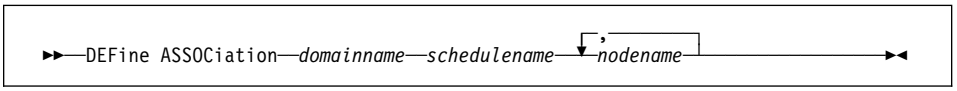
A client remains associated with a schedule until you use the DELETE ASSOCIATION command to remove it from the list of associated clients or until the schedule is deleted by using the DELETE SCHEDULE command.

In addition, any clients that you subsequently define to ADSM are *not* automatically associated with a schedule. You must use the DEFINE ASSOCIATION command to associate any newly registered clients with the appropriate schedules.

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the policy domain to which the schedule belongs.

Syntax



Parameters

domainname
Specifies the name of the policy domain to which the schedule belongs. This parameter is required.

schedulename
Specifies the name of the schedule that you want to associate with one or more clients. This parameter is required.

nodename
Specifies the name of the client node to be associated with the specified schedule. This parameter is required. You can specify a list of clients that you want to associate with the specified schedule. The items in the list are separated

by commas, with no intervening spaces. You can use a pattern-matching expression to specify a name. All matching clients are associated with the specified schedule. If a client is listed, but is already associated with the specified schedule or is not assigned to the domain to which the schedule belongs, the command has no effect for that client.

Examples

Task 1

Associate clients with the WEEKLY_BACKUP schedule. The associated clients have names that begin with SMITH or JOHN, and are assigned to the EMPLOYEE_RECORDS policy domain.

Command:

```
define association employee_records weekly_backup smith*,john *
```

Output:

```
ANR2510I Node JOHN04 associated with schedule WEEKLY_BACKUP
in policy domain EMPLOYEE_RECORDS.
ANR2510I Node JOHNNY associated with schedule WEEKLY_BACKUP
in policy domain EMPLOYEE_RECORDS.
ANR2510I Node SMITH associated with schedule WEEKLY_BACKUP
in policy domain EMPLOYEE_RECORDS.
```

Task 2

Associate the clients JOE, TOM, and LARRY with the WINTER schedule, assigned to the EMPLOYEE_RECORDS policy domain. However, the client JOE is already associated with the WINTER SCHEDULE.

Command:

```
define association employee_records winter joe,tom,larry
```

Output:

```
ANR2510I Node TOM associated with schedule WINTER in policy
domain EMPLOYEE_RECORDS.
ANR2510I Node LARRY associated with schedule WINTER in policy
domain EMPLOYEE_RECORDS.
```

Related Commands

Table 30 (Page 1 of 2). Commands Related to DEFINE ASSOCIATION

Command	Description
DEFINE SCHEDULE	Defines a schedule for a client operation or an administrative command.
DELETE ASSOCIATION	Deletes the association between one or more clients and a schedule.
DELETE SCHEDULE	Deletes a schedule from the database.

DEFINE ASSOCIATION

Table 30 (Page 2 of 2). Commands Related to DEFINE ASSOCIATION

Command	Description
QUERY ASSOCIATION	Displays the clients associated with one or more schedules.
REGISTER NODE	Defines a client to the server and sets options for that user.

DEFINE COPYGROUP (Define a Copy Group)

Use the DEFINE COPYGROUP command to define a new backup or archive copy group within a specified policy domain, policy set, and management class. This command also defines the destination storage pool and backup or archive attributes for the copy group. When you define a copy group, it must be named STANDARD.

Note: The DEFINE COPYGROUP will fail if a copy storage pool name is specified as a destination.

A *backup copy group* contains attributes that ADSM uses during the backup process to determine the following:

- Whether a file is only backed up when the file has changed since the last time it was backed up
- Whether a file that is in use is backed up
- How many days must elapse before a file can again be backed up
- How to process a file that is in use during backup

A backup copy group also contains attributes that ADSM uses to manage the backup versions of your files. These attributes control the following:

- Where the server stores backup versions of client node files
- How many backup versions the server keeps of client node files and directories
- How long the server keeps backup versions of client node files and directories

An *archive copy group* contains attributes that ADSM uses during the archive process to determine the following:

- Whether a file that is in use is archived
- Where the server stores archived copies of client node files
- How long the server keeps archived copies of client node files

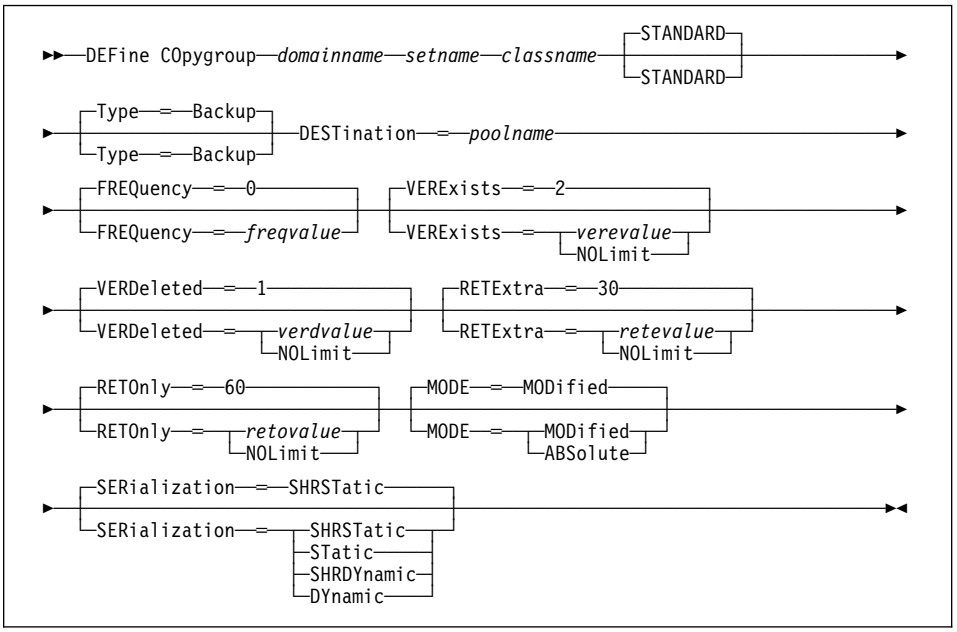
You can define one backup and one archive copy group for each management class. If you plan to have the client nodes in your installation perform backups, it is recommended that the default management class contain a backup copy group.

Note: Since there are two types of copy groups (backup and archive), the DEFINE COPYGROUP command syntax diagram and parameter listing is displayed twice—once for defining a backup copy group and once for defining an archive copy group.

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the policy domain to which the copy group belongs.

Syntax for Defining a Backup Copy Group



Parameters for Defining a Backup Copy Group

domainname

Specifies the name of the policy domain for which you are defining the copy group. This parameter is required.

setname

Specifies the name of the policy set for which you are defining the copy group. This parameter is required.

You cannot define a copy group for a management class that belongs to the ACTIVE policy set.

classname

Specifies the name of the management class for which you are defining the copy group. This parameter is required.

STANDARD

Specifies the name of the copy group as STANDARD. The name of the copy group must be STANDARD. This parameter is optional. The default value is STANDARD.

Type=Backup

Specifies that you want to define a backup copy group. The default parameter is BACKUP.

DEFINE COPYGROUP

DESTination=*poolname*
Specifies the name of the primary storage pool where backup data is to be stored. This parameter is required. You can only specify one storage pool as the destination for a copy group.

FREQuency=*freqvalue*
Specifies the minimum interval, in days, between successive backups. This parameter is optional. ADSM does not perform an incremental backup unless the specified number of days has elapsed since the last backup. The FREQUENCY value is only used during incremental backup. This value is ignored during selective backup. You can specify an integer from 0–9999, inclusive. The default value is 0.

VERExists=*verevalue*
Specifies the maximum number of backup versions to retain for files that are currently on the client file system. This parameter is optional.

If a backup causes the limit to be exceeded, the oldest backup version that exists is deleted from the storage pool. The default value is 2. Possible values are:

verevalue
Specifies the number of backup versions to retain for files that are currently on the client file system. You can specify an integer from 1–9999, inclusive. The default value is 2.

NOLimit
Specifies that you want ADSM to retain all backup versions.

VERDeleted=*verdvalue*
Specifies the maximum number of backup versions to retain for files that are deleted from the client file system. This parameter is optional. This parameter is ignored if the file still resides at the client node.

If the client file is deleted, the next backup causes the oldest versions in excess of this number to be deleted from the backup storage pool. The expiration date for the remaining versions is determined by the values specified for the RETEXTRA and RETONLY parameters. The default value is 1. Possible values are:

verdvalue
Specifies an integer that defines the number of backup versions to retain for files that are deleted from the client file system. You can specify an integer from 0–9999, inclusive.

NOLimit
Specifies that you want ADSM to retain all backup versions for files that are deleted from the client file system.

RETExtra=*retevalue*
Specifies how many days ADSM retains a backup version after that version becomes inactive (that is, a more recent backup version is stored). This parameter is optional. The default value is 30 days. Possible values are:

retevalue
Specifies an integer that defines the number of days to retain all backup versions other than the most recent version. You can specify an integer from 0–9999, inclusive.

NOLimit
Specifies that you want ADSM to retain all backup versions, other than the most recent version, indefinitely. The most recent version of a file that exists on the client workstation is retained indefinitely or until the user deletes the file on the workstation. If the user deletes the file on the workstation, the file is rolled off by using the value specified for the VERDELETED parameter.

If the NOLIMIT value is specified, extra backup versions are deleted under control of the VEREXISTS or VERDELETED parameters.

RETOnly=*retovalue*
Specifies the retention time, in days, for the last backup version of a file that has been deleted from the client's file system. This parameter is optional. The default value is 60. Possible values are:

retovalue
Specifies an integer that defines the number of days to retain the last remaining inactive version of a file. You can specify an integer from 0–9999, inclusive.

NOLimit
Specifies that the last remaining inactive version of a file be kept indefinitely.

MODE=*mode*
Specifies whether a file should be backed up based on changes made to the file since the last time it was backed up. This parameter is optional. The MODE value is only used for incremental backup. This value is ignored during selective backup. The default value is MODIFIED. Possible values are:

MODified
Specifies that the file is backed up only if it has changed since the last backup.

ABSolute
Specifies that the file is backed up regardless of whether it has been modified.

SERialization=*serialvalue*
Specifies how files or directories are handled if they are modified during backup processing and what ADSM should do if a modification occurs. This parameter is optional. The default value is SHRSTATIC.

Attention: Be careful about choosing a management class that contains a copy group that specifies shared dynamic (SHRDYNAMIC) or DYNAMIC for SERIALIZATION.

DEFINE COPYGROUP

If you choose a management class that allows a file or directory to be backed up while modifications are occurring, the backup version stored on the server might be a fuzzy backup. A fuzzy backup is a backup version that does not accurately reflect what is currently in the file or directory. The fuzzy backup contains some, but not all, modifications. If that is not acceptable, be sure to choose a management class that allows ADSM to create a backup version only if the file or directory is not being modified.

If a file is restored that contains a fuzzy backup, the file may not be usable, depending on the file's application.

Possible values are:

SHRSTatic
Specifies that a file or directory must not be backed up while being modified. ADSM attempts to perform a backup as many as four times, depending on the value specified for CHANGINGRETRIES in the client user options file. If the file or directory is modified during each backup attempt, ADSM does not back it up.

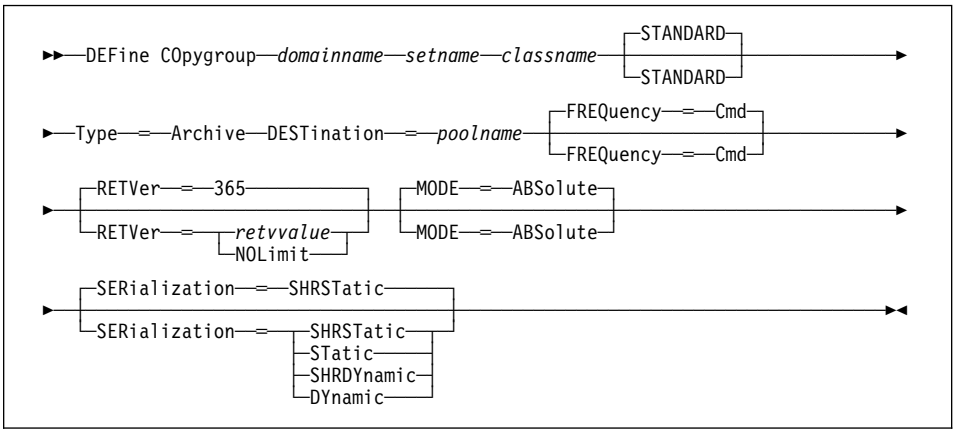
STatic
Specifies that a file or directory must not be modified during backup. If a file or directory is modified during the backup attempt, it is not backed up.

Platforms that do not support the STATIC option default to SHRSTATIC. The STATIC option is not supported on the DOS platform.

SHRDYnamic
Specifies that if the file or directory is being modified during a backup attempt, ADSM backs up the file or directory during the last attempt even though the file or directory is being modified. ADSM attempts to perform a backup as many as four times, depending on the value specified for CHANGINGRETRIES in the client user options file.

DYnamic
Specifies that a file or directory is backed up on the first attempt by ADSM, regardless of whether the file or directory is being modified during backup processing.

Syntax for Defining an Archive Copy Group



Parameters for Defining an Archive Copy Group

domainname
Specifies the name of the policy domain for which you are defining the copy group. This parameter is required.

setname
Specifies the name of the policy set for which you are defining the copy group. This parameter is required.

classname
Specifies the name of the management class for which you are defining the copy group. This parameter is required.

STANDARD
Specifies the name of the copy group. The name of the copy group must be STANDARD. This parameter is optional. The default value is STANDARD.

Type=**Archive**
Specifies that you want to define an archive copy group. This parameter is required.

DESTination=*poolname*
Specifies the name of the primary storage pool where the archive files are to reside. This parameter is required. You can only specify one storage pool as the destination for a copy group.

FREQuency=**Cmd**
Specifies the value for the copy frequency. The copy frequency must be CMD. This parameter is optional. The default value is CMD.

RETVer=*retvvalue*
Specifies the number of days to keep an archive copy bound to this management class. This parameter is optional. Possible values are:

retvvalue
Specifies an integer that defines the number of days to retain an archive copy. You can specify an integer from 0–9999, inclusive. The default value is 365.

NOLimit
Specifies that an archive copy is maintained indefinitely (that is, inventory expiration processing does not affect the archive copy).

MODE=**ABSolute**
Specifies that a file is archived. The file must be archived as ABSOLUTE. This parameter is optional. The default value is ABSOLUTE.

SERialization=*serialvalue*
Specifies how files are handled if they are modified during archive processing and what ADSM should do if a modification occurs. This parameter is optional. The default value is SHRSTATIC.

Attention: Be careful about choosing a management class that contains a copy group that specifies shared dynamic (SHRDYNAMIC) or DYNAMIC for SERIALIZATION.

If you choose a management class that allows a file to be archived while modifications are occurring, the archive copy stored on the server might be a fuzzy copy. A fuzzy copy is an archive copy that does not accurately reflect what is currently in the file. The fuzzy copy contains some, but not all, modifications. If that is not acceptable, be sure to choose a management class that allows ADSM to create an archive copy only if the file is not being modified.

If a file is restored that contains a fuzzy copy, the file may not be usable, depending on the file's application.

Possible values are:

SHRSTatic
Specifies that a file must not be archived while being modified. ADSM attempts to perform an archive as many as four times, depending on the value specified for CHANGINGRETRIES in the client user options file. If the file is modified during the archive attempt, ADSM does not archive the file.

STatic
Specifies that a file must not be modified during archive. If a file is modified during the archive attempt, it is not archived.

Platforms that do not support the STATIC option default to SHRSTATIC. The STATIC option is not supported on the DOS platform.

SHRDYnamic
Specifies that if the file is being modified during an archive attempt, ADSM archives the file during its last attempt even though the file is being modified. ADSM attempts to perform an archive as many as four times, depending on the value specified for CHANGINGRETRIES in the client user options file.

DYnamic
Specifies that a file is archived on the first attempt by ADSM, regardless of whether the file is being modified during archive processing.

Examples

Task 1

Create a backup copy group named STANDARD for management class ACTIVEFILES in policy set VACATION in the EMPLOYEE_RECORDS policy domain. The backup destination is BACKUPPOOL, with a minimum interval of three days between backups, regardless of whether the files have been modified. Retain up to five backup versions while the file resides on the node's file system.

Command:
```
define copygroup employee_records vacation activefiles standard
type=backup destination=backuppool frequency=3 verexists=5
mode=absolute
```

Output:

```
ANR1530I Backup copy group STANDARD defined in policy domain
EMPLOYEE_RECORDS, set VACATION, management class ACTIVEFILES.
```

Task 2

Create an archive copy group named STANDARD for management class MCLASS1 in policy set SUMMER in the PROG1 policy domain. The archive destination is ARCHIVEPOOL, where the archive copy is kept for 730 days.

Command:
```
define copygroup prog1 summer mclass1 standard type=archive
destination=archivepool retver=730
```

Output:

```
ANR1535I Archive copy group STANDARD defined in policy domain
PROG1, set SUMMER, management class MCLASS1.
```

Related Commands

Table 31. Commands Related to DEFINE COPYGROUP

Command	Description
ASSIGN DEFMGMTCLASS	Assigns an existing management class as the default for a specified policy set.
COPY MGMTCLASS	Creates a copy of an existing management class.
DEFINE MGMTCLASS	Defines a management class within the policy domain and policy set specified.
DEFINE STGPOOL	Defines a storage pool as a named collection of server storage media.
DELETE COPYGROUP	Deletes a backup or archive copy group from a policy domain and policy set.
DELETE MGMTCLASS	Deletes a management class and its copy groups from a policy domain and policy set.
QUERY COPYGROUP	Displays the attributes of an existing copy group.
QUERY MGMTCLASS	Displays information about one or more management classes.
UPDATE COPYGROUP	Changes one or more attributes of a copy group.

DEFINE DBBACKUPTRIGGER (Define the Database Backup Trigger)

Use the DEFINE DBBACKUPTRIGGER command to define settings for the database backup trigger. The database backup trigger determines when ADSM automatically runs a full or incremental backup of the ADSM database and deletes any unnecessary recovery log records.

ADSM uses the settings you specify with this command only when the log mode is set to ROLLFORWARD using the SET LOGMODE command.

With the DEFINE DBBACKUPTRIGGER command, you specify the percentage of the assigned capacity of the recovery log that can be used before ADSM begins a backup of the database. When space usage reaches the percentage you specify, ADSM starts a background process that does the following:

- Runs a backup of the ADSM database using one or more scratch volumes.

  Unless a full backup is required, ADSM runs an incremental backup. A full backup is required when any of the following conditions are true:

  – The database has never been backed up.

  – The database was loaded using a salvage dump created with the DSMSERV DUMPDB command and the database has not been backed up since it was loaded.

  – The maximum number of incremental backups allowed between full backups has been reached.

  – The log mode was changed from NORMAL to ROLLFORWARD.

  – The database was extended or reduced.

  ADSM can continue to write new records to the recovery log while creating a backup of the database.

  Note: If a backup initiated by the database backup trigger fails, ADSM waits 60 seconds, and then tries again. It continues to retry the backup until it is successful. If the mount limit for the device class being used for the backup has been reached (all drives busy), ADSM automatically cancels lower priority operations (such as reclamation) to make a mount point available for the database backup. To ensure that a mount point is always available to run a database backup, you can define a device class that is used only by database backup.

- After the backup is successfully completed, ADSM deletes all recovery log records except those required to restore the database to its most current state when used with the backup of the database that was just created.

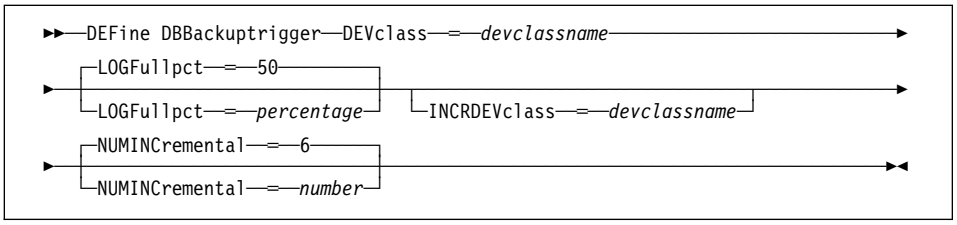
To display settings for the database backup trigger, use the QUERY DBBACKUPTRIGGER command. To update the settings for the database backup trigger, use the UPDATE DBBACKUPTRIGGER command. To delete the database backup trigger, use the DELETE DBBACKUPTRIGGER command.

DEFINE DBBACKUPTRIGGER

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Parameters

DEVclass=*devclassname*

Specifies the name of the sequential access device class to use for backups. This parameter is required.

If the mount limit for the device class specified has already been reached (all drives are busy) when the backup runs, ADSM automatically cancels lower priority operations, such as reclamation, to make a mount point available for the backup.

The server options file that is created during installation includes a DEVCONFIG option that specifies an external file named devcnfg.out. ADSM stores a backup copy of device class definitions in this file. If your ADSM database is damaged or lost and must be restored, the definitions created using the DEFINE DEVCLASS command will not be available and will need to be recreated manually.

The server options file also includes a VOLUMEHISTORY option that specifies an external file (named volhist.out) in which to to store a backup copy of sequential volume history information. The volume history file is also used for database recovery.

LOGFullpct=*percentage*

Specifies when ADSM automatically backs up the database, based on the percentage of available space used for the recovery log. When the percentage of space used for the recovery log exceeds this value, ADSM performs an automatic backup of the database and removes unnecessary records from the recovery log. This parameter is optional. You can specify a value from 1–99. The default value is 50 percent.

INCRDEVclass=*devclassname*

Specifies the name of the sequential access device class to use for incremental backups. This parameter is optional. If you do not specify a value for this option, all backups are run using the device class specified with the DEVCLASS parameter.

If the mount limit for the device class specified has already been reached (all drives are busy) when the backup runs, ADSM automatically cancels lower priority operations, such as reclamation, to make a mount point available for the backup.

The server options file that is created during installation includes a DEVCONFIG option that specifies an external file named devcnfg.out. ADSM stores a backup copy of device class definitions in this file. If your ADSM database is damaged or lost and must be restored, the definitions created using the DEFINE DEVCLASS command will not be available and will need to be recreated manually.

NUMINCremental=*number*

Specifies the maximum number of incremental backups that can be run before a full backup is required. This parameter is optional. You can specify a value from 0–32. A 0 specifies that ADSM runs only full backups automatically. The default value is 6.

Each incremental backup, whether run automatically by ADSM or run by issuing the BACKUP DB command, is added to the count of incremental backups run.

Each full backup, whether run automatically by ADSM or run by issuing the BACKUP DB command, resets the count for incremental backups to zero.

Note: If you issue a BACKUP DB command with the TYPE=INCREMENTAL parameter, ADSM performs an incremental backup of the database regardless of the NUMINCREMENTAL setting. For example, you set NUMINCREMENTAL to 5, and there have been five incremental backups since the last full backup. If you then issue BACKUP DB TYPE=INCREMENTAL, an incremental backup is still taken, and the counter for the number of incremental backups since the last full backup is set to 6. This occurs if the BACKUP DB command is issued either by an administrator or through an administrative schedule.

Examples

Task

Define the setting of the database backup trigger at 80 percent. Run two incremental backups to every full backup of the database. Assume a device class of FILE for the backup.

Command: `DEFine DBBackuptrigger DEVclass=file LOGFullpct=80 NUMINCremental=2`

Output:

```
ANR2283I Database backup trigger defined, but is disabled.
```

DEFINE DBBACKUPTRIGGER

Related Commands

Table 32. Commands Related to DEFINE DBBACKUPTRIGGER

Command	Description
BACKUP DB	Backs up the ADSM database to sequential access volumes.
DEFINE DEVCLASS	Defines a device class that can be used for storage pools, importing, or exporting.
DELETE DBBACKUPTRIGGER	Deletes the database backup trigger.
QUERY DBBACKUPTRIGGER	Displays information about the database backup trigger.
SET LOGMODE	Sets the mode for saving records in the recovery log.
UPDATE DBBACKUPTRIGGER	Changes one or more attributes of the database backup trigger.

DEFINE DBCOPY (Define a Volume Copy of a Database Volume)

Use the DEFINE DBCOPY command to create a volume copy of an existing database volume. Database volume copies increase the availability of the database and provide safeguard against media failure. You can have as many as two volume copies of an existing database volume. After each database volume copy is defined, the server attempts to synchronize the volume copy with the database.

The volume copy created via the DEFINE DBCOPY command is also called a *mirrored volume*. The mirrorread and mirrorwrite options located in the server options file control the usage of mirrored volumes.

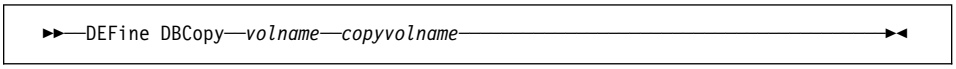
All database volumes must reside on a random access volume. Volume copies must have at least the same capacity as the original volume and should be defined on separate physical devices. Any additional space on the volume copy is not used.

This command can generate a background process that can be canceled with the CANCEL PROCESS command. If a DEFINE DBCOPY background process is canceled, the volume copy is created; however, synchronization processing is canceled, leaving the volume in a *stale* state. To display information on background processes, use the QUERY PROCESS command.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Parameters

volname

Specifies the name of the database volume for which you want to create a volume copy. This parameter is required.

copyvolname

Specifies the file name of the volume you want to assign as a database volume copy. This parameter is required. This file name can be entered with either the fully qualified path name or the path name relative to the server's current working directory. For example, if the file name is db1.dsm, the path name to be entered is:

```
l:\win32app\ibm\adsm\server\db1.dsm
```

No volume name used by ADSM can contain any embedded blanks or equal signs.

DEFINE DBCOPY

Examples

Task

Create a database volume copy named db3.dsm for the database volume named db1.dsm.

Command: `define dbcopy db1.dsm db3.dsm`

Output:

```
ANR2242I Database volume copy L:\WIN32APP\IBM\SERVER\DB3.DSM defined;
synchronization process started (process ID 2).
ANS5104I Process number 2 started.
```

Related Commands

Table 33. Commands Related to DEFINE DBCOPY

Command	Description
CANCEL PROCESS	Cancels a background server process.
DEFINE DBVOLUME	Assigns a volume to be used for database storage.
DELETE DBVOLUME	Deletes a volume from the database.
QUERY DBVOLUME	Displays information about one or more database volumes.
QUERY PROCESS	Displays information about one or all background server processes.

DEFINE DBVOLUME (Define a Database Volume)

Use the DEFINE DBVOLUME command to define a new database volume. All database volumes must reside on a random access volume.

Attention: The size of an allocated database, recovery log, or storage pool volume cannot be changed once it has been defined to the ADSM server. ADSM uses the initial size allocation of the volume at the time it is defined to the server to calculate data placement for later retrieval.

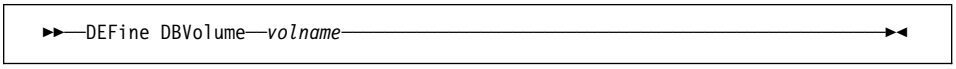
Each time you define a new database volume, you provide additional space to the database. To permit the database to use this additional space, use the EXTEND DB command.

When you define a database volume, it must occupy at least 5MB of space. Regardless of the defined storage capacity of a database volume, 1MB is not available for database storage. For example, if you define a database volume with a capacity of 9MB, 8MB are available for storage on the volume.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Parameters

volname

Specifies the file name of the database volume to be defined. This parameter is required. This file name can be entered with either the fully qualified path name or the path name of the server's current working directory. For example, if the file name is db1.dsm, the path name to be entered is:

```
l:\win32app\ibm\adsm\server\db1.dsm
```

No volume name used by ADSM can contain any embedded blanks or equal signs.

Examples

Task

Create a database volume in the server directory with a file name of db2.dsm.

Command: `define dbvolume db2.dsm`

DEFINE DBVOLUME

Output:

```
ANR2240I Database volume L:\WIN32APP\IBM\ADSM\SERVER\DB2.DSM
defined.
```

Related Commands

Table 34. Commands Related to DEFINE DBVOLUME

Command	Description
DEFINE DBCOPY	Creates a volume copy of a database volume.
DELETE DBVOLUME	Deletes a volume from the database.
EXTEND DB	Extends usable database storage within the volumes previously allocated for its use.
QUERY DBVOLUME	Displays information about one or more database volumes.

DEFINE DEVCLASS (Define a Device Class)

Use the DEFINE DEVCLASS command to define a device class for storage pools.

You can use the UPDATE DEVCLASS and DELETE DEVCLASS commands to either modify or eliminate existing device classes. However, you cannot modify the device type of an existing device class. The DISK device class is predefined by ADSM and requires no user intervention. This also means that the DISK device class cannot be modified or eliminated with the UPDATE DEVCLASS or DELETE DEVCLASS command.

To avoid confusion, it is beneficial to define a unique device class to support the sequential access devices available at your installation. For more information on defining device classes, refer to *ADSM Administrator's Guide*.

The server options file that is created during installation includes a DEVCONFIG option that specifies a default device configuration file named devcnfg.out. You can specify other device configuration files with additional DEVCONFIG options. The files specified with this option are automatically updated with the results of this command. The files are also automatically updated whenever a device class, library, or drive is defined, updated, or deleted.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax

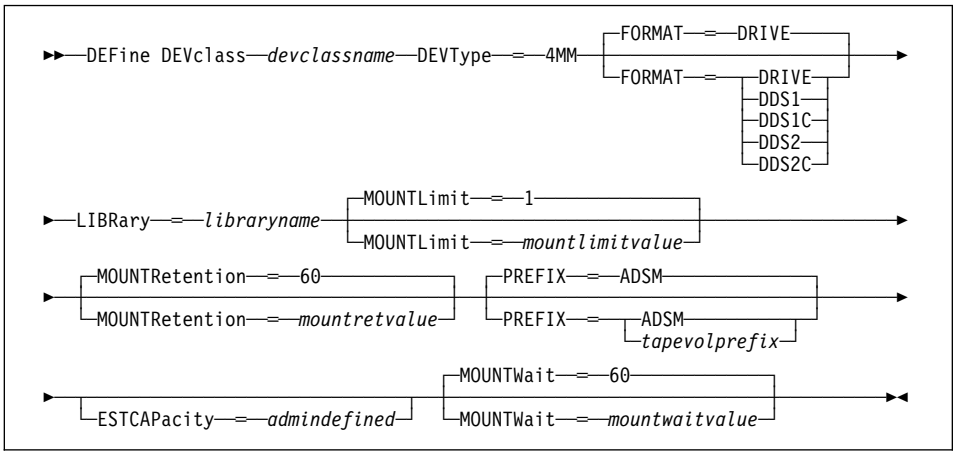
The supported parameters for this command vary between device types; therefore, the syntax and parameter descriptions are provided according to the device type. The syntax and parameter information is presented in the following order:

- 4MM
- 8MM
- DLT
- FILE
- GENERICTAPE
- QIC
- REMOVABLEFILE

Use the GENERICTAPE device type for devices supported by native device drivers. All other device types are for use with the ADSM device driver.

DEFINE DEVCLASS

Syntax for Defining a Device Class with a Device Type of 4MM



Parameters for Defining a Device Class with a Device Type of 4MM

devclassname
Specifies the name of the device class to be defined. This parameter is required. The maximum length of the device class name is 30 characters.

DEVType=4MM
Specifies that the 4MM device type is assigned to the device class. This parameter is required. 4MM indicates that 4mm tape devices are assigned to this device class.

FORMAT=*tapeformat*
Specifies the recording format to be used when writing data to sequential access media. This parameter is optional; the default value is DRIVE. Tape capacities are provided using their uncompressed values; hardware compression significantly increases these capacity values.

The following are possible values for 4mm devices:

DRIVE
Specifies that ADSM selects the highest format that can be supported by the sequential access drive on which a volume is mounted.

Attention:: Avoid specifying the DRIVE value when a mixture of devices is used within the same library. For example, if you have drives that support recording formats superior to other drives in a library, do not specify the FORMAT=DRIVE option.

DDS1
Specifies that ADSM writes data using the DDS-1 recording format for 4mm tapes, without compression. This format results in an uncompressed cartridge capacity of 1.3GB on 60 meter tape or 2GB on 90 meter tape. This format only applies to 60 and 90 meter tapes.

DDS1C
Specifies that ADSM writes data using the DDS-1 recording format for 4mm tapes, with compression enabled. This results in a cartridge capacity of approximately 1.3GB on a 60 meter tape or 2GB on a 90 meter tape. This format, however, uses the tape drive hardware compression feature, so the actual capacity may be greater, depending on the effectiveness of compression. This format only applies to 60 and 90 meter tapes.

DDS2
Specifies that ADSM writes data using the DDS-2 recording format for 4mm tapes, without compression. This format results in a cartridge capacity of 4GB on 120 meter tape. This format only applies to 120 meter tape.

DDS2C
Specifies that ADSM writes data using the DDS-2 recording format for 4mm tapes, with compression. This format results in a cartridge capacity of approximately 8GB on 120 meter tape. This format, however, uses the tape drive hardware compression feature, so the actual capacity may be greater, depending on the effectiveness of compression. This format only applies to 120 meter tape.

LIBRary=*libraryname*
Specifies the name of the defined library object that contains the 4mm tape drives used by this device class. For information about defining a library object, see the DEFINE LIBRARY command.

MOUNTLimit=*mountlimitvalue*
Specifies the maximum number of sequential access volumes that can be simultaneously mounted for the device class. This parameter is optional. The default value is 1. You can specify an integer in the range of 1 to 256, inclusive. It is recommended that this value is equal to the number of drives available to this device class.

If this value is set to 1, it may not be possible for media-to-media operations (such as, reclamation) to work.

MOUNTRetention=*mountretvalue*
Specifies the amount of time, in minutes, to retain an idle sequential access volume before dismounting it. This parameter is optional. The default value is 60. You can specify an integer in the range of 0 to 9999, inclusive.

This parameter can improve response time for sequential access media mounts by leaving previously mounted volumes online.

PREFIX=*tapevolprefix*
Specifies the prefix of the file name that the server writes into the sequential access media labels. For each sequential access volume assigned to this device class, ADSM uses this prefix to create the file name. This parameter is optional. The default value is ADSM. The maximum length of this prefix is 8 characters.

If you have already established a media label naming convention that supports your current management system, use a volume prefix that conforms to your naming conventions.

Values specified for this parameter must meet the following conditions:

- The value is to be made up of qualifiers, which can contain up to 8 characters (including periods). For example, the following value would be acceptable:

```
AB.CD2.E
```

- The qualifiers must be separated by a single period.
- The first letter of each qualifier must be alphabetical or national (@,#,$), followed by alphabetical, national, hyphen, or numeric characters.

An example of a tape volume data set name using the default prefix, with an ADSM qualifier added, is ADSM.BFS.

ESTCAPacity=*admindefined*

Specifies the estimated capacity for the sequential access volumes categorized by this device class. This parameter is optional. You can specify this parameter if the default estimated capacity for the device class is inaccurate due to compression of data.

You must specify this value as an integer followed by a scale factor. The following are possible scale factors:

Symbol	Symbol Name
K	Kilobyte
M	Megabyte
G	Gigabyte

For example, ESTCAPACITY=5M specifies that the estimated capacity for a volume in this device class is 5 megabytes. The smallest value allowed is 100KB (that is, ESTCAPACITY=100K).

For more information on the default estimated capacity for 4mm tapes, see Table 35.

Table 35. ADSM Default Estimated Capacity for 4mm Tape

Tape Format	Estimated Capacity
DDS1	1.3 - 2.0GB
DDS1C	1.3 - 2.0GB (see note)
DDS2	4.0GB
DDS2C	8.0GB (see note)

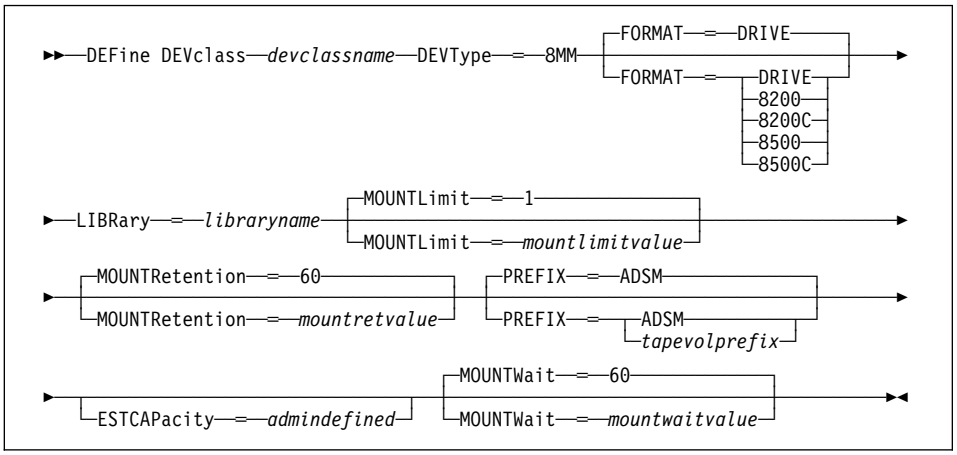
Note: This format uses the tape drive hardware compression feature. Depending on the effectiveness of compression, the actual capacity may be greater than the listed value.

MOUNTWait=*mountwaitvalue*

Specifies the maximum length of time, in minutes, to wait for a sequential access volume to be mounted. This parameter is optional and does not apply to sequential access media libraries. If the mount request is not satisfied within the specified amount of time, the mount request is canceled. The default value is 60 minutes. You can specify an integer in the range of 0 to 9999, inclusive.

DEFINE DEVCLASS

Syntax for Defining a Device Class with a Device Type of 8MM



Parameters for Defining a Device Class with a Device Type of 8MM

devclassname
Specifies the name of the device class to be defined. This parameter is required. The maximum length of the device class name is 30 characters.

DEVType=8MM
Specifies that the 8MM device type is assigned to the device class. This parameter is required. 8MM indicates that 8mm tape devices are assigned to this device class.

FORMAT=*tapeformat*
Specifies the recording format to be used when writing data to sequential access media. This parameter is optional; the default value is DRIVE.

Possible values for 8mm devices:

DRIVE
Specifies that ADSM selects the highest format that can be supported by the sequential access drive on which a volume is mounted.

Attention:: Avoid specifying the DRIVE value when a mixture of devices is used within the same library. For example, if you have drives that support recording formats superior to other drives in a library, do not specify the FORMAT=DRIVE option.

8200
Specifies that ADSM writes data using the 8200 recording format. This results in a tape capacity of 2.3GB when using standard 112M tape cartridges.

8200C
Specifies that ADSM writes data using the 8200C recording format. This results in a tape capacity of approximately 2.3GB when using standard 112

meter tape cartridges. This format, however, uses the tape drive's hardware compression feature, so the actual capacity may be greater than 2.3GB, depending on the effectiveness of the compression feature.

8500
Specifies that ADSM writes data using the 8500 recording format. This results in a tape capacity of 5.0GB when using standard 112M tape cartridges.

8500C
Specifies that ADSM writes data using the 8500C recording format. This results in a tape capacity of at least 5.0GB when using standard 112M tape cartridges. However, this format uses the tape drive's hardware compression feature, so the actual capacity of the cartridge may be greater than 5.0GB, depending on the effectiveness of the compression feature.

LIBRary=*libraryname*
Specifies the name of the defined library object that contains the 8mm tape drives used by this device class. For information about defining a library object, see the DEFINE LIBRARY command.

MOUNTLimit=*mountlimitvalue*
Specifies the maximum number of sequential access volumes that can be simultaneously mounted for the device class. This parameter is optional. The default value is 1. You can specify an integer in the range of 1 to 256, inclusive. It is recommended that this value is equal to the number of drives available to this device class.

If this value is set to 1, it may not be possible for media-to-media operations (such as, reclamation) to work.

MOUNTRetention=*mountretvalue*
Specifies the amount of time, in minutes, to retain an idle sequential access volume before dismounting it. This parameter is optional. The default value is 60. You can specify an integer in the range of 0 to 9999, inclusive.

This parameter can improve response time for sequential access media mounts by leaving previously mounted volumes online.

PREFIX=*tapevolprefix*
Specifies the prefix of the file name that the server writes into the sequential access media labels. For each sequential access volume assigned to this device class, ADSM uses this prefix to create the file name. This parameter is optional. The default value is ADSM. The maximum length of this prefix is 8 characters.

If you have already established a media label naming convention that supports your current management system, use a volume prefix that conforms to your naming conventions.

Values specified for this parameter must meet the following conditions:

- The value is to be made up of qualifiers, which can contain up to 8 characters (including periods). For example, the following value would be acceptable:

  ```
  AB.CD2.E
  ```

- The qualifiers must be separated by a single period.
- The first letter of each qualifier must be alphabetical or national (@,#,$), followed by alphabetical, national, hyphen, or numeric characters.

An example of a tape volume data set name using the default prefix, with an ADSM qualifier added, is ADSM.BFS.

ESTCAPacity=*admindefined*

Specifies the estimated capacity for the sequential access volumes categorized by this device class. This parameter is optional. You can specify this parameter if the default estimated capacity for the device class is inaccurate due to compression of data.

You must specify this value as an integer followed by a scale factor. The following are possible scale factors:

Symbol	Symbol Name
K	Kilobyte
M	Megabyte
G	Gigabyte

For example, ESTCAPACITY=5M specifies that the estimated capacity for a volume in this device class is 5 megabytes. The smallest value allowed is 100KB (that is, ESTCAPACITY=100K).

For more information on the default estimated capacity for 8mm tapes, see Table 36.

Table 36. ADSM Default Estimated Capacity for 8mm Tape

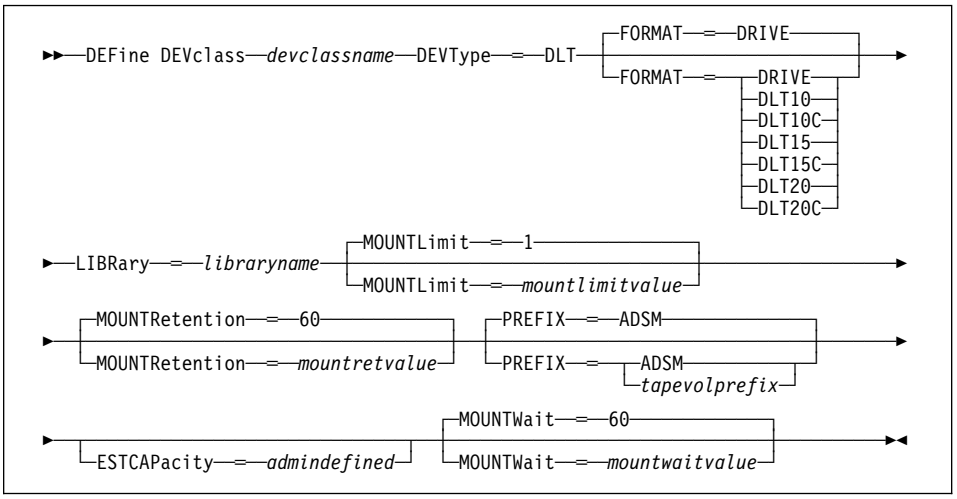
Tape Format	Estimated Capacity
8200	2.3GB
8200C	2.3GB (see note)
8500	5.0GB
8500C	5.0GB (see note)

Note: This format uses the tape drive hardware compression feature. Depending on the effectiveness of compression, the actual capacity may be greater than the listed value.

MOUNTWait=*mountwaitvalue*

Specifies the maximum length of time, in minutes, to wait for a sequential access volume to be mounted. This parameter is optional and does not apply to sequential access media libraries. If the mount request is not satisfied within the specified amount of time, the mount request is canceled. The default value is 60 minutes. You can specify an integer in the range of 0 to 9999, inclusive.

Syntax for Defining a Device Class with a Device Type of DLT



Parameters for Defining a Device Class with a Device Type of DLT

devclassname
Specifies the name of the device class to be defined. This parameter is required. The maximum length of the device class name is 30 characters.

DEVType=DLT
Specifies that the DLT device type is assigned to the device class. This parameter is required. DLT indicates that DLT devices are assigned to this device class.

FORMAT=*tapeformat*
Specifies the recording format to be used when writing data to sequential access media. This parameter is optional; the default value is DRIVE.

These are the possible values for DLT devices:

DRIVE
Specifies that ADSM selects the highest format that can be supported by the sequential access drive on which a volume is mounted.

Attention:: Avoid specifying the DRIVE value when a mixture of devices is used within the same library. For example, if you have drives that support recording formats superior to other drives in a library, do not specify the FORMAT=DRIVE option.

DLT10
Specifies that ADSM writes data using the DLT10 recording format. This results in a tape capacity of approximately 10.0GB when using CompacTape III or CompacTape IV cartridges.

DLT10C
Specifies that ADSM writes data using the DLT10C recording format. This results in a tape capacity of approximately 10.0GB when using CompacTape III and CompacTape IV cartridges. This format, however, uses the tape drive's hardware compression feature, so the actual capacity may be greater than 10.0GB, depending on the effectiveness of the compression feature.

DLT15
Specifies that ADSM writes data using the DLT15 recording format. This results in a tape capacity of approximately 15.0GB when using CompacTape III or CompacTape IV cartridges.

DLT15C
Specifies that ADSM writes data using the DLT15C recording format. This results in a tape capacity of approximately 15.0GB when using CompacTape III and CompacTape IV cartridges. This format, however, uses the tape drive's hardware compression feature, so the actual capacity may be greater than 15.0GB, depending on the effectiveness of the compression feature.

DLT20
Specifies that ADSM writes data using the DLT20 recording format. This results in a tape capacity of approximately 20.0GB when using CompacTape IV cartridges.

Attention:: The DLT20 format can only be used with CompacTape IV cartridges in a DLT4000 drive.

DLT20C
Specifies that ADSM writes data using the DLT20C recording format. This results in a tape capacity of approximately 20.0GB when using CompacTape IV cartridges. This format, however, uses the tape drive's hardware compression feature, so the actual capacity of the cartridge may be greater than 20.0GB, depending on the effectiveness of the compression feature.

Attention:: The DLT20C format can only be used with CompacTape IV cartridges in a DLT4000 drive.

LIBRary=*libraryname*
Specifies the name of the defined library object that contains the DLT drives used by this device class. For information about defining a library object, see the DEFINE LIBRARY command.

MOUNTLimit=*mountlimitvalue*
Specifies the maximum number of sequential access volumes that can be simultaneously mounted for the device class. This parameter is optional. The default value is 1. You can specify an integer in the range of 1 to 256, inclusive. It is recommended that this value is equal to the number of drives available to this device class.

If this value is set to 1, it may not be possible for media-to-media operations (such as, reclamation) to work.

MOUNTRetention=*mountretvalue*
Specifies the amount of time, in minutes, to retain an idle sequential access volume before dismounting it. This parameter is optional. The default value is 60. You can specify an integer in the range of 0 to 9999, inclusive.

This parameter can improve response time for sequential access media mounts by leaving previously mounted volumes online.

PREFIX=*tapevolprefix*
Specifies the prefix of the file name that the server writes into the sequential access media labels. For each sequential access volume assigned to this device class, ADSM uses this prefix to create the file name. This parameter is optional. The default value is ADSM. The maximum length of this prefix is 8 characters.

If you have already established a media label naming convention that supports your current management system, use a volume prefix that conforms to your naming conventions.

Values specified for this parameter must meet the following conditions:

- The value is to be made up of qualifiers, which can contain up to 8 characters (including periods). For example, the following value would be acceptable:

  ```
  AB.CD2.E
  ```

- The qualifiers must be separated by a single period.
- The first letter of each qualifier must be alphabetical or national (@,#,$), followed by alphabetical, national, hyphen, or numeric characters.

An example of a tape volume data set name using the default prefix, with an ADSM qualifier added, is ADSM.BFS.

ESTCAPacity=*admindefined*
Specifies the estimated capacity for the sequential access volumes categorized by this device class. This parameter is optional. You can specify this parameter if the default estimated capacity for the device class is inaccurate due to compression of data.

You must specify this value as an integer followed by a scale factor. The following are possible scale factors:

Symbol	Symbol Name
K	Kilobyte
M	Megabyte
G	Gigabyte

For example, ESTCAPACITY=5M specifies that the estimated capacity for a volume in this device class is 5 megabytes. The smallest value allowed is 100KB (that is, ESTCAPACITY=100K).

For more information on the default estimated capacity for DLT, see Table 37 on page 122.

Table 37. ADSM Default Estimated Capacity for DLT

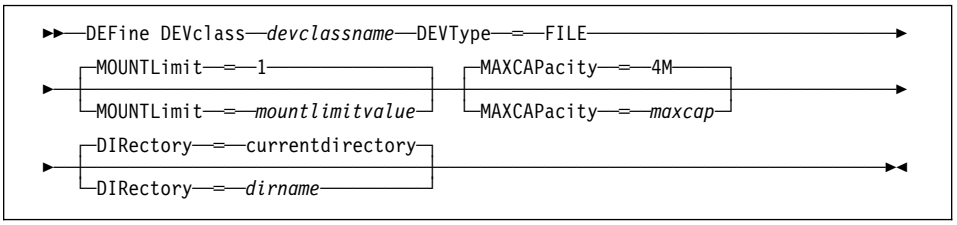
Tape Format	Estimated Capacity
DLT10	10.0GB
DLT10C	10.0GB (see note)
DLT20	20.0GB
DLT20C	20.0GB (see note)

Note: This format uses the tape drive hardware compression feature. Depending on the effectiveness of compression, the actual capacity may be greater than the listed value.

MOUNTWait=*mountwaitvalue*

Specifies the maximum length of time, in minutes, to wait for a sequential access volume to be mounted. This parameter is optional and does not apply to sequential access media libraries. If the mount request is not satisfied within the specified amount of time, the mount request is canceled. The default value is 60 minutes. You can specify an integer in the range of 0 to 9999, inclusive.

Syntax for Defining a Device Class with a Device Type of FILE



Parameters for Defining a Device Class with a Device Type of FILE

devclassname
Specifies the name of the device class to be defined. This parameter is required. The maximum length of the device class name is 30 characters.

DEVType=FILE
Specifies that the FILE device type is assigned to the device class. This parameter is required. FILE indicates that a file or files are assigned to this device class. When the server needs to access a volume that belongs to this device class, it opens a file and reads or writes file data. A file is a form of sequential access media.

MOUNTLimit=*mountlimitvalue*
Specifies the maximum number of files that can be simultaneously open for input/output. This parameter is optional. The default value is 1. You can specify an integer in the range of 1 to 256, inclusive.

MAXCAPacity=*maxcap*
Specifies the maximum size of any data storage files defined to a storage pool categorized by this device class. This parameter is optional. You must specify this value as an integer followed by a scale factor. The following are possible scale factors:

Symbol	Symbol Name
K	Kilobyte
M	Megabyte
G	Gigabyte

For example, MAXCAPACITY=5M specifies that the maximum capacity for a volume in this device class is 5 megabytes. The default value is 4MB (that is, MAXCAPACITY=4M). The smallest value allowed is 100KB (that is, MAXCAPACITY=100K).

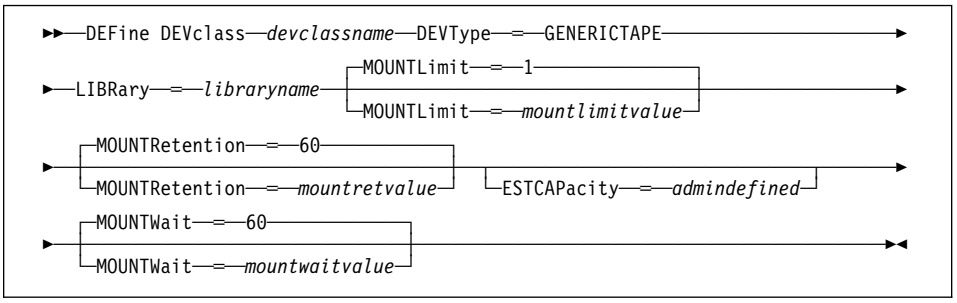
DIRectory=*dirname*
Specifies the directory location of the file or files used in this device class. This parameter is optional. The default is the current working directory of the server at the time the command is issued.

By specifying a directory name, you identify the location where the server places the files that represent storage volumes for this device class. While processing

the command, the server expands the specified directory name into its fully qualified form, starting from the root directory.

Later, if the server needs to allocate a scratch volume, it creates a new file in this directory. For scratch volumes used to store client data, the file created by the server has a file name extension of .BFS. For scratch volumes used to store export data, a file name extension of .EXP is used. For example, suppose you define a device class with a DIRECTORY of **\ADSMSTOR** and the server needs a scratch volume in this device class to store export data. The file which the server creates might then be named **\ADSMSTOR\00566497.EXP**.

Syntax for Defining a Device Class with a Device Type of GENERICTAPE



When using this device type, the server does not recognize either the type of device (for example, 4mm, 8mm, or DLT) or the cartridge recording format. Since the server does not recognize the type of device, if an I/O error occurs, error information is less detailed compared to error information for a specific device type (for example, 8mm).

When defining devices to the server do not mix various types of devices within the same device type. For example, by having both 4mm and 8mm tape devices defined within the same GENERICTAPE device type, it is possible that the server could attempt mounting a 4mm cartridge in an 8mm tape device.

Parameters for Defining a Device Class with a Device Type of GENERICTAPE

devclassname
Specifies the name of the device class to be defined. This parameter is required. The maximum length of the device class name is 30 characters.

DEVType=GENERICTAPE
Specifies that the GENERICTAPE device type is assigned to the device class. This parameter is required. GENERICTAPE indicates that the volumes for this device class are used in tape drives supported by a Windows NT tape device driver.

The server recognizes that the media can be removed and that additional media can be inserted, subject to limits set with the MOUNTLIMIT parameter for the device class and the MAXSCRATCH parameter for the storage pool.

Volumes in a device class with device type GENERICTAPE are sequential access volumes.

LIBRary=*libraryname*
Specifies the name of the defined library object that contains the tape drives used by this device class. For information about defining a library object, see the DEFINE LIBRARY command.

MOUNTLimit=*mountlimitvalue*
Specifies the maximum number of volumes that can be simultaneously open for input/output in this device class. This parameter is optional. The default value is 1. You can specify an integer in the range of 1 to 256, inclusive. It is

recommended that this value is equal to the number of drives available to this device class.

If this value is set to 1, it may not be possible for media-to-media operations (such as reclamation) to work.

MOUNTRetention=*mountretvalue*
Specifies the amount of time, in minutes, to retain an idle sequential access volume before dismounting it. This parameter is optional. The default value is 60. You can specify an integer in the range of 0 to 9999, inclusive.

This parameter can improve response time for sequential access media mounts by leaving previously mounted volumes online.

ESTCAPacity=*admindefined*
Specifies the estimated capacity for the sequential access volumes categorized by this device class. This parameter is optional. The default value is 1GB.

You must specify this value as an integer followed by a scale factor. The following are possible scale factors:

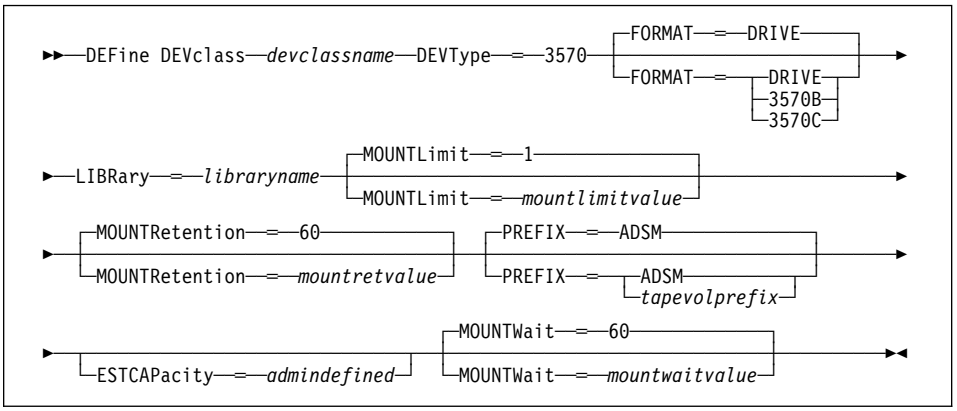
Symbol	Symbol Name
K	Kilobyte
M	Megabyte
G	Gigabyte

For example, ESTCAPACITY=5M specifies that the estimated capacity for a volume in this device class is 5 megabytes. The smallest value allowed is 100KB (that is, ESTCAPACITY=100K).

Specify a capacity appropriate to the particular tape drive being used.

MOUNTWait=*mountwaitvalue*
Specifies the maximum length of time, in minutes, to wait for a sequential access volume to be mounted. This parameter is optional and does not apply to sequential access media libraries. If the mount request is not satisfied within the specified amount of time, the mount request is canceled. The default value is 60 minutes. You can specify an integer in the range of 0 to 9999, inclusive.

Syntax for Defining a Device Class with a Device Type of 3570



Parameters for Defining a Device Class with a Device Type of 3570

devclassname
Specifies the name of the device class to be defined. This parameter is required. The maximum length of the device class name is 30 characters.

DEVType=3570
Specifies the 3570 device type is assigned to the device class. This parameter is required. 3570 indicates that IBM 3570 cartridge tape devices are assigned to this device class.

FORMAT=*tapeformat*
Specifies the recording format to be used when writing data to sequential access media. This parameter is optional; the default value is DRIVE.

The following are possible values for 3570 devices:

DRIVE Specifies that ADSM selects the highest format that can be supported by the sequential access drive on which a volume is mounted.

3570B Specifies that ADSM writes data using the basic (uncompressed) format. This results in a tape capacity of approximately 5GB.

3570C Specifies that ADSM writes data using the compressed format. This results in a tape capacity of approximately 5GB. This format, however, uses the tape drive's hardware compression feature, so the actual capacity may be greater, depending on the effectiveness of compression.

LIBRary=*libraryname*
Specifies the name of the defined library object that contains the tape drives that can be used by this device class. For information about defining a library object, see the DEFINE LIBRARY command.

MOUNTLimit=*mountlimitvalue*

Specifies the maximum number of sequential access volumes that can be simultaneously mounted for the device class. This parameter is optional. The default value is 1. You can specify an integer in the range of 1 to 256, inclusive. It is recommended that this value is equal to the number of drives available to this device class.

If this value is set to 1, it may not be possible for media-to-media operations (such as, reclamation) to work.

MOUNTRetention=*mountretvalue*

Specifies the amount of time, in minutes, to retain an idle sequential access volume before dismounting it. This parameter is optional. The default value is 60. You can specify an integer in the range of 0 to 9999, inclusive.

This parameter can improve response time for sequential access media mounts by leaving previously mounted volumes online. However, for EXTERNAL library types (that is, a library managed by an external media management system) setting this parameter to a low value (for example, two minutes) enhances device sharing between applications.

PREFIX=*tapevolprefix*

Specifies the high level qualifier of the data set name that the server writes into the sequential access media labels. For each sequential access volume assigned to this device class, ADSM uses this prefix to create the data set name. This parameter is optional. The default value is ADSM. The maximum length of this prefix is 8 characters.

If you have already established a media label naming convention that supports your current management system, use a volume prefix that conforms to your naming conventions.

Values specified for this parameter must meet the following conditions:

- The value is to be made up of qualifiers, which can contain up to 8 characters (including periods). For example, the following value would be acceptable:

  ```
  AB.CD2.E
  ```

- The qualifiers must be separated by a single period.
- The first letter of each qualifier must be alphabetical or national (@,#,$), followed by alphabetical, national, hyphen, or numeric characters.

An example of a tape volume data set name using the default prefix, with an ADSM qualifier added, is ADSM.BFS.

ESTCAPacity=*admindefined*

Specifies the estimated capacity for the sequential access volumes categorized by this device class. This parameter is optional. You can specify this parameter if the default estimated capacity for the device class is inaccurate due to compression of data.

You must specify this value as an integer followed by a scale factor. The following are possible scale factors:

Symbol	Symbol Name
K	Kilobyte
M	Megabyte
G	Gigabyte

For example, ESTCAPACITY=5M specifies that the estimated capacity for a volume in this device class is 5 megabytes. The smallest value allowed is 100KB (that is, ESTCAPACITY=100K).

For more information on the default estimated capacity for 3570 cartridge tapes, see Table 38.

Table 38. ADSM Estimated Capacity for 3570 Cartridge Tape

Tape Format	Estimated Capacity
3570B	5GB
3570C	5GB (see note)

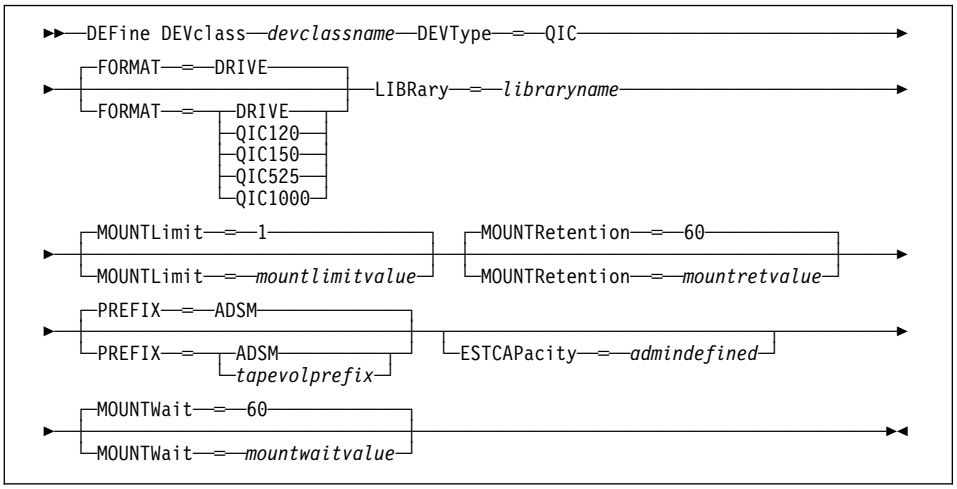
Note: This format uses the tape drive hardware compression feature. Depending on the effectiveness of compression, the actual capacity may be greater than the listed value.

MOUNTWait=*mountwaitvalue*

Specifies the maximum length of time, in minutes, to wait for a sequential access volume to be mounted. This parameter is optional. If the mount request is not satisfied within the specified amount of time, the mount request is canceled. The default value is 60 minutes. You can specify an integer in the range of 0 to 9999, inclusive.

DEFINE DEVCLASS

Syntax for Defining a Device Class with a Device Type of QIC



Parameters for Defining a Device Class with a Device Type of QIC

devclassname
Specifies the name of the device class to be defined. This parameter is required. The maximum length of the device class name is 30 characters.

DEVType=QIC
Specifies that the QIC device type is assigned to the device class. This parameter is required. QIC indicates that quarter-inch cartridge tape devices are assigned to this device class.

FORMAT=*tapeformat*
Specifies the recording format to be used when writing data to sequential access media. This parameter is optional; the default value is DRIVE.

The following are possible values for QIC devices:

DRIVE Specifies that ADSM selects the highest format that can be supported by the sequential access drive on which a volume is mounted.

Attention: Avoid specifying the DRIVE value when a mixture of devices is used within the same library. For example, if you have drives that support recording formats superior to other drives in a library, do not specify the FORMAT=DRIVE option.

QIC120 See Table 39 on page 131.

QIC150 See Table 39 on page 131.

QIC525 See Table 39 on page 131.

QIC1000 See Table 39 on page 131.

Table 39. QIC Tape Recording Format Selections

Tape/Format	QIC-120	QIC-150	QIC-525	QIC-1000
3M DC300XLP	–	–	–	–
3M DC600A	Read	–	–	–
3M DC600XTD	Read/Write	Read/Write	–	–
3M DC6150	Read/Write	Read/Write	–	–
3M DC6320	Read/Write	Read/Write	Read/Write	–
3M DC6525	Read/Write	Read/Write	Read/Write	–
3M DC9100	–	–	–	Read/Write
3M DC9120XL	–	–	–	Read/Write

Note: ADSM cannot use 3M DC300XLP and 3M DC600A tapes.

LIBRary=*libraryname*
Specifies the name of the defined library object that contains the QIC tape drives that can be used by this device class. For information about defining a library object, see the DEFINE LIBRARY command.

MOUNTLimit=*mountlimitvalue*
Specifies the maximum number of sequential access volumes that can be simultaneously mounted for the device class. This parameter is optional. The default value is 1. You can specify an integer in the range of 1 to 256, inclusive. It is recommended that this value is equal to the number of drives available to this device class.

If this value is set to 1, it may not be possible for media-to-media operations (such as, reclamation) to work.

MOUNTRetention=*mountretvalue*
Specifies the amount of time, in minutes, to retain an idle sequential access volume before dismounting it. This parameter is optional. The default value is 60. You can specify an integer in the range of 0 to 9999, inclusive.

This parameter can improve response time for sequential access media mounts by leaving previously mounted volumes online.

PREFIX=*tapevolprefix*
Specifies the prefix of the file name that the server writes into the sequential access media labels. For each sequential access volume assigned to this device class, ADSM uses this prefix to create the file name. This parameter is optional. The default value is ADSM. The maximum length of this prefix is 8 characters.

If you have already established a media label naming convention that supports your current management system, use a volume prefix that conforms to your naming conventions.

Values specified for this parameter must meet the following conditions:

- The value is to be made up of qualifiers, which can contain up to 8 characters (including periods). For example, the following value would be acceptable:

```
AB.CD2.E
```

- The qualifiers must be separated by a single period.
- The first letter of each qualifier must be alphabetical or national (@,#,$), followed by alphabetical, national, hyphen, or numeric characters.

An example of a tape volume data set name using the default prefix, with an ADSM qualifier added, is ADSM.BFS.

ESTCAPacity=*admindefined*

Specifies the estimated capacity for the sequential access volumes categorized by this device class. This parameter is optional. You can specify this parameter if the default estimated capacity for the device class is inaccurate due to compression of data.
You must specify this value as an integer followed by a scale factor. The following are possible scale factors:

Symbol	Symbol Name
K	Kilobyte
M	Megabyte
G	Gigabyte

For example, ESTCAPACITY=5M specifies that the estimated capacity for a volume in this device class is 5 megabytes. The smallest value allowed is 100KB (that is, ESTCAPACITY=100K).

For more information on the default estimated capacity for QIC tapes, see Table 40.

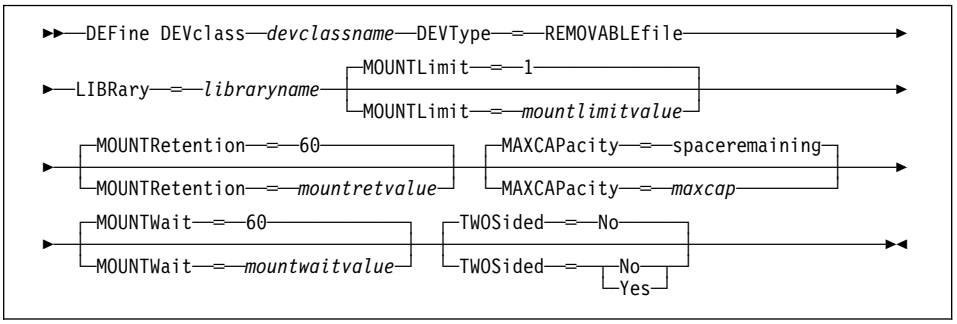
Table 40. ADSM Default Estimated Capacity for QIC Tape

Tape Format	Estimated Capacity (range)
QIC120	26MB–172MB
QIC150	31MB–207MB
QIC525	65MB–427MB
QIC1000	169MB–1.1GB

MOUNTWait=*mountwaitvalue*

Specifies the maximum length of time, in minutes, to wait for a sequential access volume to be mounted. This parameter is optional. If the mount request is not satisfied within the specified amount of time, the mount request is canceled. The default value is 60 minutes. You can specify an integer in the range of 0 to 9999, inclusive.

Syntax for Defining a Device Class with a Device Type of REMOVABLEFILE



Parameters for Defining a Device Class with a Device Type of REMOVABLEFILE

devclassname
Specifies the name of the device class to be defined. This parameter is required. The maximum length of the device class name is 30 characters.

DEVType=REMOVABLEfile
Specifies that the REMOVABLEFILE device type is assigned to the device class. This parameter is required. REMOVABLEFILE indicates that the volumes for this device class are files on local, removable media. Common drives for this device type include Iomega Zip and Jaz drives, and SyQuest drives. To access volumes that belong to this device class, the server requests that the removable media be mounted in drives. The server then opens a file on the media and reads or writes file data. Removable file drives are treated as single sided. Two-sided media are treated as two separate volumes.

The server recognizes that the media can be removed and that additional media can be inserted, subject to limits set with the MOUNTLIMIT parameter for the device class and the MAXSCRATCH parameter for the storage pool.

Volumes in a device class with device type REMOVABLEFILE are sequential access volumes.

LIBRary=*libraryname*
Specifies the name of the defined library object that contains the removable media drives used by this device class. For information about defining a library object, see the DEFINE LIBRARY command.

MOUNTLimit=*mountlimitvalue*
Specifies the maximum number of files that can be simultaneously open for input/output in this device class. This parameter is optional. The default value is 1. You can specify an integer in the range of 1 to 256, inclusive.

Each removable medium contains only one file. It is recommended that this value is equal to the number of drives available to this device class.

If this value is set to 1, it may not be possible for media-to-media operations (such as reclamation) to work.

DEFINE DEVCLASS

MOUNTRetention=*mountretvalue*

Specifies the amount of time, in minutes, to retain an idle sequential access volume before dismounting it. This parameter is optional. The default value is 60. You can specify an integer in the range of 0 to 9999, inclusive.

This parameter can improve response time for sequential access media mounts by leaving previously mounted volumes online.

MAXCAPacity=*maxcap*

Specifies the maximum size of any volumes (which are actually files) defined to a storage pool categorized by this device class. This parameter is optional. You must specify this value as an integer followed by a scale factor. The following are possible scale factors:

Symbol	Symbol Name
K	Kilobyte
M	Megabyte
G	Gigabyte

For example, MAXCAPACITY=5M specifies that the maximum capacity for a volume in this device class is 5 megabytes. The default maximum capacity is the space remaining on the media after it is first used. The smallest value allowed is 100KB (that is, MAXCAPACITY=100K).

Because the server opens only one file per physical removable medium, specify a capacity such that the one file makes full use of your media capacity.

MOUNTWait=*mountwaitvalue*

Specifies the maximum length of time, in minutes, to wait for a sequential access volume to be mounted. This parameter is optional and does not apply to sequential access media libraries. If the mount request is not satisfied within the specified amount of time, the mount request is canceled. The default value is 60 minutes. You can specify an integer in the range of 0 to 9999, inclusive.

TWOSided=*twosidedvalue*

Specifies whether the cartridges associated with the REMOVABLEFILE device class have two sides. The default value is NO. Possible values are:

No

Specifies the cartridges associated with the REMOVABLEFILE device class have only one side. One sided cartridges are processed by DRM MOVE/QUERY DRMEDIA command.

Yes

Specifies the cartridges associated with the REMOVABLEFILE device class have two sides. Two sided cartridges are not processed by DRM MOVE/QUERY DRMEDIA command.

Examples

Task 1

Define a device class named PLAINFILES with a file device type and a maximum capacity of 50MB.

Command:

```
define devclass plainfiles devtype=file maxcapacity=50m
```

Output:

```
ANR2203I Device class PLAINFILES defined.
```

Task 2

Define a device class named 8MMTAPE for an 8mm device in a library named AUTO. The format is DRIVE, mount limit is 2, mount retention is 10, tape volume prefix is named ADSMVOL, and the estimated capacity is 6GB.

Command:

```
define devclass 8mmtape devtype=8mm library=auto format=drive
mountlimit=2 mountretention=10 prefix=adsmvol estcapacity=6g
```

Output:

```
ANR2203I Device class 8MMTAPE defined.
```

Related Commands

Table 41. Commands Related to DEFINE DEVCLASS

Command	Description
BACKUP DEVCONFIG	Backs up ADSM device information to a file.
DEFINE LIBRARY	Defines an automated or manual library.
DELETE DEVCLASS	Deletes a device class name.
QUERY DEVCLASS	Displays information about one or more device classes.
UPDATE DEVCLASS	Changes the attributes of a device class.

DEFINE DOMAIN (Define a New Policy Domain)

Use the DEFINE DOMAIN command to define a new policy domain.

A policy domain provides you with a logical way of managing backup and archive policies for a group of client nodes with common backup-archive policy needs. You can also define policy domains to limit the number of client nodes that can be managed by a single policy administrator. A policy domain contains one or more policy sets, with only one policy set active at a time.

Each policy set contains one or more management classes. You can specify one default management class for each policy set. A management class can contain a backup copy group, an archive copy group, or both; however, neither is required.

An ADSM client node is assigned to one policy domain. The active policy set within the policy domain should contain management classes that meet the needs of files stored on the client node. The user of the client node can use the default management class or select any management class in the active policy set to manage files that are backed up or archived from the client node. Client nodes running on different platforms can be assigned to the same policy domain. For example, a policy domain can be used by both OS/2 and AIX clients.

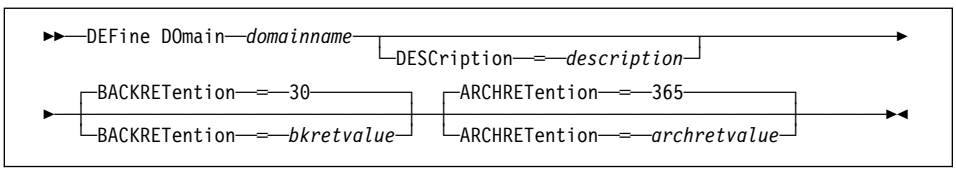
This command specifies the backup and archive retention grace periods for the policy domain. These retention grace periods are used by ADSM to protect backup versions and archive copies from deletion when the respective copy group is not available. For further descriptions of these parameters, see the parameter definitions. You can also find a detailed discussion of the retention grace periods in the *ADSM Administrator's Guide*. To determine the retention periods for an existing policy domain, use the QUERY DOMAIN command.

After you define a new policy domain, you can define additional policy objects in the new policy domain, such as policy sets, management classes, and copy groups. You can use COPY commands to copy policy sets and management classes. In addition, you must activate a policy set before clients assigned to the new policy domain can back up or archive files. A new policy domain can also be created by copying an existing policy domain to a new policy domain name.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

domainname
Specifies the name of the policy domain to be defined. This parameter is required. The maximum length of this name is 30 characters.

DESCription=*description*
Specifies a text string that describes the policy domain. This parameter is optional. The maximum length of the description is 255 characters. The description must be enclosed in quotation marks if it contains any blank characters. The default is no description.

BACKRETention=*bkretvalue*
Specifies an integer that defines the number of days (from the date of deactivation) to retain backup versions that are no longer on the client's system. This parameter is optional. The default value is 30. You can specify an integer in the range of 0 to 9999, inclusive. The backup retention value is used by ADSM to manage inactive versions of files when any of the following conditions are present:

- A file's management class is changed, but neither the new management class nor the default management class contains a backup copy group.
- The management class to which a file is bound no longer exists, and the default management class does not contain a backup copy group.
- The backup copy group is deleted from the management class to which a file is bound and the default management class does not contain a backup copy group.

ARCHRETention=*archretvalue*
Specifies an integer that defines the number of days (from the date of archive) to retain archive copies. This parameter is optional. The default value is 365. You can specify an integer in the range of 0 to 9999, inclusive. The archive retention value is used by ADSM to manage inactive copies of files when either of the following conditions are present:

- The management class to which a file is bound no longer exists, and the default management class does not contain an archive copy group.
- The archive copy group is deleted from the management class to which a file is bound and the default management class does not contain an archive copy group.

Examples

Task 1

Define a policy domain with the name of EMPLOYEE_RECORDS.

DEFINE DOMAIN

Command: `define domain employee_records`

Output:

```
ANR1500I Policy domain EMPLOYEE_RECORDS defined.
```

Task 2

Define a policy domain with a name of PROG1 and a description of Programming Group Domain. Specify that archive copy retention is for 90 days when management classes or archive copy groups are deleted and the default management class does not contain an archive copy group. Also specify that backup version retention is for 60 days when management classes or copy groups are deleted and the default management class does not contain a backup copy group.

Command:
```
define domain prog1 description="Programming Group Domain"
backretention=60 archretention=90
```

Output:

```
ANR1500I Policy domain PROG1 defined.
```

Related Commands

Table 42. Commands Related to DEFINE DOMAIN

Command	Description
COPY DOMAIN	Creates a copy of an existing policy domain.
DEFINE POLICYSET	Defines a policy set within the specified policy domain.
DELETE DOMAIN	Deletes a policy domain along with any policy objects in the policy domain.
QUERY DOMAIN	Displays information about one or more policy domains.
UPDATE DOMAIN	Changes the attributes of a policy domain.

DEFINE DRIVE (Define a Drive to a Library)

Use the DEFINE DRIVE command to define a drive that ADSM can use to access data on storage volumes. Each drive is assigned to a single library, which must be defined prior to issuing this command. You can define more than one drive for a given library; this is done by issuing the DEFINE DRIVE command once for each drive.

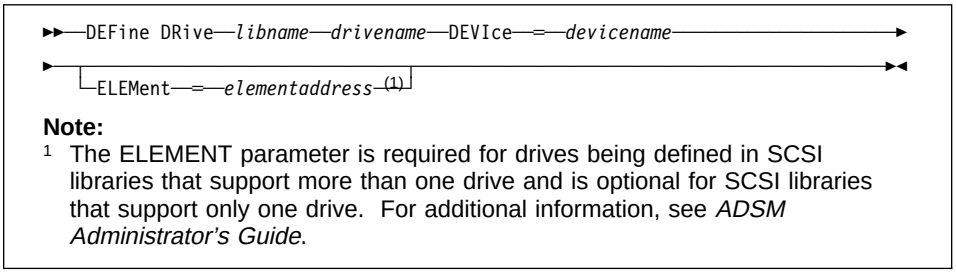
Remember: Stand-alone drives always require a library.

For additional information, refer to *ADSM Administrator's Guide*.

Privilege Class

To issue this command you must have system privilege or unrestricted storage privilege.

Syntax



Note:
1 The ELEMENT parameter is required for drives being defined in SCSI libraries that support more than one drive and is optional for SCSI libraries that support only one drive. For additional information, see *ADSM Administrator's Guide*.

Parameters

libname
Specifies the name of the library to which the drive is to be assigned. This parameter is required for all drives, including stand-alone drives. It is also required for drives that are device type REMOVABLEFILE. The specified library must have been previously defined using the DEFINE LIBRARY command.

drivename
Specifies the name assigned to the drive. This parameter is required. The maximum length of this name is 30 characters.

DEVIce=*devicename*
Specifies the name of the device that corresponds to the drive. For example, you might specify mt5.0.1. For additional information about device names, refer to the DEVICE parameter description for the DEFINE LIBRARY command and the *ADSM Administrator's Guide*. This parameter is required. For a drive that is device type REMOVABLEFILE, specify its drive letter and a colon, for example, E:.

ELEMent=*elementaddress*
Specifies the element address of the drive. The ELEMENT parameter is required for drives being defined in SCSI libraries that support more than one drive; it is optional for SCSI libraries that support only one drive. The element address is a number that indicates the physical location of a drive within an automated library.

DEFINE DRIVE

ADSM needs the element address to connect the physical location of the drive to the drive's SCSI address. For a description of which element address values to use for various library configurations, see *ADSM Administrator's Guide*.

Usage Notes

- When issuing the DEFINE DRIVE command for a removable drive, a formatted medium must be present in the drive. For a REMOVABLEFILE device type, ADSM does not supply utilities to format or label the media. You must use the device manufacturer's utilities or operating system utilities to format and label the media. Such utilities may include the format and label commands. The label on the media must not contain more than 8 characters, embedded blanks, or periods. The label must also follow the operating system's rules for file names. This allows ADSM to verify that a valid file system is available.
- If your SCSI adapter has the capability of letting the system see attached drives as either fixed disks or removable, make sure the system views the attached drive as removable.

Examples

Task 1

Suppose you have already defined a manual tape library named MANLIB using the DEFINE LIBRARY command. You then wish to inform the server that you have a tape drive that can be used to access storage media. You choose the name TAPEDRIVE0 for this drive.

Command: `define drive manlib tapedrive0 device=mt3`

Output:

```
ANR8404I Drive TAPEDRIVE0 defined in library MANLIB.
```

Task 2

Suppose you have already defined a manual library named MANUAL using the DEFINE LIBRARY command. You then wish to inform the server that you have a stand-alone Iomega Zip drive accessed as drive letter H, ready for use. You choose the name ZIP1 for this drive.

Command: `define drive manual ZIP1 device=h:`

Output:

```
ANR8404I Drive ZIP1 defined in library MANUAL.
```

Related Commands

Table 43. Commands Related to DEFINE DRIVE

Command	Description
DEFINE DEVCLASS	Defines a device class that can be used for storage pools, importing, or exporting.
DEFINE LIBRARY	Defines an automated or manual library.
DELETE LIBRARY	Deletes a library.
QUERY DRIVE	Displays information about one or more drives.
QUERY LIBRARY	Displays information about one or more libraries.
UPDATE DRIVE	Changes the attributes of a drive.

DEFINE LIBRARY (Define a Library)

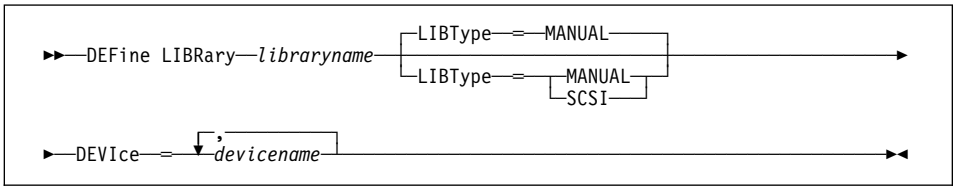
Use the DEFINE LIBRARY command to define a library and specify its type. A library is a collection of one or more drives, and possibly robotic devices (depending on the library type), which can be used to access storage volumes.

The server options file that is created during installation includes a DEVCONFIG option that specifies a default device configuration file named devcnfg.out. You can specify other device configuration files with additional DEVCONFIG options. The files you specify with this option are automatically updated with the results of this command. The files are also automatically updated whenever a device class, library, or drive is defined, updated, or deleted.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Parameters

libraryname

Specifies the name of the library to be defined. This parameter is required. The maximum length of this name is 30 characters.

LIBType=*librarytype*

Specifies the type of library that is being defined. This parameter is optional. The default is MANUAL. Possible values are:

MANUAL

Specifies that the library type is not automated and requires human interaction (a mount operator) when a storage volume needs to be mounted into a drive. When volumes need to be mounted on drives that reside in this type of library, messages will be sent to mount operators to inform them of the required action. This type of library is used with stand-alone drives.

SCSI

Specifies that the library is automated via a SCSI autochanger device. When volumes need to be mounted on drives that reside in this type of library, ADSM uses the robotic autochanger device to automatically carry out the required actions.

DEVIce=*devicename*

Specifies the names of the devices that access the library's robotic mechanism. This parameter is required for SCSI, but is not valid for MANUAL library types. If the library type is SCSI, only one device name is allowed.

There are several ways to specify a device name. The following describes one of the easier methods, known as alias names. For information describing the other methods, refer to *ADSM Administrator's Guide*.

For devices supported by either the ADSMSCSI driver or Windows NT drivers, you can use an alias name to refer to the devices when using ADSM. The alias name replaces the real ADSMSCSI name or Windows NT name for a device in ADSM commands and screens.

An alias name has the form mt*x.y.z.n* or lb*x.y.z.n*. The mt indicates the device is a tape device and the lb indicates the device is the controller for a tape autochanger or an automated library. The alias can be abbreviated. Some examples follow:

mt3	Tape drive at SCSI ID 3, LUN 0 on port 0, bus 0
lb4.1	Library at SCSI ID 4, LUN 1 on port 0, bus 0
mt5.0.1	Tape drive at SCSI ID 5, LUN 0, port 1, bus 0

Because the alias name does not change unless you change how the device is physically attached, we recommend that you always use the alias name for devices controlled by Windows NT device drivers. To distinguish between a real device name and an alias, ADSM checks for a backslash (\) at the beginning of the name. If the name begins with a backslash, ADSM recognizes that the name is the real device name and not an alias.

Using the real device name for a device controlled by a Windows NT device driver is not recommended because that name can change the next time that the machine is booted.

For additional information, see the *ADSM Administrator's Guide*.

Examples

Task 1

Define a library named MANLIB with the library type of MANUAL.

Command: `DEFine LIBRary manlib LIBType=MANUAL`

Output:

```
ANR8400I Library MANLIB defined.
```

DEFINE LIBRARY

Task 2

Define a library named EZLIFE with a library type of SCSI. For this example assume that you are using the ADSMSCSI device driver. The device SCSI ID is 3, with a logical unit number (LUN) of 0 on path 0, port 0; thus, the device name is: mt3.0.0.0

Command: `DEFine LIBRary ezlife LIBType=SCSI DEVice=mt3.0.0.0`

Output:

```
ANR8400I Library EZLIFE defined.
```

Related Commands

Table 44. Commands Related to DEFINE LIBRARY

Command	Description
AUDIT LIBRARY	Ensures that an automated library is in a consistent state.
DEFINE DRIVE	Assigns a drive to a library.
DELETE LIBRARY	Deletes a library.
QUERY DRIVE	Displays information about one or more drives.
QUERY LIBRARY	Displays information about one or more libraries.
UPDATE DRIVE	Changes the attributes of a drive.
UPDATE LIBRARY	Changes the attributes of a library.

DEFINE LOGCOPY (Define a Volume Copy of a Recovery Log Volume)

Use the DEFINE LOGCOPY command to create a volume copy of an existing recovery log volume. Recovery log volume copies increase the availability of the recovery log and provide a safeguard against media failure. You can have as many as two volume copies of an existing recovery log volume. After each recovery log volume copy is defined, the server attempts to synchronize the volume copy with the recovery log.

The volume copy created via the DEFINE LOGCOPY command is also called a *mirrored volume*. The mirrorread and mirrorwrite options located in the server options file control the usage of mirrored volumes.

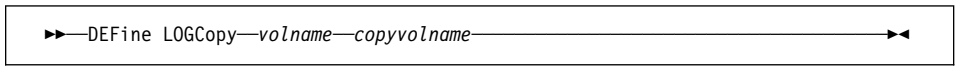
All recovery log volumes must reside on a random access volume. Volume copies must have at least the same capacity as the original volume and should be defined on separate physical devices. Any additional space on the volume copy is not used.

This command can generate a background process that can be canceled with the CANCEL PROCESS command. If a DEFINE LOGCOPY background process is canceled, the volume copy is created; however, synchronization processing is canceled leaving the volume in a *stale* state. To display information on background processes, use the QUERY PROCESS command.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Parameters

volname

Specifies the name of the recovery log volume for which you want to create a volume copy. This parameter is required.

copyvolname

Specifies the file name of the volume you want to assign as a recovery log volume copy. This parameter is required. This file name can be entered with either the fully qualified path name or the path name relative to the server's current working directory. For example, if the file name is log01.dsm, the path name to be entered is:

```
l:\win32app\ibm\adsm\server\log01.dsm
```

No volume name used by ADSM can contain any embedded blanks or equal signs.

DEFINE LOGCOPY

Examples

Task

Create a volume copy named log3.dsm of the recovery log volume named log1.dsm.

Command: `DEFine LOGCopy log1.dsm log3.dsm`

Output:

```
ANR2262I Recovery log volume copy L:\WIN32APP\IBM\ADSM\SERVER\LOG3.DSM
defined; synchronization process started (process ID 3).
ANS5104I Process number 3 started.
```

Related Commands

Table 45. Commands Related to DEFINE LOGCOPY

Command	Description
CANCEL PROCESS	Cancels a background server process.
DEFINE LOGVOLUME	Defines a disk volume to the recovery log.
DELETE LOGVOLUME	Deletes a volume from the recovery log.
QUERY LOGVOLUME	Displays information about one or more log volumes.
QUERY PROCESS	Displays information about one or all background server processes.

DEFINE LOGVOLUME (Define a Recovery Log Volume)

Use the DEFINE LOGVOLUME command to define a new recovery log volume. All recovery log volumes must reside on a random access volume.

Attention: The size of an allocated database, recovery log, or storage pool volume cannot be changed once it has been defined to the ADSM server. ADSM uses the initial size allocation of the volume at the time it is defined to the server to calculate data placement for later retrieval.

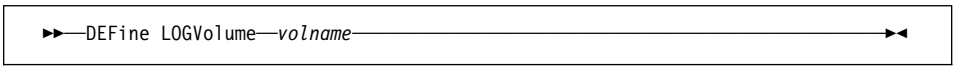
Each time you define a new recovery log volume, you provide additional space for the recovery log. To permit the recovery log to use this additional space, use the EXTEND LOG command.

When you define a recovery log volume, it must occupy at least 5MB of space. Storage space is used in 4MB blocks after 1MB is used for overhead purposes. Regardless of the defined storage capacity of a recovery log volume, 1MB is not available for recovery log storage. For example, if you define a recovery log volume with a capacity of 9MB, 8MB are available for storage on the volume.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Parameters

volname

Specifies the file name of the recovery log volume. This parameter is required. This file name can be entered with either the fully qualified path name or the path name of the server's current working directory. For example, if the file name is log1.dsm the path name to be entered is:

```
l:\win32app\ibm\adsm\server\log1.dsm
```

No volume name used by ADSM can contain any embedded blanks or equal signs.

Examples

Task

Define a recovery log volume named LOG2.DSM.

DEFINE LOGVOLUME

Command: `DEFine LOGVolume log2.dsm`

Output:

```
ANR2260I Recovery log volume L:\WIN32APP\IBM\ADSM\SERVER\LOG2.DSM
defined.
```

Related Commands

Table 46 provides references to related commands.

Table 46. Commands Related to DEFINE LOGVOLUME

Command	Description	Reference
DEFINE LOGCOPY	Creates a volume copy of a recovery log volume.	Page 145
DELETE LOGVOLUME	Deletes a volume from the recovery log.	Page 224
EXTEND LOG	Extends usable log storage within the volumes previously allocated for its use.	Page 276
QUERY LOGVOLUME	Displays information about one or more log volumes.	Page 433

DEFINE MACHINE (Define a Machine)

This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

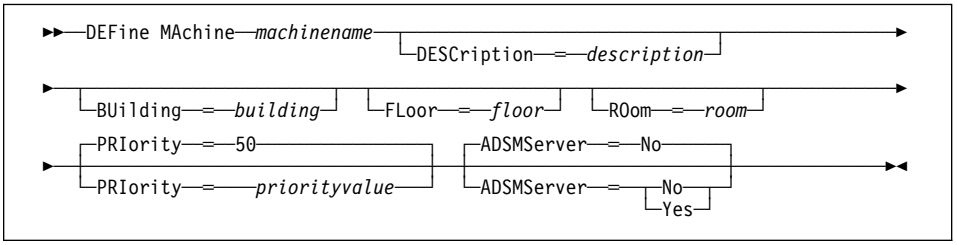
Use the DEFINE MACHINE command to save the description and recovery related information for a machine that contains an ADSM backup/archive client node or ADSM server.

This command is provided for your use in documenting, in the ADSM server database, the machine information required to recover an ADSM client machine should a disaster occur. The ADSM server database will be used to store this information for you, and QUERY commands are provided to retrieve the information should you need to reference it in the case of a disaster. The information provided by this command is NOT used by the server in any way to coordinate disaster recovery or to manage the server under normal operation. The information provided in this command is solely determined by you in planning for client machine disaster recovery.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

machinename
Specifies the name of the machine to be defined. This parameter is required. The maximum length of the machine name is 64 characters.

DESCription=*description*
Specifies the description of the machine. This parameter is optional. The maximum length of the description is 255 characters. The description must be enclosed in quotation marks if it contains any blank characters. The default is no description.

BUilding=*building*
Specifies the building name or number that this machine is in. This parameter is optional. You can enter a building name or a building number. The maximum length of the building name or number is 16 characters. The building must be enclosed in quotation marks if it contains any blank characters. The default is no building name or number.

DEFINE MACHINE

FLoor=*floor*
Specifies the floor name or number that this machine is in. This parameter is optional. You can enter a floor name or a floor number. The maximum length of the floor name or number is 16 characters. The floor must be enclosed in quotation marks if it contains any blank characters. The default is no floor name or number.

ROom=*room*
Specifies the room name or number that this machine is in. This parameter is optional. You can enter a room name or a room number. The maximum length of the room name or number is 16 characters. The room must be enclosed in quotation marks if it contains any blank characters. The default is no room name or number.

PRIority=*priorityvalue*
Specifies the restore priority value for the machine. This parameter is optional. The default value is 50. You can specify an integer in the range of 1 to 99, inclusive, with 1 being the highest priority and 99 being the lowest. This value is used to provide a prioritized list for client machine recovery.

ADSMServer=*adsmservervalue*
Specifies whether the machine being defined contains an ADSM server. This parameter is optional. The default value is no. Possible values are:

No
Specifies that this machine does not contain an ADSM server.

Yes
Specifies that this machine contains an ADSM server. Only one machine can be defined as containing the ADSM server.

Examples

Task

Define a machine with the name DISTRICT5, a location of building 101, a floor of 27, and a room named datafacilities. This machine contains mission critical data and therefore requires a setting of priority one.

Command:
```
define machine district5 building=101 floor=27
room=datafacilities priority=1
```

Output:

```
ANR6609I Machine DISTRICT5 defined.
```

Related Commands

Table 47. Commands Related to DEFINE MACHINE

Command	Description
DEFINE MACHNODEASSOCIATION	Associates an ADSM node with a machine.
DEFINE RECMEDMACHASSOCIATION	Associates recovery media with a machine.
DELETE MACHINE	Deletes an existing machine.
INSERT MACHINE	Inserts machine characteristics or recovery instructions into the ADSM database.
QUERY MACHINE	Displays information about one or more machines.
UPDATE MACHINE	Changes the information of an existing machine.

DEFINE MACHNODEASSOCIATION (Associate an ADSM Node With a Machine)

This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

Use the DEFINE MACHNODEASSOCIATION command to associate one or more ADSM client nodes with a machine. During disaster recovery, this association information is used to determine what ADSM client nodes resided on machines that were destroyed.

This command is provided for your use in documenting, in the ADSM server database, the machine information required to recover an ADSM client machine should a disaster occur. The ADSM server database will be used to store this information for you, and QUERY commands are provided to retrieve the information should you need to reference it in the case of a disaster. The information provided by this command is NOT used by the server in any way to coordinate disaster recovery or to manage the server under normal operation. The information provided in this command is solely determined by you in planning for client machine disaster recovery.

Before associating a node with a machine, the following conditions must be true:

- The specified machine is defined
- The specified node is registered

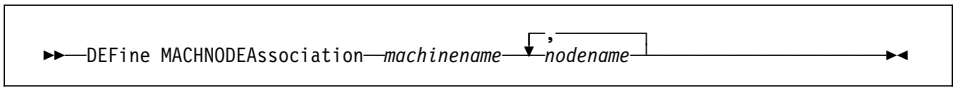
A node remains associated with a machine until one of the following steps occurs:

- Delete the association between the machine and the node by issuing the DELETE MACHNODEASSOCIATION command.
- Delete the node by issuing the REMOVE NODE command.
- Delete the machine by issuing the DELETE MACHINE command.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

machinename
Specifies the name of the machine to which one or more nodes are to be associated. This parameter is required.

nodename
Specifies the name of the node to be associated with the machine. This parameter is required. You can specify a list of nodes that you want to associate with the specified machine. The items in the list are separated with commas, with no intervening spaces. You can use a pattern matching expression to specify a name. All matching nodes are associated with the machine. A node can only be associated with one machine.

Examples

Task

Create an association between the DISTRICT5 machine and a node with the name of ACCOUNTSPAYABLE.

Command: `define machnodeassociation district5 accountspayable`

Output:

```
ANR6619I Node ACCOUNTSPAYABLE associated with machine DISTRICT5.
```

Related Commands

Table 48. Commands Related to DEFINE MACHNODEASSOCIATION

Command	Description
DEFINE MACHINE	Defines a machine for DRM.
DELETE MACHINE	Deletes an existing machine.
DELETE MACHNODEASSOCIATION	Deletes association between a machine and node.
QUERY MACHINE	Displays information about one or more machines.
REGISTER NODE	Defines a client to the server and sets options for that user.
REMOVE NODE	Removes a client from the list of registered nodes for a specific policy domain.

DEFINE MGMTCLASS (Define a Management Class)

Use the DEFINE MGMTCLASS command to define a new management class in a policy set.

You can define one or more management classes for each policy set in a policy domain. A management class can contain a backup copy group, an archive copy group, or both. However, neither is required.

Note: The DEFINE MGMTCLASS command will fail if a copy storage pool is specified as the destination for space-managed files.

You must specify an existing management class as the default management class for a policy set before you can activate the policy set. To specify an existing management class as the default management class, use the ASSIGN DEFMGMTCLASS command.

When a client node is registered with ADSM, the node is defined to a policy domain. This policy domain contains management classes appropriate for the information stored on the client node.

The user of a client node can use the default management class or select any management class in the active policy set. By entering clear descriptions of your management classes, users can easily select management classes that are appropriate for their storage management needs.

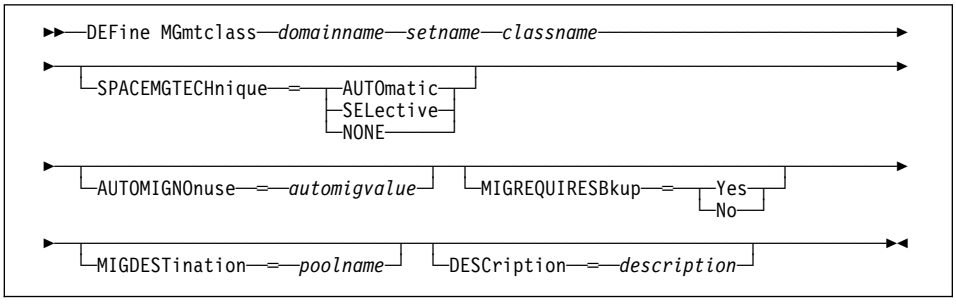
The following parameters affect only HSM clients that use this management class, and have no effect on backup-archive clients:

SPACEMGTECHNIQUE
AUTOMIGNONUSE
MIGREQUIRESBKUP
MIGDESTINATION

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the policy domain to which the management class belongs.

Syntax



Parameters

domainname
Specifies the name of the policy domain to which the management class belongs. This parameter is required.

setname
Specifies the name of the policy set to which the management class belongs. This parameter is required. You cannot define a management class to the ACTIVE policy set.

classname
Specifies the name of the new management class. This parameter is required. The maximum length of this name is 30 characters. You cannot use either *default* or *grace_period* as a class name.

SPACEMGTECHnique=*smtvalue*
Specifies whether the file is eligible for migration. This parameter is optional. Possible values are:

AUTOmatic
Specifies that the file is eligible for automatic migration or selective migration.

SELective
Specifies that the file is eligible for selective migration only.

NONE
Specifies that the file is not eligible for migration.

The default in the management class named STANDARD is NONE.

This parameter is effective only for HSM clients, not for backup-archive clients.

AUTOMIGNOnuse=*automigvalue*
Specifies the number of days that must elapse since the file was last accessed before it is eligible for automatic migration. This parameter is optional. If SPACEMGTECHNIQUE is not AUTOMATIC, ADSM ignores this attribute. You can specify a value from 0–9999. The default value is 0.

This parameter is effective only for HSM clients, not for backup-archive clients.

MIGREQUIRESBkup=*migreqvalue*
Specifies whether a backup version of a file must exist before a file can be migrated. This parameter is optional. Possible values are:

Yes A backup version must exist.

No A backup version is optional.

Note: This parameter is effective only for HSM clients, not for backup-archive clients. For HSM clients, the default is YES.

MIGDESTination=*poolname*
Specifies the name of a primary storage pool that is a destination for migrated files. A file must be associated with a management class that specifies an appropriate storage pool for migrated files. The type of storage devices in a storage pool and options specified for the storage pool affects the speed with which a migrated file can be recalled to a local file system. This parameter is optional. The default value is SPACEMGPOOL.

This parameter is effective only for HSM clients, not for backup-archive clients.

DESCription=*description*
Describes the management class by using a text string. This parameter is optional. The maximum length of the description is 255 characters. The description must be enclosed in quotation marks if it contains any blank characters.

Examples

Task 1

Define a management class called ACTIVEFILES for policy set VACATION in the EMPLOYEE_RECORDS policy domain.

Command:
```
define mgmtclass employee_records vacation activefiles
```

Output:

```
ANR1520I Management class ACTIVEFILES defined in policy
domain EMPLOYEE_RECORDS, set VACATION.
```

Task 2

Define a management class called MCLASS1, described as Technical Support Mgmt Class, for policy set SUMMER in the PROG1 policy domain.

Command:
```
define mgmtclass prog1 summer mclass1 description="technical
support mgmt class"
```

Output:

```
ANR1520I Management class MCLASS1 defined in policy domain
PROG1, set SUMMER.
```

Related Commands

Table 49. Commands Related to DEFINE MGMTCLASS

Command	Description
ASSIGN DEFMGMTCLASS	Assigns an existing management class as the default for a specified policy set.
COPY MGMTCLASS	Creates a copy of an existing management class.
DEFINE COPYGROUP	Defines a copy group for backup or archive processing within a specified management class.
DEFINE POLICYSET	Defines a policy set within the specified policy domain.
DELETE MGMTCLASS	Deletes a management class and its copy groups from a policy domain and policy set.
QUERY COPYGROUP	Displays the attributes of an existing copy group.
QUERY MGMTCLASS	Displays information about one or more management classes.
QUERY POLICYSET	Displays information about one or more policy sets.
UPDATE COPYGROUP	Changes one or more attributes of a copy group.
UPDATE MGMTCLASS	Changes the attributes of a management class.

DEFINE POLICYSET (Define a Policy Set)

Use the DEFINE POLICYSET command to define a policy set in a specified policy domain.

A policy set provides you with a logical way of grouping management classes and a set of definitions for use in the ACTIVE policy set. You can define one or more policy sets for each policy domain; however, only one policy set can be active at a time in a given policy domain.

A policy set can contain zero or more management classes. You can specify one default management class for each policy set. A management class can contain a backup copy group, an archive copy group, or both. However, neither is required.

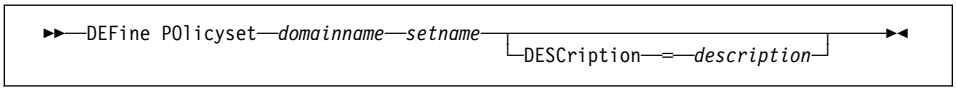
Use the ACTIVATE POLICYSET command to make a new policy set the active policy set. When a policy set is activated, ADSM uses these new definitions to manage client files for the client nodes assigned to the policy domain where this newly activated policy set resides. Use the VALIDATE POLICYSET command to verify that a policy set is complete and valid before activating it with the ACTIVATE POLICYSET command.

After you define a policy set, you can define policy objects to the new policy set, such as management classes, a default management class, and copy groups. You can use the COPY MGMTCLASS command to copy a management class and its associated copy groups into the new policy set.

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the policy domain to which the policy set belongs.

Syntax



Parameters

domainname
Specifies the name of the policy domain to which the policy set belongs. This parameter is required.

setname
Specifies the name you want to assign to the policy set. This parameter is required. The maximum length of this name is 30 characters. You cannot define a policy set named ACTIVE.

DESCription=*description*
Describes the new policy set using a text string. This parameter is optional. The maximum length of the description is 255 characters. The description must be enclosed in quotation marks if it contains any blank characters. The default is no description.

Examples

Task 1

Define a policy set called VACATION for the EMPLOYEE_RECORDS policy domain.

Command: `define policyset employee_records vacation`

Output:

```
ANR1510I Policy set VACATION defined in policy domain
EMPLOYEE_RECORDS.
```

Task 2

Define a policy set called SUMMER for the PROG1 policy domain and include a description of Programming Group Policies.

Command: `define policyset prog1 summer description="programming group policies"`

Output:

```
ANR1510I Policy set SUMMER defined in policy domain PROG1.
```

DEFINE POLICYSET

Related Commands

Table 50. Commands Related to DEFINE POLICYSET

Command	Description
ACTIVATE POLICYSET	Validates and activates a policy set within a policy domain.
COPY MGMTCLASS	Creates a copy of an existing management class.
COPY POLICYSET	Creates a copy of an existing policy set.
DEFINE DOMAIN	Defines a policy domain that can be assigned to one or more clients.
DEFINE MGMTCLASS	Defines a management class within the policy domain and policy set specified.
DELETE POLICYSET	Deletes a policy set, including its management classes and copy groups, from a policy domain.
QUERY POLICYSET	Displays information about one or more policy sets.
UPDATE POLICYSET	Changes the description of a policy set.
VALIDATE POLICYSET	Verifies and reports on conditions the administrator must consider before activating the policy set.

DEFINE RECMEDMACHASSOCIATION (Associate Recovery Media with a Machine)

This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

Use the DEFINE RECMEDMACHASSOCIATION command to associate a machine with the recovery media. A machine is associated with recovery media so that the location of the boot media and its list of volume names are available when the machine requires recovery. Multiple machines can be associated with the same recovery media.

This command is provided for your use in documenting, in the ADSM server database, the machine information required to recover an ADSM client machine should a disaster occur. The ADSM server database will be used to store this information for you, and QUERY commands are provided to retrieve the information should you need to reference it in the case of a disaster. The information provided by this command is NOT used by the server in any way to coordinate disaster recovery or to manage the server under normal operation. The information provided in this command is solely determined by you in planning for client machine disaster recovery.

Before associating a machine with a recovery media, the following conditions must be true:

- The specified machine is defined
- The specified recovery media is defined

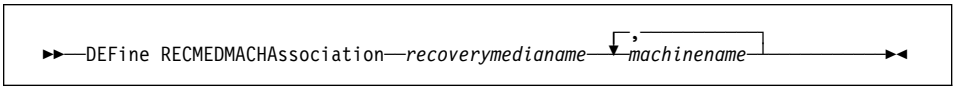
A machine remains associated with recovery media until one of the following steps occurs:

- Delete the association between the recovery media and the machine by issuing the DELETE RECMEDMACHASSOCIATION command.
- Delete the recovery media by issuing the DELETE RECOVERYMEDIA command.
- Delete the machine by issuing the DELETE MACHINE command.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

recoverymedianame
Specifies the name of the recovery media to which one or more machines are to be associated. This parameter is required.

DEFINE RECMEDMACHASSOCIATION

machinename

Specifies the name of the machine to be associated with the recovery media. This parameter is required. You can specify a list of machines that you want to associate with the specified recovery media. The items in the list are separated with commas, with no intervening spaces. You can use a pattern matching expression to specify a name. All matching machines are associated with the recovery media. If a machine is listed, but is already associated with the specified recovery media, the command has no effect for that machine. A machine can be associated with more than one recovery media.

Examples

Task

Associate machines DISTRICT1 and DISTRICT5 to the DIST5RM recovery media.

Command:

```
define recmedmachassociation dist5rm district1,district5
```

Output:

```
ANR6625I Machine DISTRICT1 associated with recovery
media DIST5RM.
ANR6625I Machine DISTRICT5 associated with recovery
media DIST5RM.
```

Related Commands

Table 51. Commands Related to DEFINE RECMEDMACHASSOCIATION

Command	Description
DEFINE MACHINE	Defines a machine for DRM.
DEFINE RECOVERYMEDIA	Defines the media required to recover a machine.
DELETE MACHINE	Deletes an existing machine.
DELETE RECMEDMACHASSOCIATION	Deletes association between recovery media and a machine.
DELETE RECOVERYMEDIA	Deletes existing recovery media.
QUERY MACHINE	Displays information about one or more machines.
QUERY RECOVERYMEDIA	Displays media available for machine recovery.

DEFINE RECOVERYMEDIA (Define Recovery Media)

This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

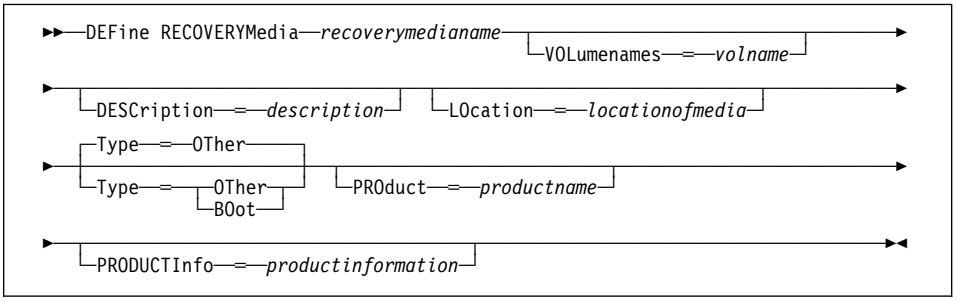
Use the DEFINE RECOVERYMEDIA command to describe the media (for example, boot media) needed for recovering a machine. Recovery media can be associated with one or more machines.

This command is provided for your use in documenting, in the ADSM server database, the media required to recover an ADSM client machine should a disaster occur. The ADSM server database will be used to store this information for you, and QUERY commands are provided to retrieve the information should you need to reference it in the case of a disaster. The information provided by this command is NOT used by the server in any way to coordinate disaster recovery or to manage the server under normal operation. The information provided in this command is solely determined by you in planning for client machine disaster recovery.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

recoverymedianame

Specifies the name of the recovery media to be defined. This parameter is required. The maximum length of the name is 30 characters.

DESCription=*description*

Specifies the description of the recovery media. This parameter is optional. The maximum length of the description is 255 characters. The description must be enclosed in quotation marks if it contains any blank characters. The default is no description.

VOLumenames=*volname*

Specifies the list of volume names that contain the recoverable data (for example, OS/2.2.1 operating system image copies). This parameter is optional. It is recommended that the boot media volume names specified in the list are in the

same order the boot media volumes are inserted into the machine at recovery time. The maximum length of the volume names list is 255 characters. The volume names list must be enclosed in quotation marks if it contains any blank characters. If a boot type recovery media is specified, the volume names that contain the boot media must be specified.

LOcation=*locationofmedia*
Specifies the location of the recovery media. For example, "Building=021 Floor=02 Room=2846 Cabinet=1A0". This parameter is optional. The maximum length of the location is 255 characters. The location description must be enclosed in quotation marks if it contains any blank characters. The default is no location.

Type=*typemode*
Specifies the type of recovery media. This parameter is optional. The default value is OTHER. Possible values are:

BOot
Specifies that this is boot media. Volume names must be specified when BOot is specified.

OTher
Specifies that this is not boot media. Example usage for this might be to track a CD ROM that contains AIX manuals.

PROduct=*productname*
Specifies the product name that wrote to this media. This parameter is optional. The maximum length of the product name is 16 characters. The product name must be enclosed in quotation marks if it contains any blank characters. The default is no product name for this recovery media.

PRODUCTInfo=*productinformation*
Specifies any information about the product that wrote to the media which may be needed for restoring the machine. This parameter is optional. The maximum length of the product information is 255 characters. The product information must be enclosed in quotation marks if it contains any blank characters. The default is no product information.

Examples

Task

Define the recovery media named DIST5RM with a short description and a location of district 1 vault.

Command:
```
define recoverymedia dist5rm description='district 5 base system
image' location='district 1 vault'
```

Output:

```
ANR6632I Recovery media DIST5RM defined.
```

Related Commands

Table 52. Commands Related to DEFINE RECOVERYMEDIA

Command	Description
DEFINE RECMEDMACHASSOCIATION	Associates recovery media with a machine.
DELETE RECOVERYMEDIA	Deletes existing recovery media.
QUERY RECOVERYMEDIA	Displays media available for machine recovery.
UPDATE RECOVERYMEDIA	Changes the attributes of existing recovery media.

DEFINE SCHEDULE (Define a Client or an Administrative Command Schedule)

Use the DEFINE SCHEDULE command to create a new schedule. The DEFINE SCHEDULE command takes two forms, depending on whether the schedule applies to client operations or administrative commands. The syntax and parameters for each form are defined separately.

Restrictions:

1. Not all clients can run all scheduled operations, even though ADSM allows you to define the schedule on the server and associate it with the client. For example, a Windows 3.1 client cannot run a schedule when the action is to restore or retrieve files, issue a command, or run an executable script (called a macro by ADSM). An executable script is also known as a command file, a batch file, or a script on different client operating systems. A Macintosh client cannot run a schedule when the action is to restore or retrieve files, or run an executable script.
2. You cannot schedule MACRO or QUERY ACTLOG commands.

Defining Client Schedules

Use the DEFINE SCHEDULE command to create a new schedule for client operations such as backing up or archiving clients in a specified policy domain.

A schedule determines:

- The automatic function to be performed, for example, an incremental backup
- A startup window that indicates a time range during which the operation can begin
- The time period between startup windows

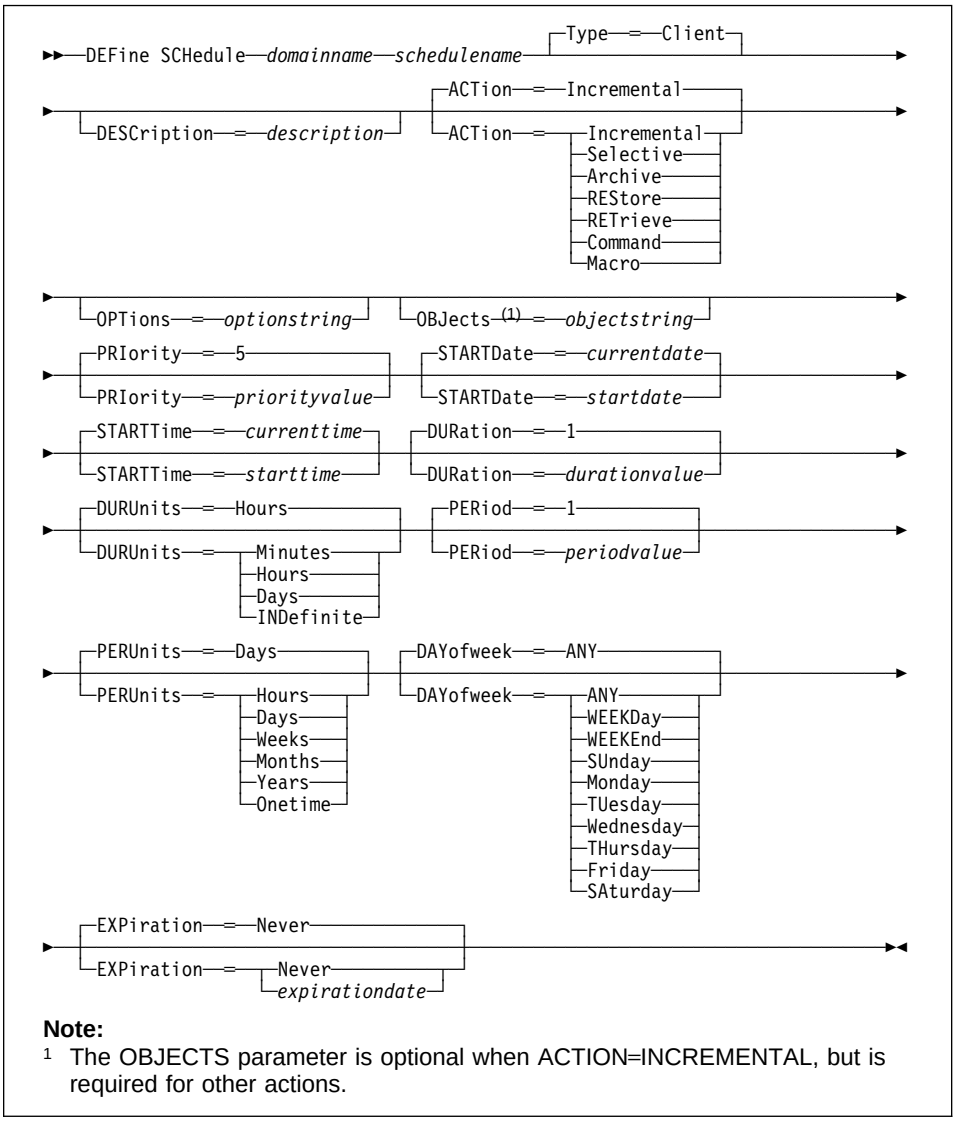
For each schedule, a startup window is specified. The startup window is the time period during which the schedule must be initiated. The schedule will not necessarily complete execution within this window. If the schedule needs to be retried for any reason, the retry attempt must begin before the startup window elapses, or the operation does not restart.

After you define a schedule, use the DEFINE ASSOCIATION command to associate specific clients with the schedule so that they will execute it.

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the policy domain to which the schedule belongs.

Syntax for Defining Client Schedules



Note:

1 The OBJECTS parameter is optional when ACTION=INCREMENTAL, but is required for other actions.

Parameters for Defining Client Schedules

domainname

Specifies the name of the policy domain to which this schedule belongs. This parameter is required.

schedulename

Specifies the name of the schedule to be defined. This parameter is required. The maximum length of the name is 30 characters.

DEFINE SCHEDULE

Type=**Client**
Specifies that this schedule defines a client schedule. This parameter is optional. The default value is CLIENT. Administrative command schedules are defined by specifying TYPE=ADMINISTRATIVE.

DESCription=*description*
Specifies a description of the schedule. This parameter is optional. The maximum length of the description is 255 characters. The description must be enclosed in quotation marks if it contains any blank characters. The default is no description.

ACTion=*actionvalue*
Specifies the action that occurs when this schedule is executed. This parameter is optional. The default value is INCREMENTAL. Possible values are:

Incremental
Specifies that this schedule initiates the backup of any files that have changed since the last backup and for which the specified time between backups has elapsed. In addition, this schedule initiates the backup of any files for which a backup does not exist. Incremental also backs up any file where all existing backups may have expired.

Selective
Specifies that this schedule backs up only the files specified with the OBJECTS parameter.

Archive
Specifies that this schedule archives the files specified with the OBJECTS parameter.

REStore
Specifies that this schedule restores the files specified with the OBJECTS parameter.

RETrieve
Specifies that this schedule retrieves the files specified with the OBJECTS parameter.

Command
Specifies that the action is to be a client operating system command string specified with the OBJECTS parameter.

Macro
Specifies that a macro whose file name is specified with the OBJECTS parameter is to be executed.

OPTions=*optionstring*
Specifies options that are supplied to the DSMC command at the time the schedule is executed. Only those options that are valid on the DSMC command line may be specified for this parameter. Refer to the appropriate client manual for information on which options are valid from the command line. This parameter is optional.

You can specify most options from the client's option file. Each option is preceded by a hyphen and delimited with a space. The option string must be enclosed in quotation marks if it contains any blank characters.

When applicable, these options override the options specified by a client node after it has successfully contacted the server.

Do not include the following options because they have no effect on the client's execution of the scheduled command:

MAXCMDRETRIES
QUERYSCHEDPERIOD
RETRYPERIOD
SCHEDLOGNAME
SCHEDMODE
TCPCLIENTADDRESS
TCPCLIENTPORT

OBJects=*objectstring*

Specifies the objects for which the specified action is performed. This parameter is required except when ACTION=INCREMENTAL. The allowed objects depend on the action you specify with the ACTION parameter and the operating system used by the clients associated with the schedule.

You can specify more than one object by separating the objects with commas, with no intervening spaces. For example, you can enter a string of file names. If the value for this parameter contains any blank characters, it must be enclosed in quotation marks.

When you specify ACTION=INCREMENTAL and do not specify any objects with this parameter, the DSMC command is invoked without specified objects and attempts to process objects as defined in the client's option file.

PRIority=*priorityvalue*

Specifies the priority value for a schedule. This parameter is optional. You can specify an integer in the range of 1–10, inclusive, with 1 being the highest priority and 10 being the lowest. The default value is 5.

If two or more schedules for a given client have the same window start time, this value determines the order of execution. The schedule with the highest priority starts first. For example, a schedule with PRIORITY=3 starts before a schedule with PRIORITY=5.

STARTDate=*startdate*

Specifies the date for the beginning of the window in which the schedule is first executed. This parameter is optional. The default value is the current date. This parameter is used in conjunction with the STARTTIME parameter to specify when the initial startup window begins.

Possible values are:

MM/DD/YYYY

Specifies the date for the beginning of the startup window in MM/DD/YYYY format (for example, 01/31/1995).

TODAY
Specifies that the beginning of the startup window is on the current date.

TODAY+*numdays* **or** +*numdays*
Specifies that the beginning of the startup window is a specific number of days after the current date. The maximum value for the number of days is 9999.

For example, to specify that the beginning of the initial startup window is 3 days from now, you can specify STARTDATE=TODAY+3 or STARTDATE=+3.

STARTTime=*starttime*
Specifies the time for the beginning of the window in which the schedule is first executed, in HH:MM format. This parameter is optional. The default value is the current time. This parameter is used in conjunction with the STARTDATE parameter to specify when the initial startup window begins.

Possible values are:

HH:MM:SS
Specifies the time for the beginning of the startup window in HH:MM:SS format (for example, 12:33:28).

NOW
Specifies that the beginning of the startup window is at the current time on the specified start date.

NOW+*numhours:numminutes* **or** +*numhours:numminutes*
Specifies the time for the beginning of the startup window is at the current time plus a specific number of hours (and, optionally, minutes) on the specified start date.

For example, if you issue the DEFINE SCHEDULE command at 5:00 with STARTTIME=NOW+02:00 or STARTTIME=+02:00, the beginning of the initial startup window is at 7:00.

NOW–*numhours:numminutes* **or** –*numhours:numminutes*
Specifies the time for the beginning of the startup window is at the current time minus a specific number of hours (and, optionally, minutes) on the specified start date.

For example, if you issue the DEFINE SCHEDULE command at 5:00 with STARTTIME=NOW–02:00 or STARTTIME=–02:00, the beginning of the initial startup window is at 3:00.

DURation=*durationvalue*
Specifies the number of units that define the length of the startup window. This parameter is optional. This value must be in the range of 1–999, inclusive. The default value is 1.

This parameter is used in conjunction with the DURUNITS parameter to specify the length of the startup window. For example, if you specify DURATION=20 and DURUNITS=MINUTES, the schedule must be started within 20 minutes of the

start date and start time. The default value for the length of the startup window is 1 hour. The duration of the window must be shorter than the period between windows.

This value is ignored if you specify DURUNITS=INDEFINITE.

DURUnits=*durunitsvalue*
Specifies the time units used to determine the duration of the window in which the schedule can start. This parameter is optional. The default value is HOURS.

This parameter is used in conjunction with the DURATION parameter to specify how long the startup window remains open to execute the schedule. For example, if DURATION=20 and DURUNITS=MINUTES, the schedule must be started within 20 minutes of the start date and start time. The default value for the length of the startup window is 1 hour. The duration of the window must be shorter than the period between windows. Possible values are:

Minutes
Specifies that the duration of the window is defined in minutes.

Hours
Specifies that the duration of the window is defined in hours.

Days
Specifies that the duration of the window is defined in days.

INDefinite
Specifies that the startup window has an indefinite duration. The schedule can run any time after the scheduled start time, until the schedule expires. You cannot specify DURUNITS=INDEFINITE unless you also specify PERUNITS=ONETIME.

PERiod=*periodvalue*
Specifies the length of time between startup windows for this schedule. This parameter is optional. You can specify an integer in the range of 1–999, inclusive. The default value is 1.

This parameter is used in conjunction with the PERUNITS parameter to specify the period between startup windows. For example, if you specify PERIOD=5 and PERUNITS=DAYS (assuming that DAYOFWEEK=ANY), the operation is scheduled every 5 days after the initial start date and start time. The period between startup windows must exceed the duration of each window. The default value for the length of time between startup windows is 1 day.

This value is ignored if you specify PERUNITS=ONETIME.

PERUnits=*perunitsvalue*
Specifies the time units used to determine the period between startup windows for this schedule. This parameter is optional. The default value is DAYS.

This parameter is used in conjunction with the PERIOD parameter to specify the period between startup windows. For example, if you specify PERIOD=5 and PERUNITS=DAYS (assuming that DAYOFWEEK=ANY), the operation is scheduled every 5 days after the initial start date and start time. The period

between startup windows must exceed the duration of each window. The default value for the length of time between startup windows is 1 day. Possible values are:

Hours
Specifies that the time between startup windows for the schedule is in hours.

Days
Specifies that the time between startup windows for this schedule is in days.

Weeks
Specifies that the time between startup windows for the schedule is in weeks.

Months
Specifies that the time between startup windows for the schedule is in months.

Years
Specifies that the time between startup windows for the schedule is in years.

Onetime
Specifies that the schedule executes only once. This value overrides the value specified for the PERIOD parameter.

DAYofweek=*dayofweekvalue*
Specifies the day of the week on which the startup window begins. This parameter is optional. If the beginning of the calculated startup window falls on a day that does not correspond with your value for the DAYOFWEEK parameter, the startup window will be shifted forward in 24-hour increments until the DAYOFWEEK parameter is satisfied.

If you select a value for DAYOFWEEK other than ANY, and depending on the values for PERIOD and PERUNITS, schedules may not be executed when you would expect. Use the QUERY EVENT command to project when schedules will be executed and thereby ensure that the desired result is achieved. The default value is ANY. Possible values are:

ANY
Specifies that the startup window can begin on any day of the week.

WEEKDay
Specifies that the startup window can begin on Monday, Tuesday, Wednesday, Thursday, or Friday.

WEEKEnd
Specifies that the startup window can begin on Saturday or Sunday.

SUnday
Specifies that the startup window begins on Sunday.

Monday
Specifies that the startup window begins on Monday.

TUesday
Specifies that the startup window begins on Tuesday.

Wednesday
Specifies that the startup window begins on Wednesday.

THursday
Specifies that the startup window begins on Thursday.

Friday
Specifies that the startup window begins on Friday.

SAturday
Specifies that the startup window begins on Saturday.

EXPiration=*expirationdate*
Specifies the date on which this schedule is no longer used, in MM/DD/YYYY format. This parameter is optional. The default value is NEVER. Possible values are:

Never
Specifies that the schedule never expires.

expirationdate
Specifies the date on which this schedule is no longer used, in MM/DD/YYYY format. If you specify an expiration date, the schedule expires at 23:59:59 on the specified date.

Defining Administrative Command Schedules

Use the DEFINE SCHEDULE command to create a new schedule for the execution of an administrative command.

A schedule determines:

- The administrative command to run
- A startup window that indicates a time range during which the operation can begin
- The time period between startup windows

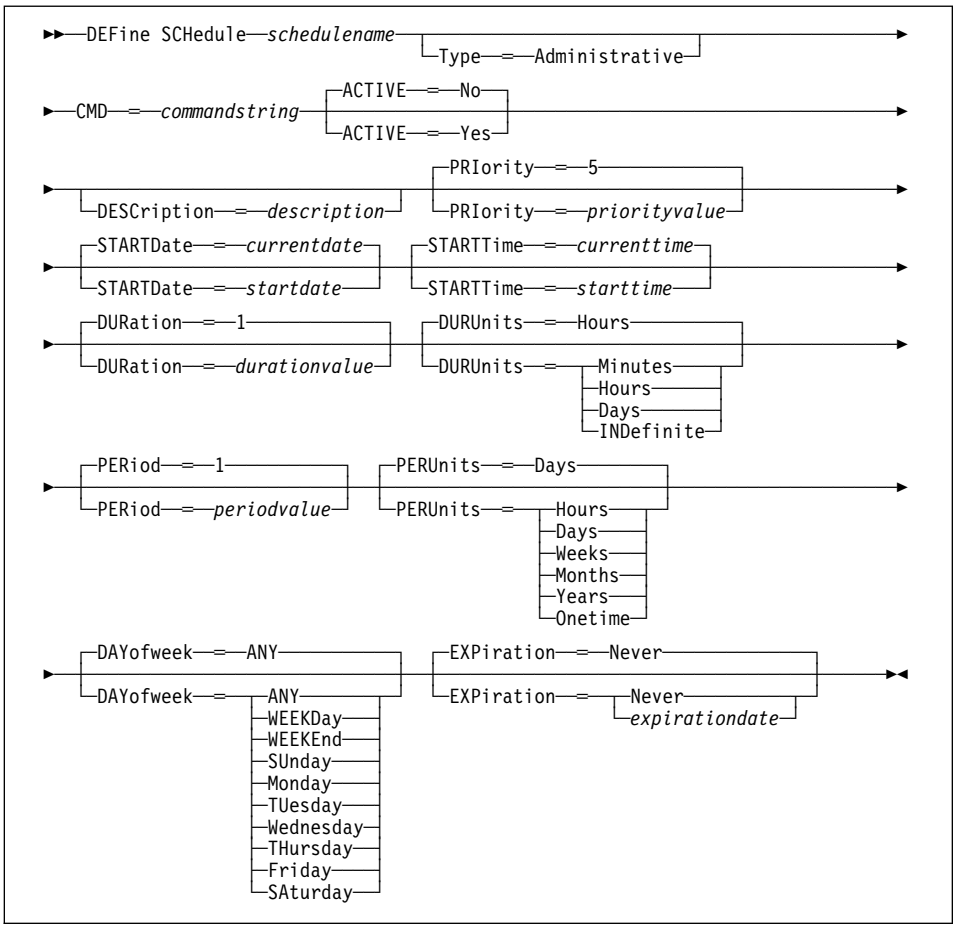
For each schedule, a startup window (or *duration*) is specified. The startup window is the time period during which the schedule must be initiated. The schedule will not necessarily complete execution within this window. If the server is not running when this window starts, but is started before the end of the defined window is reached, the schedule will run when the server is restarted.

DEFINE SCHEDULE

Privilege Class

To issue this command, you must have system privilege.

Syntax for Defining Administrative Command Schedules



Parameters for Defining Administrative Command Schedules

schedulename

Specifies the name of the command schedule to be defined. This parameter is required. The maximum length of the name is 30 characters.

Type=Administrative

Specifies that this schedule defines an administrative command (as opposed to a client command). This parameter is optional. An administrative command is assumed if the CMD parameter is specified.

CMD=*commandstring*
Specifies the actual administrative command that is to be scheduled. The maximum length of the command is 512 characters. The administrative command must be enclosed in quotation marks if it contains any blank characters. This parameter is required for administrative command schedules.

ACTIVE=*activevalue*
Specifies if the defined administrative command is immediately eligible for scheduled execution. This parameter is optional. The default value is NO. The administrative command schedule must be set to the active state with the UPDATE SCHEDULE command to be made eligible for scheduled execution. A defined administrative command schedule will not be executed unless it is set to the active state. Possible values are:

YES Specifies that the defined administrative command is eligible for scheduled execution.

NO Specifies that the defined administrative command is not eligible for scheduled execution.

DESCription=*description*
Specifies a description of the schedule. This parameter is optional. The maximum length of the description is 255 characters. The description must be enclosed in quotation marks if it contains any blank characters. The default is no description.

PRIority=*priorityvalue*
Specifies the priority value for a schedule. This parameter is optional. You can specify an integer in the range of 1–10, inclusive, with 1 being the highest priority and 10 being the lowest. The default value is 5.

If two or more administrative schedules have the same window start time, this value determines the order of execution. The schedule with the highest priority starts first. For example, a schedule with PRIORITY=3 starts before a schedule with PRIORITY=5.

STARTDate=*startdate*
Specifies the date for the beginning of the window in which the schedule is first executed. This parameter is optional. The default value is the current date. This parameter is used in conjunction with the STARTTIME parameter to specify when the initial startup window begins.

Possible values are:

MM/DD/YYYY
Specifies the date for the beginning of the startup window in MM/DD/YYYY format (for example, 01/31/1995).

TODAY
Specifies that the beginning of the startup window is on the current date.

TODAY+*numdays* **or** +*numdays*
Specifies that the beginning of the startup window is a specific number of days after the current date. The maximum value for the number of days is 9999.

For example, to specify that the beginning of the initial startup window is 3 days from now, you can specify STARTDATE=TODAY+3 or STARTDATE=+3.

STARTTime=*starttime*
Specifies the time for the beginning of the window in which the schedule is first executed, in HH:MM format. This parameter is optional. The default value is the current time. This parameter is used in conjunction with the STARTDATE parameter to specify when the initial startup window begins.

Possible values are:

HH:MM:SS
Specifies the time for the beginning of the startup window in HH:MM:SS format (for example, 12:33:28).

NOW
Specifies that the beginning of the startup window is at the current time on the specified start date.

NOW+*numhours:numminutes* **or** +*numhours:numminutes*
Specifies the time for the beginning of the startup window is at the current time plus a specific number of hours (and, optionally, minutes) on the specified start date.

For example, if you issue the DEFINE SCHEDULE command at 5:00 with STARTTIME=NOW+02:00 or STARTTIME=+02:00, the beginning of the initial startup window is at 7:00.

NOW−*numhours:numminutes* **or** −*numhours:numminutes*
Specifies the time for the beginning of the startup window is at the current time minus a specific number of hours (and, optionally, minutes) on the specified start date.

For example, if you issue the DEFINE SCHEDULE command at 5:00 with STARTTIME=NOW−02:00 or STARTTIME=−02:00, the beginning of the initial startup window is at 3:00.

DURation=*durationvalue*
Specifies the number of units that define the length of the startup window. This parameter is optional. This value must be in the range of 1–999, inclusive. The default value is 1.

This parameter is used in conjunction with the DURUNITS parameter to specify the length of the startup window. For example, if you specify DURATION=20 and DURUNITS=MINUTES, the schedule must be started within 20 minutes of the start date and start time. The default value for the length of the startup window is 1 hour. The duration of the window must be shorter than the period between windows.

This value is ignored if you specify DURUNITS=INDEFINITE.

DURUnits=*durunitsvalue*
Specifies the time units used to determine the duration of the window in which the schedule can start. This parameter is optional. The default value is HOURS.

This parameter is used in conjunction with the DURATION parameter to specify how long the startup window remains open to execute the schedule. For example, if DURATION=20 and DURUNITS=MINUTES, the schedule must be started within 20 minutes of the start date and start time. The default value for the length of the startup window is 1 hour. The duration of the window must be shorter than the period between windows. Possible values are:

Minutes
Specifies that the duration of the window is defined in minutes.

Hours
Specifies that the duration of the window is defined in hours.

Days
Specifies that the duration of the window is defined in days.

INDefinite
Specifies that the startup window has an indefinite duration. The schedule can run any time after the scheduled start time, until the schedule expires. You cannot specify DURUNITS=INDEFINITE unless you also specify PERUNITS=ONETIME.

PERiod=*periodvalue*
Specifies the length of time between startup windows for this schedule. This parameter is optional. You can specify an integer in the range of 1–999, inclusive. The default value is 1.

This parameter is used in conjunction with the PERUNITS parameter to specify the period between startup windows. For example, if you specify PERIOD=5 and PERUNITS=DAYS (assuming that DAYOFWEEK=ANY), the operation is scheduled every 5 days after the initial start date and start time. The period between startup windows must exceed the duration of each window. The default value for the length of time between startup windows is 1 day.

This value is ignored if you specify PERUNITS=ONETIME.

PERUnits=*perunitsvalue*
Specifies the time units used to determine the period between startup windows for this schedule. This parameter is optional. The default value is DAYS.

This parameter is used in conjunction with the PERIOD parameter to specify the period between startup windows. For example, if you specify PERIOD=5 and PERUNITS=DAYS (assuming that DAYOFWEEK=ANY), the operation is scheduled every 5 days after the initial start date and start time. The period between startup windows must exceed the duration of each window. The default value for the length of time between startup windows is 1 day. Possible values are:

Hours
Specifies that the time between startup windows for the schedule is in hours.

Days
Specifies that the time between startup windows for this schedule is in days.

Weeks
Specifies that the time between startup windows for the schedule is in weeks.

Months
Specifies that the time between startup windows for the schedule is in months.

Years
Specifies that the time between startup windows for the schedule is in years.

Onetime
Specifies that the schedule executes only once. This value overrides the value specified for the PERIOD parameter.

DAYofweek=*dayofweekvalue*
Specifies the day of the week on which the startup window begins. If the beginning of the calculated startup window falls on a day that does not correspond with your value for the DAYOFWEEK parameter, the startup window will be shifted forward in 24-hour increments until the DAYOFWEEK parameter is satisfied.

If you select a value for DAYOFWEEK other than ANY, depending on the values for PERIOD and PERUNITS, schedules may not be executed when you would expect. Use the QUERY EVENT TYPE=ADMINISTRATIVE command to project when schedules will be executed and thereby ensure that the desired result is achieved.

The default value is ANY. Possible values are:

ANY
Specifies that the startup window can begin on any day of the week.

WEEKDay
Specifies that the startup window can begin on Monday, Tuesday, Wednesday, Thursday, or Friday.

WEEKEnd
Specifies that the startup window can begin on Saturday or Sunday.

SUnday
Specifies that the startup window begins on Sunday.

Monday
Specifies that the startup window begins on Monday.

TUesday
Specifies that the startup window begins on Tuesday.

Wednesday
Specifies that the startup window begins on Wednesday.

THursday
Specifies that the startup window begins on Thursday.

Friday
Specifies that the startup window begins on Friday.

SAturday
Specifies that the startup window begins on Saturday.

EXPiration=*expirationdate*
Specifies the date on which this schedule is no longer used, in MM/DD/YYYY format. This parameter is optional. The default value is NEVER. Possible values are:

Never
Specifies that the schedule never expires.

expirationdate
Specifies the date on which this schedule is no longer used, in MM/DD/YYYY format. If you specify an expiration date, the schedule expires at 23:59:59 on the specified date.

Examples

Task 1

Define a schedule named MONTHLY_BACKUP that initiates an incremental backup of all associated nodes. Because the specified start date, October 1, 1994 (10/01/1994), is a Thursday and does not match the specified day of the week (Sunday), the initial startup window begins on the first Sunday after October 1, 1994 (10/01/1994). The startup windows for this schedule extend from 01:00 through 03:00. This monthly schedule initiates backup of c: and d: file spaces for all associated nodes.

Command:
```
define schedule standard monthly_backup description="Monthly
Backup of c: and d: drives" objects="c:\* d:\*"
startdate=10/01/1994 starttime=01:00 duration=2 durunits=hours
period=1 perunits=months dayofweek=sunday
```

Output:

```
ANR2500I Schedule MONTHLY_BACKUP defined in policy domain
STANDARD.
```

DEFINE SCHEDULE

Task 2

Define a schedule named WEEKLY_BACKUP that initiates an incremental backup of all associated nodes. The initial startup window for this schedule extends from 23:00 on Saturday, July 4, 1994 (07/04/1994), to 03:00 on Sunday, July 5, 1994 (07/05/1994). Subsequent windows begin at 23:00, every Saturday. No messages are returned to the client node when this schedule is executed.

Command:

```
define schedule employee_records weekly_backup
startdate=07/04/1994 starttime=23:00 duration=4 durunits=hours
perunits=weeks dayofweek=saturday options=-quiet
```

Output:

```
ANR2500I Schedule WEEKLY_BACKUP defined in policy domain
EMPLOYEE_RECORDS.
```

Task 3

Define a schedule named BACKUP_ARCHIVEPOOL that backs up the primary storage pool ARCHIVEPOOL to the copy storage pool RECOVERYPOOL. The backup runs at 8 p.m. every two days.

Command:

```
define schedule backup_archivepool type=administrative
cmd="backup stgpool archivepool recoverypool" active=yes
starttime=20:00 period=2
```

Output:

```
ANR2577I Schedule BACKUP_ARCHIVEPOOL defined.
```

Related Commands

Table 53. Commands Related to DEFINE SCHEDULE

Command	Description
COPY SCHEDULE	Creates a copy of an existing schedule.
DEFINE ASSOCIATION	Associates one or more clients with a schedule.
DELETE SCHEDULE	Deletes a schedule from the database.
QUERY EVENT	Displays information about scheduled and completed events for selected clients.
QUERY SCHEDULE	Displays information about one or more schedules.
SET MAXCMDRETRIES	Specifies the maximum number of retries after a failed attempt to execute a scheduled command.
SET RETRYPERIOD	Specifies the time between retry attempts by the client scheduler.
UPDATE SCHEDULE	Changes the attributes of a schedule.

DEFINE STGPOOL (Define a Storage Pool)

Use the DEFINE STGPOOL command to name a set of volumes as a primary storage pool or a copy storage pool. The volumes in a pool belong to the same device class. A primary storage pool is used as the destination for backup files, archive files, or files migrated from client nodes. A copy storage pool is used to store backup copies of files that are in primary storage pools.

During installation, ADSM provides three predefined random access storage pools:

BACKUPPOOL A storage destination for workstation files that are backed up to the server

ARCHIVEPOOL A storage destination for workstation files that are archived to the server

SPACEMGPOOL A storage destination for files migrated from client nodes

Use this command to increase ADSM data storage capacity by defining additional storage pools. You can define storage pools as necessary to manage your storage.

You can restrict administrator authority, by storage pool, to control administrator access to your data storage.

If you want to migrate files from one primary storage pool to another, you must specify the NEXTSTGPOOL parameter. This parameter links primary storage pools together into a hierarchy for data storage.

To determine the name of the device class (and the corresponding device type) to which you want the storage pool assigned, use the QUERY DEVCLASS command.

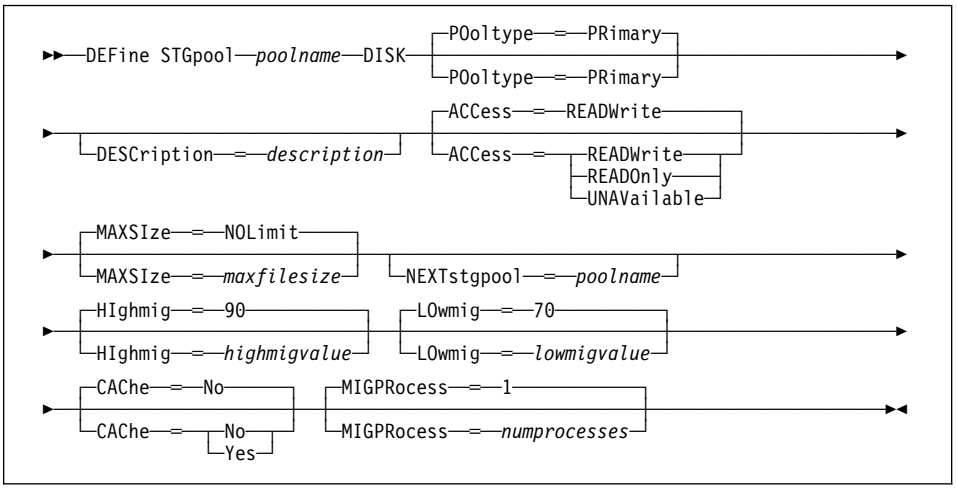
After you define a storage pool, you can use the DEFINE VOLUME command to assign volumes to the storage pool.

The DEFINE STGPOOL command takes three forms, depending on whether you are defining a primary storage pool assigned to random access devices, a primary storage pool assigned to sequential access devices, or a copy storage pool. The syntax and parameters for each form are defined separately.

Privilege Class

To issue this command, you must have system privilege.

Syntax for Defining Random Access Storage Pools



Parameters for Defining a Random Access Storage Pool

poolname

Specifies the name of the storage pool to be defined. This parameter is required. The maximum length of the name is 30 characters.

DISK

Specifies that you want to define a storage pool to the DISK device class (the DISK device class is predefined during installation). This parameter is required.

POoltype=PRimary

Specifies that you want to define a primary storage pool. This parameter is optional. The default value is PRIMARY.

DESCription=*description*

Specifies a description of the storage pool to be defined. This parameter is optional. The maximum length of the description is 255 characters. The description must be enclosed in quotation marks if it contains any blank characters. The default is no description.

ACCess=*accessmode*

Specifies how users and system processes (like migration and reclamation) can access files in the storage pool. This parameter is optional. The default value is READWRITE. Possible values are:

READWrite

Specifies that users and system processes (like migration) can read and write to files stored on volumes in the storage pool.

READOnly

Specifies that users can only read files from the volumes in the storage pool.

No new writes are permitted to the volumes in the storage pool from other volumes outside the storage pool. However, system processes (like reclamation) are permitted to move files within the volumes in the storage pool.

If this storage pool has been specified as a subordinate storage pool (with the NEXTSTGPOOL parameter) and is defined as *readonly*, the storage pool is skipped when system processes (like migration) attempt to write files to the storage pool.

UNAVailable
Specifies that users cannot access files stored on volumes in the storage pool.

No new writes are permitted to volumes in the storage pool from other volumes outside the storage pool. However, system processes (like reclamation) are permitted to move files within the volumes in the storage pool. Files can also be moved or copied from this storage pool to another storage pool.

If this storage pool has been specified as a subordinate storage pool (with the NEXTSTGPOOL parameter) and is defined as *unavailable*, the storage pool is skipped when system processes (like migration) attempt to write files to the storage pool.

MAXSIze=*maxfilesize*
Specifies the maximum file size for the storage pool. This parameter is optional. The value of this parameter can be either NOLIMIT, or an integer followed by a scale factor. The default value is NOLIMIT, which specifies that there is no maximum size limit for files stored in the storage pool.

To limit the maximum file size, specify an integer (1–999999) followed by a scale factor. Scale factors and their meanings are:

Scale Factor	Meaning
K	Kilobyte
M	Megabyte
G	Gigabyte
T	Terabyte

For example, MAXSIZE=5G specifies that the maximum file size for this storage pool is 5 gigabytes.

If a file exceeds the maximum size and no pool is specified as the NEXTSTGPOOL, the file is not stored. If a file exceeds the maximum size and a pool is specified as the NEXTSTGPOOL, the file is stored in the next storage pool that can accept the file size. If you specify the NEXTSTGPOOL parameter, at least one storage pool in your hierarchy should have a MAXSIZE value of NOLIMIT. By setting MAXSIZE to NOLIMIT for at least one pool, you ensure that no matter what its size, a file can be stored somewhere.

NEXTstgpool=*poolname*
Specifies the name of the storage pool to which files can be migrated. This parameter is optional.

A pool specified with the NEXTSTGPOOL parameter must be a primary storage pool. A copy storage pool cannot be specified.

If you do not specify a value for this parameter, migration cannot occur and files that exceed the value specified for the MAXSIZE parameter cannot be placed in another storage pool.

You cannot create a chain of storage pools that leads to an endless loop through the NEXTSTGPOOL parameter. At least one storage pool in the hierarchy must have no value specified for NEXTSTGPOOL.

HIghmig=*highmigvalue*
Specifies when ADSM can start migration for this storage pool, as a percentage of the storage pool capacity. This parameter is optional. You can specify an integer from 0–100, inclusive. The default value is 90 percent.

When the storage pool occupancy exceeds the value for this parameter, ADSM can initiate migration, by node, to the next storage pool, as defined with the NEXTSTGPOOL parameter. You can specify HIGHMIG=100 to prevent migration for this storage pool (assuming you have defined the NEXTSTGPOOL parameter).

LOwmig=*lowmigvalue*
Specifies when ADSM can stop migration for this storage pool, as a percentage of the storage pool occupancy. This parameter is optional. You can specify an integer from 0–99. The default value is 70.

When the storage pool occupancy reaches the value for this parameter, ADSM will not initiate migration of another node's files. Because all file spaces that belong to a node are migrated together, the occupancy of the storage pool can fall below the value you specified for this parameter. You can set LOWMIG=0 to permit migration to empty the storage pool.

CAChe=*cachingvalue*
For random access storage pools only, specifies whether a cached copy of a file that has been migrated remains in the random access storage pool. This parameter is optional. The primary copy of the file is migrated to the next storage pool, as defined with the NEXTSTGPOOL parameter.

Caching improves the retrievability of files that have been migrated to sequential access storage pools by permitting cached copies of files to remain on the storage pool. The cached copies are available, if needed, or can be overwritten when necessary. The default value is NO. Possible values are:

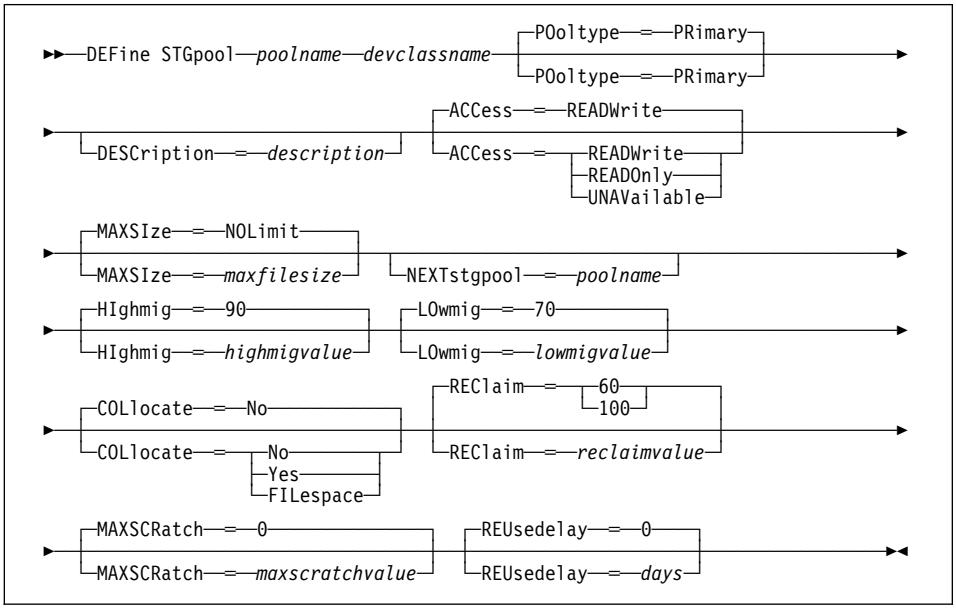
Yes
Specifies that caching is enabled.

No
Specifies that caching is disabled.

MIGPRocess=*numprocesses*
Specifies the number of processes that are used for migrating files from this storage pool. This parameter is optional. You can specify an integer from 1–999, inclusive. The default value is 1.

During migration, these processes are performed in parallel to provide the potential for improved migration rates.

Syntax for Defining Primary Sequential Access Storage Pools



Parameters for Defining a Primary Sequential Access Storage Pool

poolname
Specifies the name of the storage pool to be defined. This parameter is required. The maximum length of the name is 30 characters.

devclassname
Specifies the name of the device class to which this storage pool is assigned. This parameter is required. You can specify any device class defined with the DEFINE DEVCLASS command.

POoltype=**PRimary**
Specifies that you want to define a primary storage pool. This parameter is optional. The default value is PRIMARY.

DESCription=*description*
Specifies a description of the storage pool to be defined. This parameter is optional. The maximum length of the description is 255 characters. The description must be enclosed in quotation marks if it contains any blank characters. The default is no description.

ACCess=*accessmode*

Specifies how users and system processes (like migration and reclamation) can access files in the storage pool. This parameter is optional. The default value is READWRITE. Possible values are:

READWrite

Specifies that users and system processes (like migration) can read and write to files stored on volumes in the storage pool.

READOnly

Specifies that users can only read files stored on the volumes in the storage pool.

No new writes are permitted to the volumes in the storage pool from other volumes outside the storage pool. However, system processes (like reclamation) are permitted to move files within the volumes in the storage pool.

If this storage pool has been specified as a subordinate storage pool (with the NEXTSTGPOOL parameter) and is defined as *readonly*, the storage pool is skipped when system processes (like migration) attempt to write files to the storage pool.

UNAVailable

Specifies that users cannot access files stored on volumes in the storage pool.

No new writes are permitted to volumes in the storage pool from other volumes outside the storage pool. However, system processes (like reclamation) are permitted to move files within the volumes in the storage pool. Files can also be moved or copied from this storage pool to another storage pool.

If this storage pool has been specified as a subordinate storage pool (with the NEXTSTGPOOL parameter) and is defined as *unavailable*, the storage pool is skipped when system processes (like migration) attempt to write files to the storage pool.

MAXSIze=*maxfilesize*

Specifies the maximum file size for the storage pool. This parameter is optional. The value of this parameter can be either NOLIMIT, or an integer followed by a scale factor. The default value is NOLIMIT, which specifies that there is no maximum size limit for files stored in the storage pool.

To limit the maximum file size, specify an integer (1–999999) followed by a scale factor. Scale factors and their meanings are:

Scale Factor	Meaning
K	Kilobyte
M	Megabyte
G	Gigabyte
T	Terabyte

For example, MAXSIZE=5G specifies that the maximum file size for this storage pool is 5 gigabytes.

If a file exceeds the maximum size and no pool is specified as the NEXTSTGPOOL, the file is not stored. If a file exceeds the maximum size and a pool is specified as the NEXTSTGPOOL, the file is stored in the next storage pool that can accept the file size. If you specify the NEXTSTGPOOL parameter, at least one storage pool in your hierarchy should have a MAXSIZE value of NOLIMIT. By setting MAXSIZE to NOLIMIT for at least one pool, you ensure that no matter what its size, a file can be stored somewhere.

NEXTstgpool=*poolname*
Specifies the name of the storage pool to which files can be migrated. This parameter is optional.

A pool specified with the NEXTSTGPOOL parameter must be a primary storage pool. A copy storage pool cannot be specified.

If you do not specify a value for this parameter, migration cannot occur from this storage pool and files that exceed the value specified for the MAXSIZE parameter cannot be placed in another storage pool.

You cannot create a chain of storage pools that leads to an endless loop through the NEXTSTGPOOL parameter. At least one storage pool in the hierarchy must have no value specified for NEXTSTGPOOL.

HIghmig=*highmigvalue*
Specifies when ADSM can start migration for this storage pool, as a percentage of the storage pool occupancy. This parameter is optional. You can specify an integer from 1–100, inclusive. The default value is 90 percent.

When the storage pool occupancy exceeds the value for this parameter, ADSM can initiate migration, by volume, to the next storage pool, as defined with the NEXTSTGPOOL parameter. You can specify HIGHMIG=100 to prevent migration for this storage pool (assuming you have defined the NEXTSTGPOOL parameter).

LOwmig=*lowmigvalue*
Specifies when ADSM can stop migration for this storage pool, as a percentage of the storage pool occupancy. This parameter is optional. You can specify an integer from 0–99. The default value is 70.

When the storage pool occupancy reaches the value for this parameter, ADSM will not initiate migration of files from another volume. Because all files that are on a single volume are migrated together, the occupancy of the storage pool can fall below the value you specified for this parameter. You can set LOWMIG=0 to permit migration to empty the storage pool.

COLlocate=*collocation*
Specifies whether ADSM attempts to keep data belonging to a single client node assigned to as few volumes as possible; or attempts to keep data belonging to a single client node's filespace assigned to as few volumes as possible. This parameter is optional. The default value is NO.

Collocation reduces the number of sequential access media mounts for restore, retrieve, and recall operations. However, collocation increases both the amount of server time needed to collocate files for storing, and the number of volumes required. Collocation may not be useful on systems with only one or two sequential devices. For additional information, see *ADSM Administrator's Guide*.

Possible values are:

Yes
Specifies that collocation is enabled at the client node level. The server tries to put data for one node on as few volumes as possible. If the node has multiple filespaces, no attempt is made to collocate those filespaces.

No
Specifies that collocation is disabled.

FILespace
Specifies that collocation is enabled at the filespace level for client nodes. The server tries to put data for one node and filespace on as few volumes as possible. If a node has multiple filespaces, the server attempts to put data for different filespaces on different volumes.

RECLaim=*reclaimvalue*
Specifies when to initiate reclamation of fragmented space on volumes in the storage pool, based on the percentage of reclaimable space on a volume. Reclamation makes the fragmented space usable again by moving any remaining active files from one volume to another volume, thus making the original volume available for reuse. This parameter is optional. You can specify an integer from 1–100, inclusive. The default value is 60.

Space becomes fragmented as files on a volume are deleted because of processes such as expiration or file space deletion. The amount of space that can be reclaimed on a volume increases as files on the volume are deleted. When the percentage of space that can be reclaimed on a volume rises above the value for the RECLAIM parameter, the volume is reclaimed. Active files on the volume are rewritten to other volumes in the storage pool, making the original volume available for new files.

It is recommended that you specify a value of 50 percent or greater for this parameter so that files stored on two volumes can be combined onto a single output volume.

MAXSCRatch=*maxscratchvalue*
Specifies the maximum number of scratch volumes that can be requested by ADSM. This parameter is optional. You can specify an integer from 0–100000000, inclusive. The default value is 0.

The value specified for this parameter is used to estimate the total number of volumes available in the storage pool, and the corresponding estimated capacity for the storage pool.

If you do not specify a value for this parameter, no scratch media are requested by ADSM.

Scratch volumes are automatically deleted from the storage pool when they become empty. When scratch volumes with the device type of FILE are deleted, the space that the volumes occupied is freed by ADSM and returned to the file system.

REUsedelay=*days*

Specifies the number of days that must elapse after all files have been deleted from a volume, before the volume can be rewritten or returned to the scratch pool. This parameter is optional. You can specify an integer from 0–9999, inclusive. The default value is 0, which means that a volume can be rewritten or returned to the scratch pool as soon as all files have been deleted from the volume.

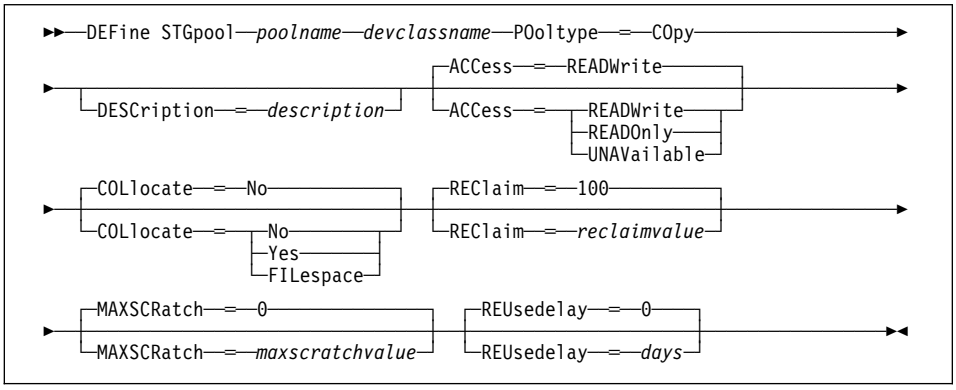
By specifying this parameter, you can ensure that the database could be restored to an earlier level and database references to files in the storage pool would still be valid.

Usage Notes

The migration occupancy represented by the HIGHMIG and LOWMIG parameter is computed differently for random and sequential access storage pools:

- For random access storage pools, the occupancy is computed as a percentage of the total byte capacity of the storage pool.
- For sequential access storage pools, the occupancy is based on the number of volumes in the storage pool that contain nondeleted files.

Syntax for Defining Copy Storage Pools



Parameters for Defining a Copy Storage Pool

poolname

Specifies the name of the copy storage pool to be defined. This parameter is required. The maximum length of the name is 30 characters.

devclassname
Specifies the name of the sequential access device class to which this copy storage pool is assigned. This parameter is required. You can specify any device class except DISK.

POoltype=COpy
Specifies that you want to define a copy storage pool. This parameter is required.

DESCription=*description*
Specifies a description of the copy storage pool to be defined. This parameter is optional. The maximum length of the description is 255 characters. The description must be enclosed in quotation marks if it contains any blank characters. The default is no description.

ACCess=*accessmode*
Specifies how users and system processes (like reclamation) can access files in the copy storage pool. This parameter is optional. The default value is READWRITE. Possible values are:

READWrite
Specifies that files can be read from and written to the volumes in the copy storage pool.

READOnly
Specifies that users can only read files stored on the volumes in the copy storage pool.

No new writes are permitted to the volumes in the copy storage pool from other volumes outside the storage pool. Files cannot be backed up to the copy storage pool, but existing backup copies can be restored. System processes (like reclamation) are permitted to move files within the volumes in the copy storage pool.

UNAVailable
Specifies that users cannot access files stored on volumes in the copy storage pool.

No new writes are permitted to volumes in the copy storage pool from other volumes outside the storage pool. Files cannot be backed up to the copy storage pool, but existing backup copies can be restored. System processes (like reclamation) are permitted to move files within the volumes in the copy storage pool.

COLlocate=*collocation*
Specifies whether ADSM attempts to keep data belonging to a single client node assigned to as few volumes as possible; or attempts to keep data belonging to a single client node's filespace assigned to as few volumes as possible. This parameter is optional. The default value is NO.

Collocation reduces the number of sequential access media mounts for restore, retrieve, and recall operations. However, collocation increases both the amount of server time needed to collocate files for storing, and the number of volumes

required. Collocation may not be useful on systems with only one or two sequential devices. For additional information, see *ADSM Administrator's Guide*.

Possible values are:

Yes
Specifies that collocation is enabled at the client node level. The server tries to put data for one node on as few volumes as possible. If the node has multiple filespaces, no attempt is made to collocate those filespaces.

No
Specifies that collocation is disabled.

FILespace
Specifies that collocation is enabled at the filespace level for client nodes. The server tries to put data for one node and filespace on as few volumes as possible. If a node has multiple filespaces, the server attempts to put data for different filespaces on different volumes.

RECLaim=*reclaimvalue*
Specifies when to initiate reclamation of fragmented space on volumes in the copy storage pool, based on the percentage of reclaimable space on a volume. Reclamation makes the fragmented space usable again by moving any remaining active files from one volume to another volume, thus making the original volume available for reuse. This parameter is optional. You can specify an integer from 1–100, inclusive. The default value is 100, which means that reclamation is not performed.

The amount of space that can be reclaimed on a volume increases as files on the volume are deleted because of processes such as expiration or file space deletion. It is recommended that you specify a value of 50 percent or greater for this parameter so that files stored on two volumes can be combined onto a single output volume.

For offsite storage pool volumes, when a copy pool volume that is offsite becomes eligible for reclamation, the reclamation process attempts to retrieve the active files on the reclaimable volume from a primary or copy storage pool that is onsite, and then write these files to an available volume in the original copy storage pool. Effectively, these files are moved back to the onsite location, although they could be obtained from the offsite volume after a disaster if a database backup is used which references the files on the offsite volume. Because of the way reclamation works with offsite volumes, use it carefully with copy storage pools.

MAXSCRatch=*maxscratchvalue*
Specifies the maximum number of scratch volumes that can be requested by ADSM. This parameter is optional. You can specify an integer from 0–100000000, inclusive. The default value is 0.

The value specified for this parameter is used to estimate the total number of volumes available in the copy storage pool, and the corresponding estimated capacity for the copy storage pool.

If you do not specify a value for this parameter, no scratch media are requested by ADSM.

Scratch volumes are automatically deleted from the storage pool when they become empty. However, if the access mode for a scratch volume is OFFSITE, the volume will not be deleted from the copy storage pool until the access mode is changed; this allows an administrator to query ADSM for empty, offsite scratch volumes and return these to the onsite location.

When scratch volumes with the device type of FILE become empty and are deleted, the space that the volumes occupied is freed by ADSM and returned to the file system.

REUsedelay=*days*

Specifies the number of days that must elapse after all files have been deleted from a volume, before the volume can be rewritten or returned to the scratch pool. This parameter is optional. You can specify an integer from 0–9999, inclusive. The default value is 0, which means that a volume can be rewritten or returned to the scratch pool as soon as all files have been deleted from the volume.

Important: Specifying this parameter, you can ensure that the database can be restored to an earlier level and database references to files in the copy storage pool are still valid. For this to happen, you must set this parameter to a value greater than the number of days you plan on retaining the oldest database backup. For additional information, refer to *ADSM Administrator's Guide*.

Examples

Task 1

Define a primary storage pool, POOL1, to the DISK device class, with caching enabled. The maximum file size is limited to 5MB, with a high migration threshold of 70 percent, and a low migration threshold of 30 percent. Any files larger than 5MB are stored in subordinate storage pools beginning with the BACKUPPOOL storage pool.

Command:

```
define stgpool pool1 disk description="disk stgpool" maxsize=5m
highmig=70 lowmig=30 cache=Yes nextstgpool=backuppool
```

Output:

```
ANR2200I Storage pool POOL1 defined (device class DISK).
```

Task 2

Define a primary storage pool named 8MMPOOL to the 8MMTAPE device class (with a device type of 8MM) with a maximum file size of 5MB. Any files larger than 5MB are stored in subordinate pools, beginning with POOL1. Collocation is enabled for the storage pool. As many as 5 scratch volumes can be requested for this storage pool.

Command:
```
define stgpool 8mmpool 8mmtape maxsize=5m nextstgpool=pool1
collocate=yes maxscratch=5
```

Output:

```
ANR2200I Storage pool 8MMPOOL defined (device class
8MMTAPE).
```

Task 3

Define a copy storage pool, COPYSTG, to the PLAINFILES device class. Include "Copy Storage Pool" as part of the description for this pool.

Command:
```
define stgpool copystg plainfiles pooltype=copy description="copy
storage pool"
```

Output:

```
ANR2200I Storage pool COPYSTG defined (device class
PLAINFILES).
```

Related Commands

Table 54 provides references to related commands.

Table 54 (Page 1 of 2). Commands Related to DEFINE STGPOOL

Command	Description	Reference
BACKUP DB	Backs up the ADSM database to sequential access volumes.	Page 53
BACKUP STGPOOL	Backs up a primary storage pool to a copy storage pool.	Page 59
DEFINE DEVCLASS	Defines a device class that can be used for storage pools, importing, or exporting.	Page 111
DEFINE VOLUME	Assigns a volume to be used for storage within a specified storage pool.	Page 196

Table 54 (Page 2 of 2). Commands Related to DEFINE STGPOOL

Command	Description	Reference
DELETE STGPOOL	Deletes a storage pool from server storage.	Page 240
QUERY DEVCLASS	Displays information about one or more device classes.	Page 376
QUERY STGPOOL	Displays information about one or more storage pools.	Page 485
RESTORE STGPOOL	Restores files to a primary storage pool from copy storage pools.	Page 533
RESTORE VOLUME	Restores files stored on specified volumes in a primary storage pool from copy storage pools.	Page 538
UPDATE STGPOOL	Changes the attributes of a storage pool.	Page 677

DEFINE VOLUME (Define a Volume in a Storage Pool)

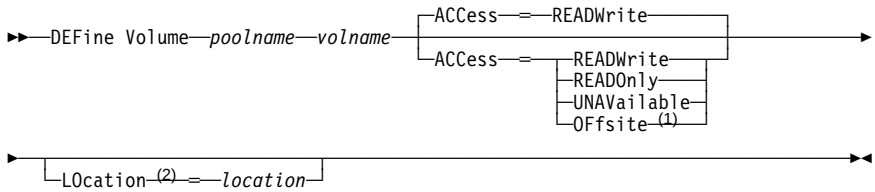
Use the DEFINE VOLUME command to assign a random or sequential access volume to be used for storage within an existing storage pool. You can define a volume to either a primary storage pool or a copy storage pool. You must define each volume to be used in a storage pool, unless you allow scratch volumes for the storage pool.

Attention: The size of an allocated database, recovery log, or storage pool volume cannot be changed once it has been defined to the ADSM server. ADSM uses the initial size allocation of the volume at the time it is defined to the server to calculate data placement for later retrieval. If you change the size of ADSM volumes by extending raw logical volumes through smit or otherwise altering the file sizes of ADSM volumes, ADSM may not initialize correctly and data could be lost.

Privilege Class

To issue this command, you must have system privilege, unrestricted storage privilege, or restricted storage privilege for the storage pool to which the volume is assigned.

Syntax



Notes:

1. This value is supported only for volumes assigned to copy storage pools.
2. This parameter can be specified only for volumes assigned to sequential access storage pools.

Parameters

poolname

Specifies the name of the storage pool to which the volume is assigned. This parameter is required.

volname

Specifies the name of the storage pool volume to be defined. This parameter is required. The volume name that you can specify depends on the device class device type of the associated storage pool:

- For device classes with a FILE or DISK device type — Specify the file name of the file containing the volume data. This file name can be entered with either the fully qualified path name or the path name relative to the directory identified in the DIRECTORY parameter of the associated device class. For example, if the file name is data1.dsm the path name to be entered is:

```
l:\win32app\ibm\adsm\server\data1.dsm
```

- For all device classes that represent tape devices, specify a 1–6 alphanumeric volume name. An example is DSMT01 (ADSM always converts volume names to uppercase).
- For device classes with a REMOVABLEFILE device type, specify a 1 to 8 alphanumeric volume name, with no embedded blanks or periods.

  No volume name used by ADSM can contain any embedded blanks or equal signs.

ACCess=*accessmode*
Specifies how users and system processes (like migration) can access files in the storage pool volume. This parameter is optional. The default value is READWRITE. Possible values are:

READWrite
Specifies that users and system processes (like migration) can read from and write to files stored on the volume.

READOnly
Specifies that users and system processes (like migration) can only read files stored on the volume.

UNAVailable
Specifies that neither users nor system processes (like migration) can access files stored on the volume.

If you define a random access volume as *unavailable*, you cannot vary the volume online. If you define a sequential access volume as *unavailable*, ADSM does not attempt to access the volume.

OFfsite
Specifies that the volume is at an offsite location from which it cannot be mounted. This value can only be specified for volumes in copy storage pools.

Use this value to help you track volumes at offsite locations. ADSM treats volumes designated as offsite differently:

- Mount requests are not generated for volumes assigned to offsite locations
- Data can be reclaimed or moved from offsite volumes by retrieving files from other storage pools
- Empty, offsite scratch volumes are not deleted from the copy storage pool

LOcation=*location*
Specifies the location of the volume. This parameter is optional. It can be specified only for volumes in sequential access storage pools. The location information can be a maximum length of 255 characters. The location must be

enclosed in quotation marks if it contains any blank characters. The default is no location.

Usage Notes

For sequential access storage pools, it is not necessary to manually define any volumes. You can use the MAXSCRATCH parameter to permit ADSM to mount its own scratch volumes.

Examples

Task 1

A storage pool named POOL1 is assigned to a device class with a device type of DISK. Define a volume named mnvol to this storage pool, with READWRITE access.

Command: `define volume pool1 mnvol access=readwrite`

Output:

```
ANR2206I Volume L:\WIN32APP\IBM\ADSM\SERVER\MNVOL defined in
storage pool POOL1 (device class DISK).
```

Task 2

A storage pool named 8mmpool is assigned to a device class with a device type of 8MMTAPE. Define a volume named TAPE01 to this storage pool.

Command: `define volume 8mmpool tape01`

Output:

```
ANR2206I Volume TAPE01 defined in storage pool 8MMPOOL
(device class 8MMTAPE).
```

Related Commands

Table 55. Commands Related to DEFINE VOLUME

Command	Description
DELETE VOLUME	Deletes a volume from a storage pool.
QUERY VOLUME	Displays information about one or more storage pool volumes.
UPDATE VOLUME	Updates the attributes of one or more storage pool volumes.

DELETE ASSOCIATION (Delete Node Associations with a Schedule)

Use the DELETE ASSOCIATION command to remove the association between one or more clients and a schedule.

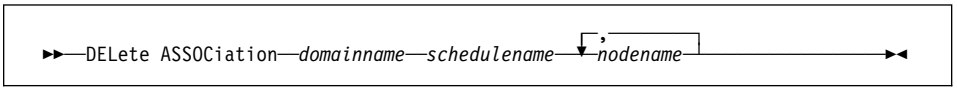
This command does not delete a client from ADSM. It only removes the association of the client from the specified schedule. When you delete the association of a client to a schedule, the client's data is no longer managed by the specified schedule.

If you try to disassociate a client from a schedule to which it is not associated, this command will have no effect for that client.

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the domain to which the schedule belongs.

Syntax



Parameters

domainname
Specifies the name of the policy domain to which the schedule belongs. This parameter is required.

schedulename
Specifies the name of the schedule from which clients are to be disassociated. This parameter is required.

nodename
Specifies the name of the node that is no longer associated with the schedule. This parameter is required. You can specify a list of clients which are to be no longer associated with the specified schedule. The items in the list are separated by commas, with no intervening spaces. You can also use a pattern-matching expression to specify a name. All matching clients are disassociated from the specified schedule.

Examples

Task 1

Remove the association between the node named JEFF, assigned to the DOMAIN1 policy domain, and the WEEKLY_BACKUP schedule.

DELETE ASSOCIATION

Command: `delete association domain1 weekly_backup jeff`

Output:

```
Do you wish to proceed? (Y/N)
```

Type Y and press the ENTER key. A message similar to the following is displayed:

```
ANR2511I Node JEFF disassociated from schedule WEEKLY_BACKUP
in policy domain DOMAIN1.
```

Task 2

Remove the association between selected clients (assigned to the DOMAIN1 policy domain) and the WEEKLY_BACKUP schedule so that this schedule is no longer executed by these clients. The nodes that are disassociated from the schedule contain ABC or XYZ in the node name.

Command: `delete association domain1 weekly_backup *abc*,*xyz*`

Output:

```
Do you wish to proceed? (Y/N)
```

Type Y and press the ENTER key. A message similar to the following is displayed:

```
ANR2511I Node XABCEF disassociated from schedule
WEEKLY_BACKUP in policy domain DOMAIN1.
ANR2511I Node ABCONTROL disassociated from schedule
WEEKLY_BACKUP in policy domain DOMAIN1.
ANR2511I Node MARTXYZ disassociated from schedule
WEEKLY_BACKUP in policy domain DOMAIN1.
```

Related Commands

Table 56. Commands Related to DELETE ASSOCIATION

Command	Description
DEFINE ASSOCIATION	Associates one or more clients with a schedule.
QUERY ASSOCIATION	Displays the clients associated with one or more schedules.

DELETE COPYGROUP (Delete a Copy Group)

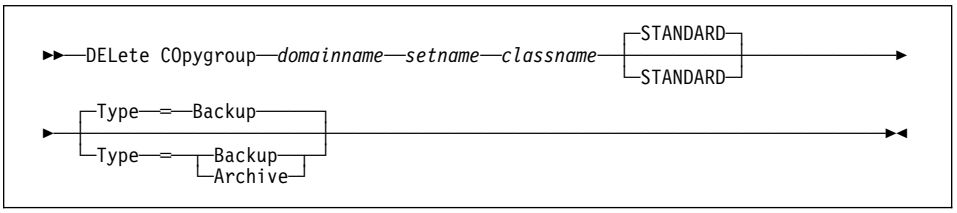
Use the DELETE COPYGROUP command to delete an existing backup or archive copy group from a specified management class. A copy group in the ACTIVE policy set cannot be deleted.

Any files that are bound to a deleted copy group are managed by the default management class, when the policy set is activated.

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the policy domain to which the copy group belongs.

Syntax



Parameters

domainname
Specifies the name of the policy domain to which the copy group to be deleted belongs. This parameter is required.

setname
Specifies the name of policy set to which the copy group to be deleted belongs. This parameter is required.

classname
Specifies the name of the management class to which the copy group to be deleted belongs. This parameter is required.

STANDARD
Specifies the name of the copy group, STANDARD. This parameter is optional. If you do not specify this value, the command defaults to STANDARD.

Type=*copygrouptype*
Specifies whether a backup or archive copy group is to be deleted. This parameter is optional. The default value is BACKUP. Possible values are:

Backup
Specifies that a backup copy group is to be deleted.

Archive
Specifies that an archive copy group is to be deleted.

DELETE COPYGROUP

Usage Notes

You can delete the predefined STANDARD copy group located in the STANDARD policy domain. If, however, at a later time you reinstall the ADSM server, all STANDARD policy objects are restored. Also, if after the server reinstall you are reestablishing your server database (via the database salvage commands), during DSMSERV AUDITDB command processing messages are issued indicating that an instance count does not agree with actual data. DSMSERV AUDITDB does not delete the STANDARD policy objects; however, it does synchronize the instance count to include the restored STANDARD policy objects.

Examples

Task 1

Delete the backup copy group, STANDARD, from the ACTIVEFILES management class that is assigned to the VACATION policy set of the EMPLOYEE_RECORDS policy domain.

Command: `delete copygroup employee_records vacation activefiles`

Output:

```
Do you wish to proceed? (Y/N)
```

Type Y and press the ENTER key. A message similar to the following is displayed:

```
ANR1531I Backup copy group STANDARD deleted from
policy domain EMPLOYEE_RECORDS, set VACATION,
management class ACTIVEFILES.
```

Task 2

Delete the archive copy group, STANDARD, from the MCLASS1 management class that is assigned to the SUMMER policy set of the PROG1 policy domain.

Command: `delete copygroup prog1 summer mclass1 Type=Archive`

Output:

```
Do you wish to proceed? (Y/N)
```

Type Y and press the ENTER key. A message similar to the following is displayed:

```
ANR1536I Archive copy group STANDARD deleted from policy
domain PROG1, set SUMMER, management class MCLASS1.
```

Related Commands

Table 57. Commands Related to DELETE COPYGROUP

Command	Description
DEFINE COPYGROUP	Defines a copy group for backup or archive processing within a specified management class.
QUERY COPYGROUP	Displays the attributes of an existing copy group.
UPDATE COPYGROUP	Changes one or more attributes of a copy group.

DELETE DBBACKUPTRIGGER (Delete the Database Backup Trigger)

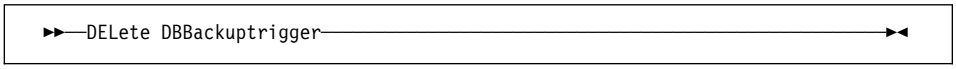
Use the DELETE DBBACKUPTRIGGER command to delete the definition for the database backup trigger.

When you delete the definition for the database backup trigger, ADSM does not run backups of the ADSM database automatically and does not remove unnecessary log records from the recovery log. After you delete the database backup trigger, be sure to use the SET LOGMODE command to change the log mode to NORMAL.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Parameters

None.

Examples

Task

Delete the definition for the database backup trigger.

Command: `delete dbbackuptrigger`

Output:

```
ANR2286I Database backup trigger deleted.
```

Related Commands

Table 58. Commands Related to DELETE DBBACKUPTRIGGER

Command	Description
DEFINE DBBACKUPTRIGGER	Defines a trigger for automatic ADSM database backups.
QUERY DBBACKUPTRIGGER	Displays information about the database backup trigger.
SET LOGMODE	Sets the mode for saving records in the recovery log.
UPDATE DBBACKUPTRIGGER	Changes one or more attributes of the database backup trigger.

DELETE DBVOLUME (Delete a Database Volume)

Use the DELETE DBVOLUME command to delete an existing database volume or database volume copy. This command may require data on the volume to be moved to other database volumes.

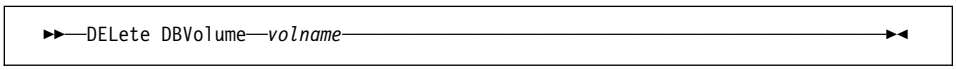
A *group of mirrored volumes* can consist of a database volume and up to two volume copies of that database volume. You cannot delete the last synchronized volume in a copy set unless the information on the volume can be moved by ADSM to other synchronized volumes in the database.

This command can generate a background process that can be canceled with the CANCEL PROCESS command. If a DELETE DBVOLUME background process is canceled, some of the database data may have already been moved. To display information on background processes, use the QUERY PROCESS command.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Parameters

volname
Specifies the name of the database volume to be deleted. This parameter is required.

Examples

Task

Delete the database volume db2.dsm.

Command: `delete dbvolume db2.dsm`

Output:

```
ANR2243I Database volume L:\WIN32APP\IBM\ADSM\SERVER\DB2.DSM deleted.
```

Related Commands

Table 59. Commands Related to DELETE DBVOLUME

Command	Description
CANCEL PROCESS	Cancels a background server process.
DEFINE DBCOPY	Creates a volume copy of a database volume.
DEFINE DBVOLUME	Assigns a volume to be used for database storage.
QUERY DBVOLUME	Displays information about one or more database volumes.
QUERY PROCESS	Displays information about one or all background server processes.

DELETE DEVCLASS (Delete a Device Class)

Use the DELETE DEVCLASS command to delete an existing device class.

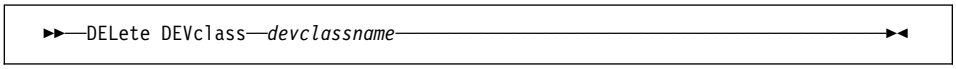
In order to use this command, you must first delete all storage pools assigned to the specified device class and, if necessary, cancel any database dump, export, or import processes that are using the device class.

The server options file that is created during installation includes a DEVCONFIG option that specifies a default device configuration file named devcnfg.out. You can specify other device configuration files with additional DEVCONFIG options. The files you specify with this option are automatically updated with the results of this command.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Parameters

devclassname
Specifies the name of the device class to be deleted. This parameter is required.

Examples

Task

Delete the device class named 8MMTAPE. There are no storage pools assigned to the device class.

Command: `delete devclass 8mmtape`

Output:

```
ANR2204I Device class 8MMTAPE deleted.
```

Related Commands

Table 60. Commands Related to DELETE DEVCLASS

Command	Description
DEFINE DEVCLASS	Defines a device class that can be used for storage pools, importing, or exporting.
QUERY DEVCLASS	Displays information about one or more device classes.
UPDATE DEVCLASS	Changes the attributes of a device class.

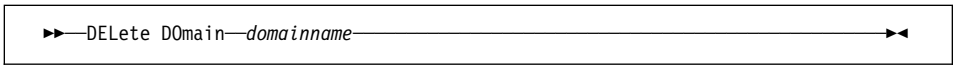
DELETE DOMAIN (Delete a Policy Domain)

Use the DELETE DOMAIN command to delete an existing policy domain. All assigned policy sets, management classes, and copy groups are deleted along with the specified policy domain. A policy domain with registered client nodes cannot be deleted.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

domainname
Specifies the name of the policy domain to be deleted. This parameter is required.

Usage Notes

You can delete the predefined STANDARD policy domain. If, however, at a later time you reinstall the ADSM server, all STANDARD policy objects are restored. Also, if after the server reinstall you are reestablishing your server database (via the database salvage commands), during DSMSERV AUDITDB command processing messages are issued indicating that an instance count does not agree with actual data. DSMSERV AUDITDB does not delete the STANDARD policy objects; however, it does synchronize the instance count to include the restored STANDARD policy objects.

Examples

Task

Delete the EMPLOYEE_RECORDS policy domain.

Command: `delete domain employee_records`

Output:

```
Do you wish to proceed? (Y/N)
```

Type Y and press the ENTER key. A message similar to the following is displayed:

```
ANR1501I Policy domain EMPLOYEE_RECORDS deleted.
```

Related Commands

Table 61. Commands Related to DELETE DOMAIN

Command	Description
COPY DOMAIN	Creates a copy of an existing policy domain.
DEFINE DOMAIN	Defines a policy domain that can be assigned to one or more clients.
QUERY DOMAIN	Displays information about one or more policy domains.
UPDATE DOMAIN	Changes the attributes of a policy domain.

DELETE DRIVE (Delete a Drive from a Library)

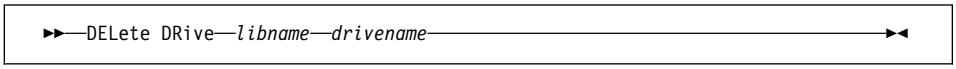
Use the DELETE DRIVE command to delete a drive from a library. An active drive cannot be deleted.

The server options file that is created during installation includes a DEVCONFIG option that specifies a default device configuration file named devcnfg.out. You can specify other device configuration files with additional DEVCONFIG options. The files you specify with this option are automatically updated with the results of this command. The files are also automatically updated whenever a device class, library, or drive is defined, updated, or deleted.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Parameters

libname
Specifies the name of the library from which the drive is to be deleted. This parameter is required.

drivename
Specifies the name of the drive to be deleted. This parameter is required.

Examples

Task

Delete drive3 from the library named AUTO.

Command: `delete drive auto drive3`

Output:

```
ANR8412I Drive DRIVE3 deleted from library AUTO.
```

Related Commands

Table 62. Commands Related to DELETE DRIVE

Command	Description
DEFINE DRIVE	Assigns a drive to a library.
DEFINE LIBRARY	Defines an automated or manual library.
DELETE LIBRARY	Deletes a library.
QUERY DRIVE	Displays information about one or more drives.
QUERY LIBRARY	Displays information about one or more libraries.
UPDATE DRIVE	Changes the attributes of a drive.

DELETE EVENT (Delete Event Records)

Use the DELETE EVENT command to delete event records from the database. An event record is created whenever processing of a scheduled command is started or missed.

Event records are deleted automatically based on the value set by the SET EVENTRETENTION command. While it is not necessary for you to manually delete event records, you can use this command to decrease the amount of database space required to hold event records, thus increasing the available capacity of the database.

An event record contains information regarding processing of scheduled work, such as the actual start date and start time, completion date and completion time, status, and results. This information is destroyed if you delete the event record. However, if you delete an event record, it does not alter defined schedules or the work which is pending for associated clients.

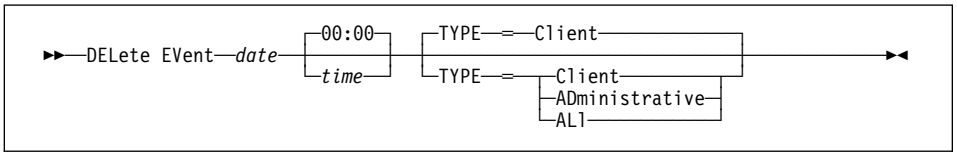
This command deletes event records if their scheduled start time is prior to a date and time specified by the administrator, unless the startup window for the event has not yet elapsed. If an event record has a startup window that has not elapsed, the record is not deleted.

This command only deletes the event records that exist at the time the command is executed.

Privilege Class

To issue this command, you must have system privilege or unrestricted policy privilege.

Syntax



Parameters

date

Specifies the date that is used to determine which event records to delete. This parameter is required.

This parameter is used in conjunction with the TIME parameter to specify a date and time for deletion of event records. Any record whose scheduled start occurs prior to the specified date and time is deleted. However, records are not deleted for events whose startup window has not yet passed.

Possible values are:

MM/DD/YYYY
Specifies that you want to delete records created on or before a specific date in MM/DD/YYYY format (for example, 01/31/1995).

TODAY
Specifies that you want to delete records created on or before the current date.

TODAY–*numdays* **or** –*numdays*
Specifies that you want to delete records created on or before the current date minus a specific number of days. The maximum value for the number of days is 9999.

For example, to delete records that are 30 or more days old, you can specify TODATE=TODAY–30 or TODATE=–30.

time
Specifies the time that is used to determine which event records to delete, in HH:MM format. This parameter is optional. The default value is 00:00.

This parameter is used in conjunction with the DATE parameter to specify a time and date for deletion of event records. Any record whose scheduled start occurs prior to the specified time and date is deleted. However, an exception is made for events whose startup window has not yet passed; records are not deleted for such events.

Possible values are:

HH:MM:SS
Specifies that you want to delete records created on or before a specific time on the specified begin date using HH:MM:SS format (for example, 12:33:28).

NOW
Specifies that you want to delete records created on or before the current time on the specified date.

NOW+*numhours:numminutes* **or** +*numhours:numminutes*
Specifies that you want to delete records created on or before the current time plus a specific number of hours (and, optionally, minutes) on the specified date.

For example, if issue the DELETE EVENT command at 9:00 with TOTIME=NOW+03:00 or TOTIME=+03:00, ADSM deletes records with a time of 12:00 or later on the specified date.

NOW–*numhours:numminutes* **or** –*numhours:numminutes*
Specifies that you want to delete records created on or before the current time minus a specific number of hours (and, optionally, minutes) on the specified date.

For example, if issue the DELETE EVENT command at 9:00 with TOTIME=NOW–03:30 or TOTIME=–03:30, ADSM deletes records with a time of 5:30 or later on the specified date.

TYPE=*typevalue*
Specifies if events for client schedules, administrative command schedules, or both, are to be deleted. This parameter is optional. The default value is CLIENT. Possible values are:

Client
Specifies that events for client schedules are to be deleted.

ADministrative
Specifies that events for administrative command schedules are to be deleted.

ALl
Specifies that events for both client and administrative command schedules are to be deleted.

Examples

Task 1

Delete records for events with scheduled start times prior to 00:00 on May 26, 1996 (05/26/1996), and whose startup window has passed. Records for these events are deleted regardless of whether the retention period for event records, as specified with the SET EVENTRETENTION command, has passed.

Command: `delete event 05/26/1996`

Output:

```
Do you wish to proceed? (Y/N)
```

Type Y and press the ENTER key. A message similar to the following is displayed:

```
ANR2512I Event records deleted: 18.
```

Task 2

Delete records for events with scheduled start times prior to 08:00 on May 26, 1996 (05/26/1996), and whose startup window has passed. Records for these events are deleted regardless of whether the retention period for event records, as specified with the SET EVENTRETENTION command, has passed.

Command: `delete event 05/26/1996 08:00`

Output:

```
Do you wish to proceed? (Y/N)
```

Type Y and press the ENTER key. A message similar to following is displayed:

```
ANR2512I Event records deleted:36.
```

Related Commands

Table 63. Commands Related to DELETE EVENT

Command	Description
QUERY EVENT	Displays information about scheduled and completed events for selected clients.
SET EVENTRETENTION	Specifies the number of days to retain event records.

DELETE FILESPACE (Delete Client Node Data from the Server)

Use the DELETE FILESPACE command to delete file spaces from the server. Files that belong to the specified file space are deleted from primary and copy storage pools.

Use the DELETE FILESPACE command to:

- Remove files for users who are not authorized to delete backed up or archived files from storage pools.
- Remove a client node from ADSM. Before removing a client node, you must delete all files belonging to the client node.
- Delete files belonging to a specific owner. When you delete a file space belonging to a specific owner, only the files that have the specified owner name in the file space are deleted.

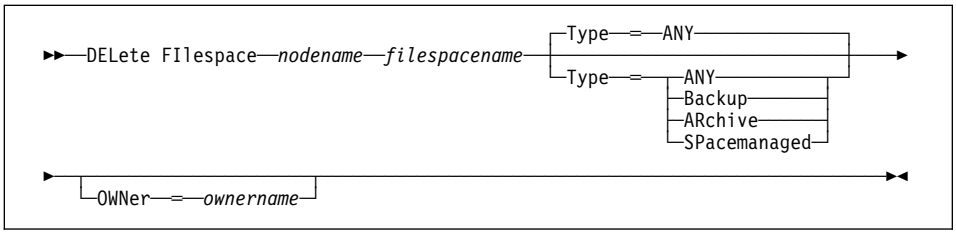
The DELETE FILESPACE command creates a server process that deletes one or more file spaces as a series of batch database transactions, thus preventing a rollback or commit for an entire file space as a single action. If the DELETE FILESPACE process is canceled or if a system failure occurs, a partial deletion can occur. In this case, a subsequent DELETE FILESPACE command for the same node or owner can delete the remaining data.

This command creates a background process that can be canceled with the CANCEL PROCESS command. To display information on background processes, use the QUERY PROCESS command. If a DELETE FILESPACE background process is canceled, some or all of the client's file spaces are deleted. If a partial deletion occurred, use the QUERY FILESPACE command to determine which file spaces have not been deleted. From the client node, the remaining files in the file space can be viewed with commands such as QUERY BACKUP. For information about the query commands, refer to the user's guide for your client and platform.

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the policy domain to which the client node is assigned.

Syntax



Parameters

nodename
Specifies the name of the client node to which the file space belongs. This parameter is required.

filespacename
Specifies the name of the file space to be deleted. This parameter is required.

This name is case-sensitive. It must be entered exactly as it is known to the server. To determine the correct capitalization for the file space to be deleted, use the QUERY FILESPACE command.

You can use a pattern-matching expression to specify this name. All matching file space names are included.

Type=*datatype*
Specifies the type of data to be deleted. This parameter is optional. The default value is ANY. Possible values are:

ANY
Specifies to delete, in order, only backed-up versions of files and archived copies of files.

To delete space-managed files (files migrated from HSM client nodes), you must specify TYPE=SPACEMANAGED.

If you specify DELETE FILESPACE nodename * TYPE=ANY, all backed-up and archived files in all file spaces for that node will be deleted. File spaces will only be deleted if they do not contain files migrated from an HSM client.

Backup
Specifies to delete all backup data.

ARchive
Specifies to delete all archive data.

SPacemanaged
Specifies to delete files migrated from a user's local file system (space-managed files from an HSM client). The OWNER parameter is ignored when you specify TYPE=SPACEMANAGED.

OWNer=*ownername*
Specifies to restrict the data that is deleted from a file space to files belonging to the owner named. This parameter is optional and is ignored when TYPE=SPACEMANAGED. This parameter only applies to multiuser client systems such as AIX and SunOS.

DELETE FILESPACE

Examples

Task 1

Delete the file space named C_Drive that belongs to the client node HTANG.

Command: `delete filespace htang C_Drive`

Output:

```
Do you wish to proceed? (Y/N)
```

Type Y and press the ENTER key. A message similar to the following is displayed:

```
ANS5104I Process number 3 started.
```

Task 2

Delete all files migrated from client node APOLLO (that is, all space-managed files).

Command: `delete filespace apollo * type=spacemanaged`

Output:

```
Do you wish to proceed? (Y/N)
```

Type Y and press the ENTER key. A message similar to the following is displayed:

```
ANR0824I Delete Filespace * (space-managed data) for node
APOLLO started.
ANR0800I DELETE FILESPACE: * for node APOLLO started as
process 4.
adsm>
ANR0806I Delete Filespace * complete for node APOLLO:
8 files deleted.
```

Related Commands

Table 64 (Page 1 of 2). Commands Related to DELETE FILESPACE

Command	Description
CANCEL PROCESS	Cancels a background server process.
QUERY ACTLOG	Searches for and displays messages from the server activity log.
QUERY FILESPACE	Displays information about data in one or more filespaces that belong to a client.

Table 64 (Page 2 of 2). Commands Related to DELETE FILESPACE

Command	Description
QUERY OCCUPANCY	Displays file space information by storage pool.
QUERY PROCESS	Displays information about one or all background server processes.
REMOVE NODE	Removes a client from the list of registered nodes for a specific policy domain.
RENAME FILESPACE	Renames a client filespace on the server.

DELETE LIBRARY (Delete a Library)

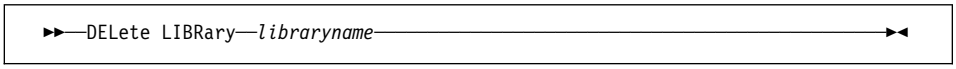
Use the DELETE LIBRARY command to delete an existing library. Prior to deleting a library, all assigned drives must be deleted.

The server options file that is created during installation includes a DEVCONFIG option that specifies a default device configuration file named devcnfg.out. You can specify other device configuration files with additional DEVCONFIG options. The files you specify with this option are automatically updated with the results of this command.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Parameters

libraryname
Specifies the name of the library to be deleted. This parameter is required.

Examples

Task

Delete the MANLIB library.

Command: `delete library manlib`

Output:

```
ANR8410I Library MANLIB deleted.
```

Related Commands

Table 65. Commands Related to DELETE LIBRARY

Command	Description
DEFINE DRIVE	Assigns a drive to a library.
DEFINE LIBRARY	Defines an automated or manual library.
DELETE DRIVE	Deletes a drive from a library.
QUERY DRIVE	Displays information about one or more drives.
QUERY LIBRARY	Displays information about one or more libraries.
UPDATE DRIVE	Changes the attributes of a drive.
UPDATE LIBRARY	Changes the attributes of a library.

DELETE LOGVOLUME (Delete a Recovery Log Volume)

Use the DELETE LOGVOLUME command to delete an existing recovery log volume or recovery log volume copy. This command may require data on the volume to be moved to other database volumes.

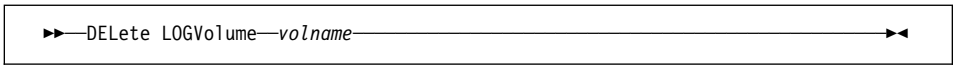
A *group of mirrored volumes* can consist of a recovery log volume and up to two volume copies of that recovery log volume. You cannot delete the last synchronized volume in a copy set unless the information on the volume can be moved by ADSM to other synchronized volumes in the recovery log.

This command can generate a background process that can be canceled with the CANCEL PROCESS command. To display information on background processes, use the QUERY PROCESS command.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Parameters

volname

Specifies the name of the recovery log volume to be deleted. This parameter is required.

Examples

Task

Delete recovery log volume log2.dsm. No data resides on the volume.

Command: `delete logvolume log2.dsm`

Output:

```
ANR2264I Delete process initiated for recovery
log volume L:\WIN32APP\IBM\ADSM\SERVER\LOG2.DSM (process id 203).
ANR0245I Deletion complete for recovery log volume
L:\WIN32APP\IBM\ADSM\SERVER\LOG2.DSM.
```

Related Commands

Table 66. Commands Related to DELETE LOGVOLUME

Command	Description
CANCEL PROCESS	Cancels a background server process.
DEFINE LOGCOPY	Creates a volume copy of a recovery log volume.
DEFINE LOGVOLUME	Defines a disk volume to the recovery log.
QUERY LOGVOLUME	Displays information about one or more log volumes.
QUERY PROCESS	Displays information about one or all background server processes.

DELETE MACHINE (Delete a Machine)

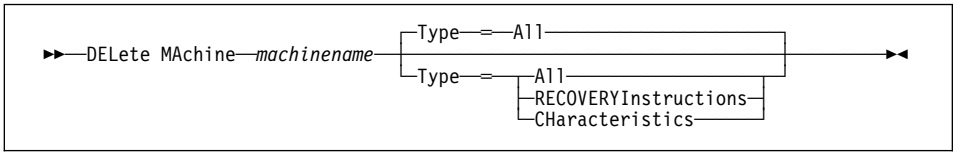
This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

Use the DELETE MACHINE command to delete machine description information from the ADSM server.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

machinename
Specifies the name of the machine to be deleted from the ADSM server. This parameter is required.

Type=*typevalue*
Specifies the type of machine information to be deleted. This parameter is optional. The default value is ALL. Possible values are:

All
Specifies to delete from the server the machine definition, including recovery instructions and characteristics.

RECOVERYInstructions
Specifies to delete from the server the recovery instructions associated with the machine. Recovery instructions are added to machine information with the INSERT command.

To replace existing recovery instructions, perform the following:

- Issue the DELETE MACHINE machinename TYPE=RECOVERYInstructions.
- Issue the INSERT command for each line of recovery instructions.

CHaracteristics

Specifies to delete from the server the machine characteristics associated with the machine. Machine characteristics are added to machine information with the INSERT command.

To replace existing machine characteristics, perform the following:

- Issue the DELETE MACHINE machinename TYPE=CHaracteristics.
- Issue the INSERT command for each line of machine characteristics.

Examples

Task

Delete the machine characteristics associated with the DISTRICT5 machine.

Command:

```
delete machine district5 type=characteristics
```

Output:

```
ANR6754I Machine DISTRICT5 characteristics deleted.
```

Related Commands

Table 67. Commands Related to DELETE MACHINE

Command	Description
DEFINE MACHINE	Defines a machine for DRM.
INSERT MACHINE	Inserts machine characteristics or recovery instructions into the ADSM database.
QUERY MACHINE	Displays information about one or more machines.
QUERY RECOVERYMEDIA	Displays media available for machine recovery.
UPDATE MACHINE	Changes the information of an existing machine.

DELETE MACHNODEASSOCIATION (Delete Association Between a Machine and a Node)

This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

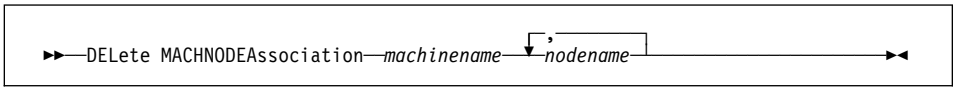
Use the DELETE MACHNODEASSOCIATION command to remove the association of one or more nodes with a machine.

This command cannot be used to delete a node from ADSM, it only removes the association of the node with a machine.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

machinename

Specifies the name of the machine from which nodes are to be disassociated. This parameter is required.

nodename

Specifies the name of the node to be disassociated from the machine. This parameter is required. You can specify a list of nodes to be disassociated from the specified machine. The items in the list are separated with commas, with no intervening spaces. You can use a pattern matching expression to specify a name. All matching nodes are disassociated from the specified machine. If a node is listed, but is not associated with the specified machine, the command has no effect for that node.

Examples

Task

Delete the association between the DISTRICT5 machine and the ACCOUNTSPAYABLE node.

Command: `delete machnodeassociation district5 accountspayable`

Output:

```
ANR6621I Node ACCOUNTSPAYABLE disassociated from machine
DISTRICT5.
```

Related Commands

Table 68. Commands Related to DELETE MACHNODEASSOCIATION

Command	Description
DEFINE MACHNODEASSOCIATION	Associates an ADSM node with a machine.
QUERY MACHINE	Displays information about one or more machines.

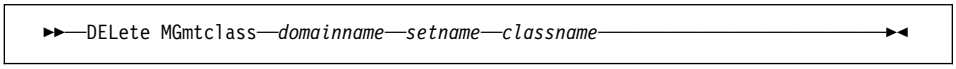
DELETE MGMTCLASS (Delete a Management Class)

Use the DELETE MGMTCLASS command to delete an existing management class, including the assigned default management class. You cannot delete a management class in the ACTIVE policy set. All assigned copy groups are deleted along with the specified management class. If you are deleting the default management class, remember a policy set cannot be activated unless it has an assigned default management class.

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the policy domain to which the management class belongs.

Syntax



Parameters

domainname
Specifies the name of the policy domain to which the management class belongs. This parameter is required.

setname
Specifies the name of the policy set to which the management class belongs. This parameter is required.

classname
Specifies the name of the management class that you want to delete. This parameter is required.

Usage Notes

You can delete the predefined STANDARD management class located in the STANDARD policy domain. If, however, at a later time you reinstall the ADSM server, all STANDARD policy objects are restored. Also, if after the server reinstall you are reestablishing your server database (via the database salvage commands), during DSMSERV AUDITDB command processing messages are issued indicating that an instance count does not agree with actual data. DSMSERV AUDITDB does not delete the STANDARD policy objects; however, it does synchronize the instance count to include the restored STANDARD policy objects.

Examples

Task

Delete the ACTIVEFILES management class from the VACATION policy set of the EMPLOYEE_RECORDS policy domain.

Command: `delete mgmtclass employee_records vacation activefiles`

Output:

```
Do you wish to proceed? (Y/N)
```

Type Y and press the ENTER key. A message similar to the following is displayed:

```
ANR1521I Management class ACTIVEFILES deleted
from policy domain EMPLOYEE_RECORDS, set VACATION.
```

Related Commands

Table 69. Commands Related to DELETE MGMTCLASS

Command	Description
ASSIGN DEFMGMTCLASS	Assigns an existing management class as the default for a specified policy set.
COPY MGMTCLASS	Creates a copy of an existing management class.
DEFINE MGMTCLASS	Defines a management class within the policy domain and policy set specified.
QUERY MGMTCLASS	Displays information about one or more management classes.
UPDATE MGMTCLASS	Changes the attributes of a management class.

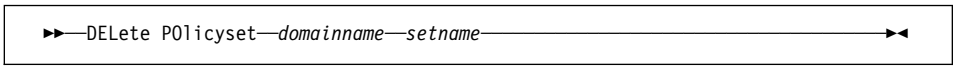
DELETE POLICYSET (Delete a Policy Set)

Use the DELETE POLICYSET command to delete an existing policy set. You cannot delete the ACTIVE policy set. When a policy set is deleted all management classes and copy groups that belong to the policy set within the specified policy domain are deleted.

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the policy domain to which the policy set belongs.

Syntax



Parameters

domainname
Specifies the name of the policy domain to which the policy set belongs. This parameter is required.

setname
Specifies the name of the policy set to be deleted. This parameter is required.

Usage Notes

You can delete the predefined STANDARD policy set. If, however, at a later time you reinstall the ADSM server, all STANDARD policy objects are restored. Also, if after the server reinstall you are reestablishing your server database (via the database salvage commands), during DSMSERV AUDITDB command processing messages are issued indicating that an instance count does not agree with actual data. DSMSERV AUDITDB does not delete the STANDARD policy objects; however, it does synchronize the instance count to include the restored STANDARD policy objects.

Examples

Task

Delete the VACATION policy set from the EMPLOYEE_RECORDS policy domain.

Command: `delete policyset employee_records vacation`

Output:

```
Do you wish to proceed? (Y/N)
```

Type Y and press the ENTER key. A message similar to the following is displayed:

```
ANR1511I Policy set VACATION deleted from policy domain
EMPLOYEE_RECORDS.
```

Related Commands

Table 70. Commands Related to DELETE POLICYSET

Command	Description
ACTIVATE POLICYSET	Validates and activates a policy set within a policy domain.
COPY POLICYSET	Creates a copy of an existing policy set.
DEFINE POLICYSET	Defines a policy set within the specified policy domain.
QUERY POLICYSET	Displays information about one or more policy sets.
UPDATE POLICYSET	Changes the description of a policy set.
VALIDATE POLICYSET	Verifies and reports on conditions the administrator must consider before activating the policy set.

DELETE RECMEDMACHASSOCIATION (Delete Association Between Recovery Media and a Machine)

This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

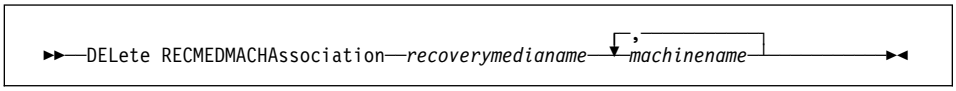
Use the DELETE RECMEDMACHASSOCIATION command to remove the association of one or more machines with a recovery media.

This command cannot be used to delete a machine from ADSM, it only removes the association of the machine with a recovery media.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

recoverymedianame
Specifies the name of the recovery media from which machines are to be disassociated. This parameter is required.

machinename
Specifies the name of the machine to be disassociated from the recovery media. This parameter is required. You can specify a list of machines to be disassociated from the specified recovery media. The items in the list are separated with commas, with no intervening spaces. You can use a pattern matching expression to specify a name. All matching machines are disassociated from the specified recovery media. If a machine is listed, but is not associated with a specified recovery media, the command has no effect for that machine.

Examples

Task

Delete the association between the DIST5RM recovery media and the DISTRICT1 and DISTRICT5 machines.

Command: `delete recmedmachassociation dist5rm district1,district5`

Output:

```
ANR6627I Machine DISTRICT1 disassociated from recovery
media DIST5RM.
ANR6627I Machine DISTRICT5 disassociated from recovery
media DIST5RM.
```

Related Commands

Table 71. Commands Related to DELETE RECMEDMACHASSOCIATION

Command	Description
DEFINE RECMEDMACHASSOCIATION	Associates recovery media with a machine.
QUERY MACHINE	Displays information about one or more machines.
QUERY RECOVERYMEDIA	Displays media available for machine recovery.

DELETE RECOVERYMEDIA (Delete Recovery Media)

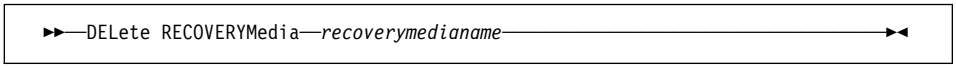
This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

Use the DELETE RECOVERYMEDIA command to delete recovery media information from the ADSM server.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

recoverymedianame
Specifies the name of the recovery media to be deleted. This parameter is required.

Examples

Task

Delete the DIST5RM recovery media.

Command: `delete recoverymedia dist5rm`

Output:

```
ANR6634I Recovery media DIST5RM deleted.
```

Related Commands

Table 72. Commands Related to DELETE RECOVERYMEDIA

Command	Description
DEFINE RECOVERYMEDIA	Defines the media required to recover a machine.
QUERY RECOVERYMEDIA	Displays media available for machine recovery.
UPDATE RECOVERYMEDIA	Changes the attributes of existing recovery media.

DELETE SCHEDULE (Delete a Client or an Administrative Command Schedule)

The DELETE SCHEDULE command takes two forms, depending on whether the schedule applies to client operations or administrative commands. The syntax and parameters for each form are defined separately.

Deleting Client Schedules

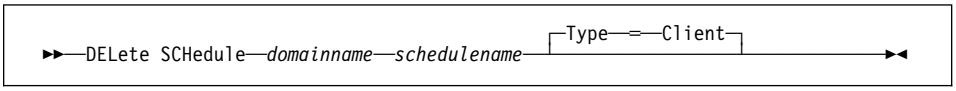
Use the DELETE SCHEDULE command to remove one or more existing schedules from the database.

Any client associations to a schedule are removed when the schedule is deleted.

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the specified policy domain.

Syntax



Parameters

domainname
Specifies the name of the policy domain to which the schedule belongs. This parameter is required.

schedulename
Specifies the name of the schedule to be deleted. This parameter is required. You can use a pattern-matching expression to specify this name. All matching schedule names are deleted from the specified policy domain.

Type=Client
Specifies that this command should delete a client schedule. This parameter is optional. The default value is CLIENT. Administrative command schedules are deleted by specifying TYPE=ADMINISTRATIVE.

Deleting Administrative Command Schedules

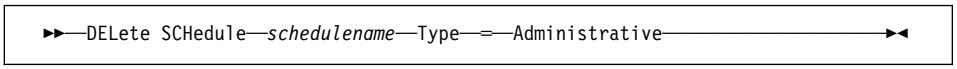
Use the DELETE SCHEDULE command to remove one or more existing schedules from the database.

Privilege Class

You must have system authority to delete an administrative command schedule.

DELETE SCHEDULE

Syntax for Deleting Administrative Command Schedules



Parameters for Deleting Administrative Command Schedules

schedulename
Specifies the name of the schedules to be deleted. This parameter is required. You can use a pattern-matching expression to specify this name.

Type=Administrative
Specifies that the schedule to be deleted is an administrative schedule. This parameter is required for deleting administrative command schedules.

Examples

Task 1

Delete the WEEKLY_BACKUP schedule, which belongs to the EMPLOYEE_RECORDS policy domain.

Command: `delete schedule employee_records weekly_backup`

Output:

```
Do you wish to proceed? (Y/N)
```

Type Y and press the enter key. A message similar to the following is displayed:

```
ANR2501I Schedule WEEKLY_BACKUP deleted from policy domain
EMPLOYEE_RECORDS.
```

Task 2

Delete all schedules that belong to the policy domain DOMAIN1.

Command: `delete schedule domain1 *`

Output:

```
Do you wish to proceed? (Y/N)
```

Type Y and press the Enter key. A message similar to the following is displayed:

```
ANR2501I Schedule WINTER deleted from policy domain DOMAIN1.
ANR2501I Schedule SUMMER deleted from policy domain DOMAIN1.
ANR2501I Schedule SPRING deleted from policy domain DOMAIN1.
```

Related Commands

Table 73. Commands Related to DELETE SCHEDULE

Command	Description
COPY SCHEDULE	Creates a copy of an existing schedule.
DEFINE SCHEDULE	Defines a schedule for a client operation or an administrative command.
QUERY SCHEDULE	Displays information about one or more schedules.
UPDATE SCHEDULE	Changes the attributes of a schedule.

DELETE STGPOOL (Delete a Storage Pool)

Use the DELETE STGPOOL command to delete a storage pool.

In order to use this command, you must first delete all volumes assigned to the specified storage pool.

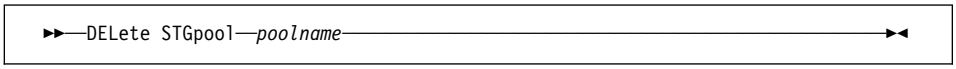
You cannot delete a storage pool that is defined as a subordinate storage pool. For more information on subordinate storage pools, see the NEXTSTGPOOL parameter in the DEFINE STGPOOL command.

Do not delete a storage pool that is specified as a destination for a management class or copy group in the ACTIVE policy set.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

poolname
Specifies the name of the storage pool to be deleted. This parameter is required.

Examples

Task

Delete the storage pool named POOLA.

Command: `delete stgpool poola`

Output:

```
ANR2201I Storage pool POOLA deleted.
```

Related Commands

Table 74. Commands Related to DELETE STGPOOL

Command	Description
BACKUP STGPOOL	Backs up a primary storage pool to a copy storage pool.
DEFINE STGPOOL	Defines a storage pool as a named collection of server storage media.
QUERY STGPOOL	Displays information about one or more storage pools.
SET DRMCOPYSTGPOOL	Specifies that copy storage pools are managed by DRM.
UPDATE STGPOOL	Changes the attributes of a storage pool.

DELETE VOLHISTORY (Delete Sequential Volume History Information Collected by the Server)

Use the DELETE VOLHISTORY command to delete sequential volume history information collected by the server when the information is no longer needed. For example, you may want to delete information about volumes used for obsolete database backups.

When volume history information about volumes *not* in storage pools is deleted, the volumes return to scratch status if they were acquired by ADSM as scratch volumes. For scratch volumes with device type FILE, the files are deleted.

When volume history information about volumes in storage pools is deleted, the volumes themselves are not affected and remain in the ADSM database.

To delete records from volume history information on a regular basis, use the DEFINE SCHEDULE command.

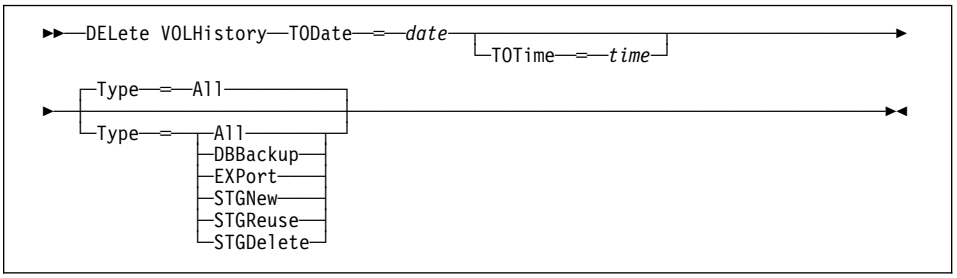
Notes:

1. Existing volume history files are *not* automatically updated with this command.
2. Do not delete sequential volume history information until you no longer need it. For example, do not delete dump volume information or storage volume reuse information unless you have backed up or dumped the database at a later time than that specified for the delete operation.
3. Do not delete the volume history information for database dump, database backup, or export volumes that reside in automated libraries unless you want to return the volumes to scratch status. When the DELETE VOLHISTORY command removes volume information for database dump, database backup, or export volumes, the volumes are automatically returned to scratch status if they reside in automated libraries. These volumes are then available for reuse by the server and the information stored on them may be overwritten when the server reuses the volume for some other purpose, such as storage pool volumes or other database backups.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

TODate=*date*

Specifies the date to use to select sequential volume history information to be deleted. ADSM deletes only those records with a date on or before the date you specify.

This parameter is required. Possible values are:

MM/DD/YYYY

Specifies that you want to delete records created on or before a specific date in MM/DD/YYYY format (for example, 01/31/1995).

TODAY

Specifies that you want to delete records created on or before the current date.

TODAY–*numdays* **or** –*numdays*

Specifies that you want to delete records created on or before the current date minus a specific number of days. The maximum value for the number of days is 9999.

For example, to delete records that are 30 or more days old, you can specify TODATE=TODAY–30 or TODATE=–30.

TOTime=*time*

Specifies the time to use to select records to delete from the volume history file. This parameter is optional.

Of the records that match the date criteria you specify with the TODATE parameter, ADSM deletes only those records with a time that is the same as or earlier than the time you specify with the TOTIME parameter. This parameter is optional. The default value is midnight (00:00:00) on the specified date. Possible values are:

HH:MM:SS

Specifies that you want to delete records created on or before a specific time on the specified date in HH:MM:SS format (for example, 12:30:22).

NOW

Specifies that you want to delete records created on or before the current time on the specified date.

For example, if you issue the DELETE VOLHISTORY command at 9:00 with TOTIME=NOW, ADSM deletes records with a time of 9:00 or earlier on the specified date.

NOW+*numhours:numminutes* **or** +*numhours:numminutes*
Specifies that you want to delete records created on or before the current time plus a specific number of hours (and optionally, minutes) on the specified date.

For example, if you issue the DELETE VOLHISTORY command at 9:00 with TOTIME=NOW+3 or TOTIME=+3, ADSM deletes records with a time of 12:00 or earlier on the specified date.

NOW–*numhours:numminutes* **or** –*numhours:numminutes*
Indicates that you want to delete records created on or before the current time minus a specific number of hours (and optionally, minutes) on the specified date.

For example, if you issue the DELETE VOLHISTORY command at 9:00 with TOTIME=NOW–3:30 or TOTIME=–3:30, ADSM deletes records with a time of 5:30 or earlier on the specified date.

Type=*typevalue*
Specifies the type of records to delete from the volume history file. This parameter is optional. The default value is ALL. Possible values are:

All
Specifies deleting all records that meet the date and time criteria you specify.

Note: If you previously had an ADSM Version 1 server installed, and you used the DUMP DB command to create online database dumps, records related to the volumes used for those dumps can exist in your volume history information. When you specify TYPE=ALL for the DELETE VOLHISTORY command, ADSM deletes any of those records that meet the date and time criteria you specify.

DBBackup
Specifies deleting only records that both contain information about volumes used for backups (full or incremental), and meet the date and time criteria you specify.

EXPort
Specifies deleting only records that both contain information about volumes used for exporting data, and meet the date and time criteria you specify.

STGNew
Specifies deleting only records that both contain information about new sequential access storage volumes and meet the specified date and time criteria.

STGReuse
Specifies deleting only records that both contain information about reused sequential storage pool volumes, and meet the date and time criteria you specify.

STGDelete
Specifies deleting only records that both contain information about deleted sequential storage volumes, and meet the date and time criteria you specify.

Examples

Task

Delete all volume history information created on or before 03/28/1996.

Command: `delete volhistory todate=03/28/1996 type=all`

Output:

```
Do you wish to proceed? (Yes/No)
```

Type Y and press the Enter key. A message similar to the following is displayed.

```
ANR2467I DELETE VOLHISTORY: 1 sequential volume history
entries were successfully deleted.
```

Related Commands

Table 75. Commands Related to DELETE VOLHISTORY

Command	Description
BACKUP VOLHISTORY	Records sequential volume history information in external files.
DEFINE SCHEDULE	Defines a schedule for a client operation or an administrative command.
DELETE VOLUME	Deletes a volume from a storage pool.
QUERY VOLHISTORY	Displays sequential volume history information that has been collected by the server.

DELETE VOLUME (Delete a Storage Pool Volume)

Use the DELETE VOLUME command to delete a storage pool volume and, optionally, the files within the volume. This command can be used to delete a volume assigned to either a primary or copy storage pool. If during the processing of this command for a primary storage pool volume, ADSM deletes the primary copy of a file (not a cached copy), ADSM also deletes any copies of that file residing in copy storage pools.

If you are deleting several volumes, it is recommended that you delete the volumes one at a time. Concurrent volume deletion can adversely affect server performance.

To determine the contents stored on a volume, use the QUERY CONTENT command.

Before you can delete a storage volume, you must do one of the following:

- Use the MOVE DATA command to move all files to another volume.
- Explicitly request to discard all files in the storage volume by specifying DISCARDDATA=YES.

Storage pool volumes may not be totally empty after a move data operation completes if one or more files cannot be relocated to another volume due to input/output errors on the device or if integrity errors were found in the file's structure. In this case, a DELETE operation with DISCARDDATA=YES is required to fully delete the volume. The files with I/O or integrity errors are then lost.

If you specify DISCARDDATA=YES, ADSM creates a server process that deletes files as a series of batch database transactions. If the DELETE VOLUME operation is canceled during processing or if a system failure occurs, a partial deletion can occur. In this case, a subsequent DELETE VOLUME command for the same volume continues deleting the remaining files.

Storage pool volumes cannot be deleted if they are already in use. For example, volumes cannot be deleted if a user is restoring or retrieving a file residing in the storage volume, if ADSM is writing information to the volume, or if reclamation is in process.

This command generates a server process that can be canceled with the CANCEL PROCESS command. To display information on background processes, use the QUERY PROCESS command.

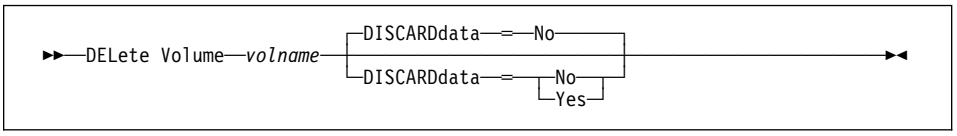
Do not use the DELETE VOLUME command with DISCARDDATA=YES if a restore process (RESTORE STGPOOL or RESTORE VOLUME) is running. The DELETE VOLUME command could cause the restore to be incomplete.

Privilege Class

To issue this command, you must have system privilege, unrestricted storage privilege, or restricted storage privilege for the storage pool to which the volume is defined.

DELETE VOLUME

Syntax



Parameters

volname
Specifies the name of the volume to be deleted. This parameter is required.

DISCARDdata=*discardvalue*
Specifies whether all files stored in the specified volume are deleted from the storage pool. This parameter is optional. No sequential access media mounts are required for this type of deletion. The default value is NO. Possible values are:

No
Specifies that all files stored in the specified volume are not deleted.

Yes
Specifies that all files stored in the specified volume are deleted.

When this option is specified for a primary storage pool volume, the command deletes from the volume both primary copies of files and files that are cached copies (copies left behind by migration processes). When primary copies of files are deleted from the volume, any copies of these files in copy storage pools are also deleted.

Examples

Task

Delete storage pool volume stgvol.1 from the storage pool FILEPOOL.

Command: `delete volume stgvol.1`

Output:

```
ANR2220W This command will delete volume
/home/bill/dsmserv/build/stgvol.1
from its storage pool after verifying that
the volume contains no data.
Do you wish to proceed? (Yes/No)
```

Type Y and press the ENTER key. A message similar to the following is displayed:

```
ANR2208I Volume /home/bill/dsmserv/build/stgvol.1
deleted from storage pool FILEPOOL.
```

DELETE VOLUME

Related Commands

Table 76. Commands Related to DELETE VOLUME

Command	Description
CANCEL PROCESS	Cancels a background server process.
DEFINE VOLUME	Assigns a volume to be used for storage within a specified storage pool.
MOVE DATA	Moves data from a specified storage pool volume to another storage pool volume.
MOVE DRMEDIA	Moves DRM media onsite and offsite.
QUERY CONTENT	Displays information about one or more files currently residing in a storage pool volume.
QUERY DRMEDIA	Displays information about disaster recovery volumes.
QUERY PROCESS	Displays information about one or all background server processes.
QUERY VOLUME	Displays information about one or more storage pool volumes.
UPDATE VOLUME	Updates the attributes of one or more storage pool volumes.

DISABLE (Temporarily Prevent Client Node Access to the Server)

Use the DISABLE command to prevent client nodes from starting any new sessions. Current client node sessions are allowed to complete, but no new client node sessions are allowed to start.

This command does not affect system processes (like migration and reclamation).

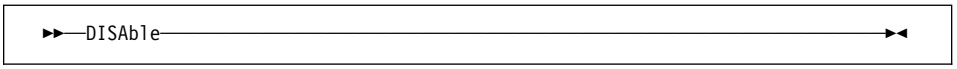
All registered administrators can access the server when it is disabled with the DISABLE command. To allow client nodes to access the server, use the ENABLE command.

Use the QUERY STATUS command to display the current availability of the server. The DISABLE command can be used before canceling all client node sessions with the CANCEL SESSION command so that the clients cannot automatically reconnect.

Privilege Class

To issue this command, you must have system privilege or operator privilege.

Syntax



Parameters

None.

Examples

Task

Temporarily prevent new client node sessions from accessing the server.

Command: `disable`

Output:

```
ANR2097I Server now disabled for backup/archive client
access.
```

DISABLE

Related Commands

Table 77. Commands Related to DISABLE

Command	Description
CANCEL SESSION	Cancels one or all active sessions with the server.
ENABLE	Resumes server activity following the DISABLE command.
QUERY SESSION	Displays information about all active administrator and client sessions with ADSM.
QUERY STATUS	Displays the settings of server parameters, such as those selected by the SET commands.

DISMOUNT VOLUME (Dismount a Volume by Volume Name)

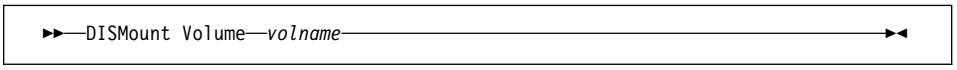
Use the DISMOUNT VOLUME command to dismount a volume by volume name.

You can only use this command to dismount *idle* volumes. Use the QUERY MOUNT command to determine the status of any mounted volumes.

Privilege Class

To issue this command, you must have system privilege or operator privilege.

Syntax



Parameters

volname
Specifies the name of the volume to be dismounted. This parameter is required.

Examples

Task

Dismount the volume BTV005.

Command: `dismount volume btv005`

Output:

```
ANR5280I Command Accepted.
```

Related Commands

Table 78. Command Related to DISMOUNT VOLUME

Command	Description
QUERY MOUNT	Displays information about mounted sequential access media.

ENABLE (Resume User Activity on the Server)

Use the ENABLE command to permit client node activity to begin after issuing the DISABLE command.

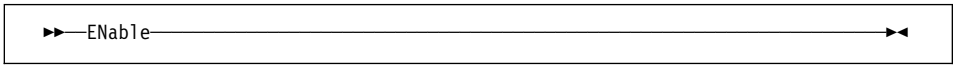
This command does not affect system processes (like migration and reclamation).

Use the QUERY STATUS command to display the current availability of the server.

Privilege Class

To issue this command, you must have system privilege or operator privilege.

Syntax



Parameters

None.

Examples

Task

Resume normal operation, permitting client nodes to access the server.

Command: `enable`

Output:

```
ANR2096I Server now enabled for backup/archive access.
```

Related Commands

Table 79. Commands Related to ENABLE

Command	Description
CANCEL SESSION	Cancels one or all active sessions with the server.
DISABLE	Prevents new clients from accessing ADSM but permits existing sessions to continue.
QUERY SESSION	Displays information about all active administrator and client sessions with ADSM.
QUERY STATUS	Displays the settings of server parameters, such as those selected by the SET commands.

EXPIRE INVENTORY (Manually Start Inventory Expiration Processing)

Use the EXPIRE INVENTORY command to manually start inventory expiration processing. Only one expiration process is allowed at any time; therefore, if expiration processing is currently running, another process cannot be started. Expiration eligibility is determined by policy information assigned to either the backup or archive files. If a file is eligible for expiration, the storage used by this file is deallocated.

Automatic expiration processing is controlled by the EXPINTERVAL option specified in the ADSM server options file. If EXPINTERVAL is set to 0, no automatic expiration will occur, and this command will be necessary to start expiration processing. For additional information about the EXPINTERVAL parameter, see Appendix E, “Tailoring Server Options” on page 753.

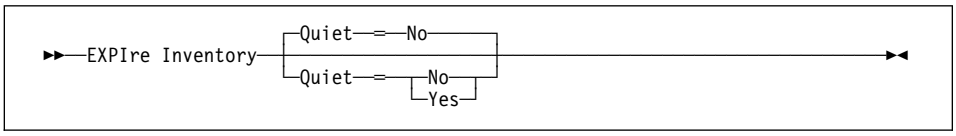
This command creates a background process that can be canceled with the CANCEL PROCESS command. To display information on background processes, use the QUERY PROCESS command.

The inventory expiration process removes client backup and archive file copies from server storage under the terms specified by the management classes to which the files are bound.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

Quiet=*quietvalue*

Specifies whether to suppress detailed messages during ADSM’s expiration processing. Normally ADSM sends detailed messages when you make policy changes that affect client files, such as deleting a management class or copy group. You can use this option to reduce the number of messages about policy changes that are generated during expiration processing.

When you specify QUIET=YES, ADSM will issue messages about policy changes only when files are deleted and either the default management class or retention grace period for the domain has been used to expire the files. This parameter is optional.

You can also specify the EXPQUiet option in the server options file to automatically determine if expiration processing is performed with minimal summary messages.

The values are:

No
Specifies that ADSM sends detailed informational messages. No is the default.

Yes
Specifies that ADSM sends only minimal summary messages and only for files that have expired based on the copy group in the default management class or retention grace period for the domain.

Examples

Task

Issue the EXPIRE INVENTORY command.

Command: `expire inventory`

Output:

```
ANR0811I Inventory client file expiration started as
process 2.
ANR0812I Inventory file expiration process 2 completed:
deleted 25 backup files and 3 archive files.
```

Related Commands

Table 80. Commands Related to EXPIRE INVENTORY

Command	Description
AUDIT LICENSES	Checks for compliance with defined licenses.
CANCEL PROCESS	Cancels a background server process.
QUERY PROCESS	Displays information about one or all background server processes.

EXPORT ADMIN (Copy Administrator Information to Sequential Media)

Use the EXPORT ADMIN command to export administrator and authority definitions for one or more administrators from the ADSM server to sequential media.

The EXPORT ADMIN command exports administrator information such as:

- Administrator name, password, and contact information
- Administrative privilege classes the administrator has been granted

The EXPORT ADMIN command allows administrative information to be copied to another server. In order to copy ADSM data and then restore it to a new server, the device class must be supported on both server platforms.

This command is useful for permitting later retrieval of server information for copying the information a new server.

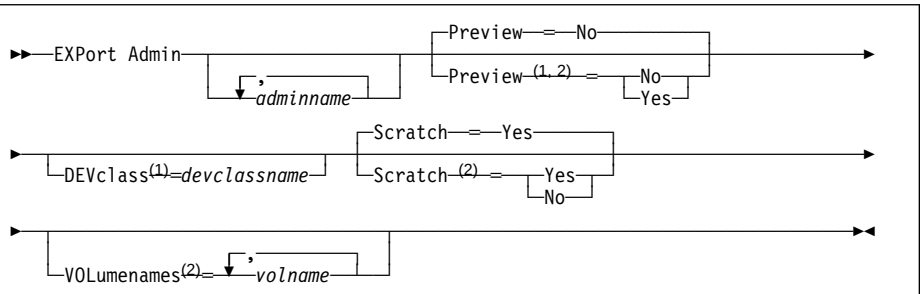
You can use the QUERY ACTLOG command to view the actual status information indicating the size and the success or failure of the export operation. You can also view this information from the server console.

This command generates a background process that can be canceled with the CANCEL PROCESS command. If an EXPORT ADMIN background process is canceled, the sequential media holding the exported data are incomplete and should not be used for importing data. To display information on background processes, use the QUERY PROCESS command.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Notes:

1 If PREVIEW=NO, a device class must be specified.

2 If PREVIEW=NO and SCRATCH=NO, one or more volumes must be specified.

Parameters

adminname

Specifies a list of administrators for which administrator information is to be exported. This parameter is optional. The items in the list are separated by commas, with no intervening spaces. You can use pattern-matching expressions to specify names. All matching administrators are included in the list. If you do not specify a value for this parameter, information related to all administrators is exported.

Preview=*value*

Specifies whether you want to preview the results of the export operation, without actually exporting information. You can use this parameter to preview how many bytes of data are transferred, allowing you to determine how many volumes will be required to hold the data. This parameter is optional. The default value is NO. Possible values are:

No

Specifies that the administrator information is to be exported. If you specify this value, you must specify a value for the DEVCLASS parameter.

Yes

Specifies that you want to preview the results of the export operation, without actually exporting administrator information. Information on the number and types of objects exported, together with the number of bytes transferred are reported to the server console and the activity log. If you specify this value, you do not need to specify device or volume parameters.

DEVclass=*devclassname*

Specifies the device class to which the export data is to be written. This parameter is required unless you specified PREVIEW=YES. You cannot specify the DISK device class.

If the mount limit for the device class specified has already been reached (all drives are busy) when the export runs, ADSM automatically cancels lower priority operations, such as reclamation, to make a mount point available for the export.

Scratch=*scratchvalue*

Specifies whether scratch volumes can be used for export. The default is SCRATCH=YES. Possible values are:

Yes

Specifies that scratch volumes are to be used for export. If you include a list of volumes on the VOLUMENAMES parameter, then scratch volumes are used only if there is not enough space to store the exported files on the volumes specified. If the device type associated with the specified device class is FILE, a file named 00000001.EXP will be chosen for the first scratch volume. If a file already exists by this name in the target directory, you must first rename or erase it if you want to use SCRATCH=YES.

No
Specifies that scratch volumes cannot be used for export. You must include a list of volumes on the VOLUMENAMES parameter to contain all of the export data. To determine how many volumes you may need, you can run the command specifying PREVIEW=YES.

VOLumenames=*volname*
Specifies one or more sequential volumes that are to be used to contain exported files. This parameter is optional. The items in the list are separated by commas, with no intervening spaces. A volume name must be specified if SCRATCH=NO and PREVIEW=NO. If you do not specify a volume and SCRATCH=YES, scratch volumes are used. Any volume name used by ADSM cannot contain any embedded blanks or equal signs.

Use the following naming conventions to specify volume names for each device type:

REMOVABLEFILE
Specify 1 to 8 alphanumeric characters, with no embedded blanks or periods.

4MM, 8MM, 3570, DLT, QIC, or GENERICTAPE
Specify 1 to 6 alphanumeric characters, for example DSMT01.

FILE
Specify any supported file name, directory, or fully qualified directory, for example d:\win32app\ibm\adsm\server\data1.dsm.

Examples

Task

Export the administrator information for all defined administrators to 8mm tape (assuming a device class named SQUARE1).

The number and type of objects exported are reported to the system console and in the activity log.

Command: `export admin devclass=square1 Scratch=Yes`

Output:

```
ANR0609I EXPORT ADMIN started as process 9.
ANS5104I Process number 9 started.
```

Related Commands

Table 81. Commands Related to EXPORT ADMIN

Command	Description
CANCEL PROCESS	Cancels a background server process.
EXPORT NODE	Copies client node information to external media.
EXPORT POLICY	Copies policy information to external media.
EXPORT SERVER	Copies all or part of the server to external media.
IMPORT ADMIN	Restores administrative information from external media.
QUERY ACTLOG	Searches for and displays messages from the server activity log.
QUERY PROCESS	Displays information about one or all background server processes.

EXPORT NODE (Copy Client Node Information to Sequential Media)

Use the EXPORT NODE command to export client node definitions from the ADSM server to sequential media. Each client node definition includes:

- User ID, password, and contact information
- Name of the policy domain to which the client is assigned
- File compression status
- Whether the user has the authority to delete backed up or archived files from data storage
- Whether the client node ID was locked at the time of export

Optionally, the EXPORT NODE command exports node data information such as:

- File space definitions
- Data from files migrated from HSM client nodes
- Archive or backup file copy data
- Access authorization information pertaining to the file spaces exported.

The EXPORT NODE command allows client node information to be copied to another server. In order to back up ADSM data and then restore it to a new server, the sequential device must be supported on both platforms.

ADSM client data can be moved between ADSM servers via export and import processing, if the same removable media type is supported on both platforms.

This command is useful for permitting later retrieval of server information for copying the information to a new server.

If a primary file cannot be exported because it is damaged or because it resides on a volume that is UNAVAILABLE or OFFLINE, ADSM attempts to obtain a copy of the file from a copy storage pool.

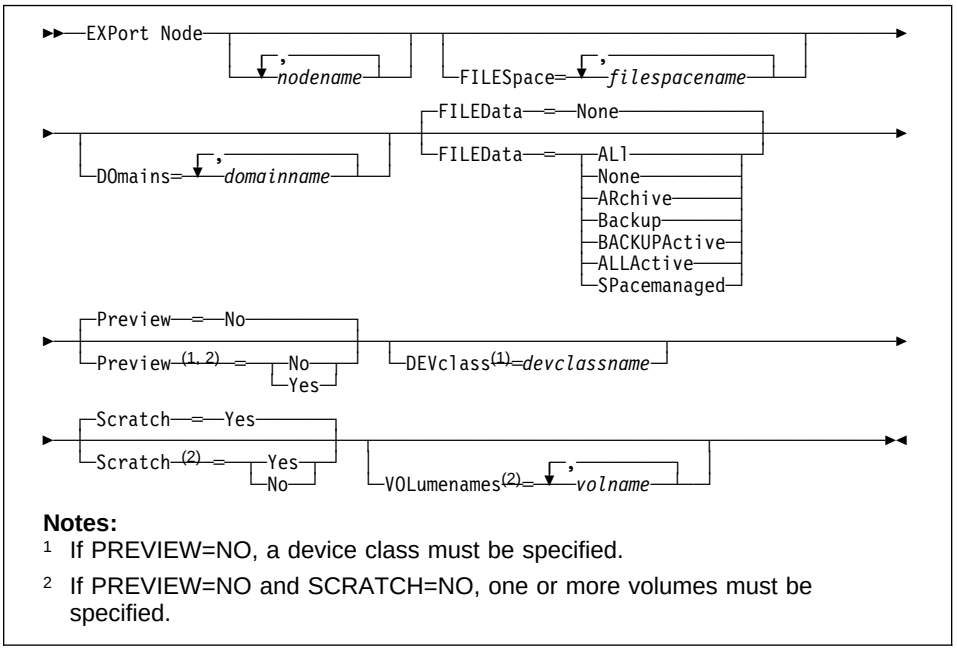
You can use the QUERY ACTLOG command to view the actual status information indicating the size and the success or failure of the export operation.

This command generates a background process that can be canceled with the CANCEL PROCESS command. If an EXPORT NODE background process is canceled, the sequential media holding the exported data are incomplete and should not be used for importing data. To display information on background processes, use the QUERY PROCESS command.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Notes:

1. If PREVIEW=NO, a device class must be specified.
2. If PREVIEW=NO and SCRATCH=NO, one or more volumes must be specified.

Parameters

nodename

Specifies a list of client node names for which information is to be exported. This parameter is optional. The items in the list are separated by commas, with no intervening spaces. You can use pattern-matching expressions to specify names. All matching nodes are included in the list. If you do not specify a value for this parameter, information related to all nodes is exported.

FILESpace=*filespacename*

Specifies a list of file space names for which data is to be exported. This parameter is optional. The items in the list are separated by commas, with no intervening spaces. You can use a pattern-matching expression to specify a name. All matching names are included in the list. If you do not specify a value for this parameter, information related to all files space names is exported.

DOmains=*domainname*

Specifies a list of policy domain names from which nodes should be exported. This parameter is optional. The items in the list are separated by commas, with no intervening spaces. For a node to be exported it must belong to one of the specified domains. You can use a pattern-matching expression to specify a name. All matching domains are included in the list. If you do not specify a value for this parameter, nodes assigned to all domains is exported.

EXPORT NODE

FILEData=*filedatatype*

Specifies the type of files that should be exported for all nodes defined to the server. This parameter is optional. The default value is NONE.

The device class used by the file data is determined by the device class for the storage pool. If it is the same device class specified in this command, then two drives are needed to export node information. The mount limit value for the device class needs to be set to at least 2.

The following descriptions mention *active* and *inactive* backup file copies. An active backup file copy is the most recent backup copy for a file that still exists on the client workstation. All other backup file copies are called inactive copies. Possible values are:

ALl

Specifies that ADSM exports all backup versions of files, all archived files, and all files migrated from a user's local file system.

None

Specifies that no files are to be exported; only node definitions are to be exported.

ARchive

Specifies that only archived files are to be exported.

Backup

Specifies that only backup versions, whether active or inactive, are to be exported.

BACKUPActive

Specifies that only active backup versions are to be exported.

ALLActive

Specifies that ADSM exports all active backup versions of files, all archived files, and all files migrated from a user's local file system.

SPacemanaged

Specifies that only files which have been migrated from a user's local file system are to be exported.

Preview=*value*

Specifies whether you want to preview the results of the export operation, without actually exporting information. You can use this parameter to preview how many bytes of data are transferred, allowing you to determine how many volumes will be required to hold the data. This parameter is optional. The default value is NO. Possible values are:

No

Specifies that the node information is to be exported. If you specify this value, you must specify a value for the DEVCLASS parameter.

Yes
Specifies that you want to preview the results of the export operation, without actually exporting node information. Information on the number and types of objects exported, together with the number of bytes transferred are reported to the server console and the activity log. If you specify this value, you do not need to specify device or volume parameters.

DEVclass=*devclassname*
Specifies the device class to which export data is to be written. This parameter is required unless you specified PREVIEW=YES. You cannot specify the DISK device class.

If the mount limit for the device class specified has already been reached (all drives are busy) when the export runs, ADSM automatically cancels lower priority operations, such as reclamation, to make a mount point available for the export.

Scratch=*scratchvalue*
Specifies whether scratch volumes can be used for export. The default is SCRATCH=YES. Possible values are:

Yes
Specifies that scratch volumes are to be used for export. If you include a list of volumes on the VOLUMENAMES parameter, then scratch volumes are used only if there is not enough space to store the exported files on the volumes specified. If the device type associated with the specified device class is FILE, a file named 00000001.EXP will be chosen for the first scratch volume. If a file already exists by this name in the target directory, you must first rename or erase it if you want to use SCRATCH=YES.

No
Specifies that scratch volumes cannot be used for export. You must include a list of volumes on the VOLUMENAMES parameter to contain all of the export data. To determine how many volumes you may need, you can run the command specifying PREVIEW=YES.

VOLumenames=*volname*
Specifies one or more sequential volumes that are to be used to contain exported files. This parameter is optional. The items in the list are separated by commas, with no intervening spaces. Any volume name used by ADSM cannot contain any embedded blanks or equal signs. A volume name must be specified if SCRATCH=NO and PREVIEW=NO. If you do not specify a volume name, then scratch volumes are used.

Use the following naming conventions to specify volume names for each device type:

REMOVABLEFILE
Specify 1 to 8 alphanumeric characters, with no embedded blanks or periods.

4MM, 8MM, 3570, DLT, QIC, or GENERICTAPE
Specify 1 to 6 alphanumeric characters, for example DSMT01.

EXPORT NODE

FILE
Specify any supported file name, directory, or fully qualified directory, for example d:\win32app\ibm\adsm\server\data1.dsm.

Examples

Task

Export the node definitions and active backup data for all nodes defined in the STANDARD policy domain to 8MM tape (assuming a device class of MENU2).

The number and type of objects exported are reported to the system console and in the activity log.

Command:
```
export node domains=standard devclass=menu2 scratch=Yes
filedata=backupactive
```

Output:

```
ANR0609I EXPORT NODE started as Process 12.
ANS5104I Process number 12 started.
```

Related Commands

Table 82. Commands Related to EXPORT NODE

Command	Description
CANCEL PROCESS	Cancels a background server process.
EXPORT ADMIN	Copies administrative information to external media.
EXPORT POLICY	Copies policy information to external media.
EXPORT SERVER	Copies all or part of the server to external media.
IMPORT NODE	Restores client node information from external media.
QUERY ACTLOG	Searches for and displays messages from the server activity log.
QUERY PROCESS	Displays information about one or all background server processes.

EXPORT POLICY (Copy Policy Information to Sequential Media)

Use the EXPORT POLICY command to export policy information for one or more policy domains from the ADSM server to sequential media.

The EXPORT POLICY command exports policy information and client node data such as:

- Policy domain definitions
- Policy set definitions, including the active policy set
- Management class definitions, including the default management class
- Backup copy group and archive copy group definitions
- Schedule definitions and client node associations

The EXPORT POLICY command allows all policy information to be copied to another server. In order to back up ADSM data and then restore it to a new server, the sequential device must be supported on both server platforms.

ADSM client data can be moved between ADSM servers via export and import processing, if the same removable media type is supported on both platforms.

This command is useful for permitting later retrieval of server information for copying the information a new server.

You can use the QUERY ACTLOG command to view the actual status information indicating the size and the success or failure of the export operation. You can also view this information from the server console.

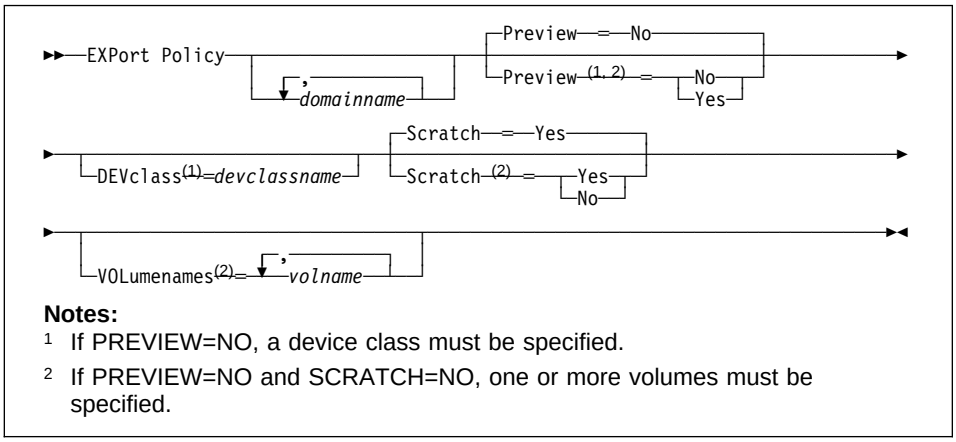
This command generates a background process that can be canceled with the CANCEL PROCESS command. If an EXPORT POLICY background process is canceled, the sequential media holding the exported data are incomplete and should not be used for importing data. To display information on background processes, use the QUERY PROCESS command.

Privilege Class

To issue this command, you must have system privilege.

EXPORT POLICY

Syntax



Notes:

1. If PREVIEW=NO, a device class must be specified.
2. If PREVIEW=NO and SCRATCH=NO, one or more volumes must be specified.

Parameters

domainname

Specifies a list of policy domains for which policy information is to be exported. This parameter is optional. The items in the list are separated by commas, with no intervening spaces. You can use pattern-matching expressions to specify names. All matching policy domains are included in the list. If you do not specify a value for this parameter, information related to all policy domains is exported.

Preview=*value*

Specifies whether you want to preview the results of the export operation, without actually exporting information. You can use this parameter to preview how many bytes of data are transferred, allowing you to determine how many volumes will be required to hold the data. This parameter is optional. The default value is NO. Possible values are:

No

Specifies that the policy information is to be exported. If you specify this value, you must specify a value for the DEVCLASS parameter.

Yes

Specifies that you want to preview the results of the export operation, without actually exporting policy information. Information on the number and types of objects exported, together with the number of bytes transferred are reported to the server console and the activity log. If you specify this value, you do not need to specify device or volume parameters.

DEVclass=*devclassname*

Specifies the device class to which export data is to be written. This parameter is required unless you specified PREVIEW=YES. You cannot specify the DISK device class. If the mount limit for the device class specified has already been reached (all drives are busy) when the export runs, ADSM automatically cancels lower priority operations, such as reclamation, to make a mount point available for the export.

Scratch=*scratchvalue*

Specifies whether scratch volumes can be used for export. The default is SCRATCH=YES. Possible values are:

Yes

Specifies that scratch volumes are to be used for export. If you include a list of volumes on the VOLUMENAMES parameter, then scratch volumes are used only if there is not enough space to store the exported files on the volumes specified. If the device type associated with the specified device class is FILE, a file named 00000001.EXP will be chosen for the first scratch volume. If a file already exists by this name in the target directory, you must first rename or erase it if you want to use SCRATCH=YES.

No

Specifies that scratch volumes cannot be used for export. You must include a list of volumes on the VOLUMENAMES parameter to contain all of the export data. To determine how many volumes you may need, you can run the command specifying PREVIEW=YES.

VOLumenames=*volname*

Specifies one or more tape volumes that are to be used to contain exported files. This parameter is optional. The items in the list are separated by commas, with no intervening spaces. Any volume name used by ADSM cannot contain any embedded blanks or equal signs. A volume name must be specified if SCRATCH=NO and PREVIEW=NO. If you do not specify a volume name, then scratch volumes are used.

Use the following naming conventions to specify volume names for each device type:

REMOVABLEFILE

Specify 1 to 8 alphanumeric characters, with no embedded blanks or periods.

4MM, 8MM, 3570, DLT, QIC, or GENERICTAPE

Specify 1 to 6 alphanumeric characters, for example DSMT01.

FILE

Specify any supported file name, directory, or fully qualified directory, for example d:\win32app\ibm\adsm\server\data1.dsm.

EXPORT POLICY

Examples

Task

Export the policy information related to all domains whose names begin with a D to a device class defined for 8MM tape (assuming a device class of CLASS4) and allowing for scratch volumes to be mounted.

The number and type of objects exported are reported to the system console and in the activity log.

Command: `export policy d* devclass=class4`

Output:

```
ANR0609I EXPORT POLICY started as process 22.
ANS5104I Process number 22 started.
```

Related Commands

Table 83. Commands Related to EXPORT POLICY

Command	Description
CANCEL PROCESS	Cancels a background server process.
EXPORT ADMIN	Copies administrative information to external media.
EXPORT NODE	Copies client node information to external media.
EXPORT SERVER	Copies all or part of the server to external media.
IMPORT POLICY	Restores policy information from external media.
QUERY ACTLOG	Searches for and displays messages from the server activity log.
QUERY PROCESS	Displays information about one or all background server processes.

EXPORT SERVER (Copy Server Information to Sequential Media)

Use the EXPORT SERVER command to export all or part of the server control information and client file data (if specified) from the ADSM server to sequential media. You can also view this information from the server console.

The EXPORT SERVER command exports server control information such as:

- Policy domain definitions
- Policy set definitions
- Management class and copy group definitions
- Schedule definitions and client node associations
- Administrator definitions
- Client node definitions

Optionally, the EXPORT SERVER command exports server data information such as:

- File space definitions
- Data from files migrated from client nodes
- Archive or backup file copy data
- Access authorization information pertaining to the file spaces exported.

The EXPORT SERVER command allows all global server control information (such as policy data and administrative information) to be copied to another server. In order to back up ADSM data and then restore it to a new server, the sequential device must be supported on both platforms.

ADSM client data can be moved between ADSM servers via export and import processing, if the same removable media type is supported on both platforms.

If a primary file cannot be exported because it is damaged or because it resides on a volume that is UNAVAILABLE or OFFLINE, ADSM attempts to obtain a copy of the file from a copy storage pool.

This command is useful for permitting later retrieval of server information for copying the information to a new server.

You can use the QUERY ACTLOG command to view the actual status information indicating the size and the success or failure of the export operation.

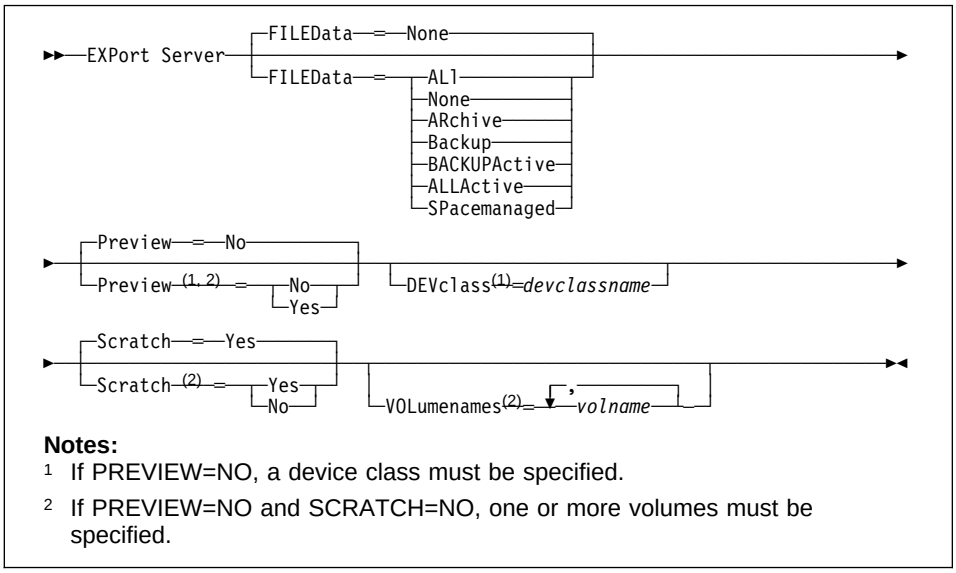
This command generates a background process that can be canceled with the CANCEL PROCESS command. If an EXPORT SERVER background process is canceled, the sequential media holding the exported data are incomplete and should not be used for importing data. To display information on background processes, use the QUERY PROCESS command.

Privilege Class

To issue this command, you must have system privilege.

EXPORT SERVER

Syntax



Notes:

1. If PREVIEW=NO, a device class must be specified.
2. If PREVIEW=NO and SCRATCH=NO, one or more volumes must be specified.

Parameters

FILEData=*filedatatype*

Specifies the type of files that should be exported for all nodes defined to the server. This parameter is optional. The default value is NONE.

The device class used by the file data is determined by the device class for the storage pool. If it is the same device class specified in this command, then two drives are needed to export server information. The mount limit value for the device class needs to be set to at least 2.

The following descriptions mention *active* and *inactive* backup file copies. An active backup file copy is the most recent backup copy for a file that still exists on the client workstation. All other backup file copies are called inactive copies. Possible values are:

ALl

Specifies that ADSM exports all backup versions of files, all archived files, and all files migrated from a user's local file system.

None

Specifies that no files are to be exported; only server definitions are to be exported.

ARchive

Specifies that only archived files are to be exported.

Backup

Specifies that only backup versions, whether active or inactive, are to be exported.

BACKUPActive
Specifies that only active backup versions are to be exported.

ALLActive
Specifies that ADSM exports all active backup versions of files, all archived files, and all files migrated from a user's local file system.

SPacemanaged
Specifies that only files which have been migrated from a user's local file system are to be exported.

Preview=*value*
Specifies whether you want to preview the results of the export operation, without actually exporting the server information. This command is used to determine how many bytes of data is transferred, allowing you to determine how many volumes will be required to hold the data. This parameter is optional. The default value is NO. Possible values are:

No
Specifies that the server information is to be exported. If you specify this value, you must specify a value for the DEVCLASS parameter.

Yes
Specifies that you want to preview the results of the export operation, without actually exporting server information. Information on the number and types of objects exported, together with the number of bytes transferred are reported to the server console and the activity log. If you specify this value, you do not need to specify device or volume parameters.

DEVclass=*devclassname*
Specifies the device class to which export data is to be written. This parameter is required unless you specified PREVIEW=YES. You cannot specify the DISK device class.

If the mount limit for the device class specified has already been reached (all drives are busy) when the export runs, ADSM automatically cancels lower priority operations, such as reclamation, to make a mount point available for the export.

Scratch=*scratchvalue*
Specifies whether scratch volumes can be used for export. The default is SCRATCH=YES. Possible values are:

Yes
Specifies that scratch volumes are to be used for export. If you include a list of volumes on the VOLUMENAMES parameter, then scratch volumes are used only if there is not enough space to store the exported files on the volumes specified. If the device type associated with the specified device class is FILE, a file named 00000001.EXP will be chosen for the first scratch volume. If a file already exists by this name in the target directory, you must first rename or erase it if you want to use SCRATCH=YES.

No
Specifies that scratch volumes cannot be used for export. You must include a list of volumes on the VOLUMENAMES parameter to contain all of the export data. To determine how many volumes you may need, you can run the command specifying PREVIEW=YES.

VOLumenames=*volname*
Specifies one or more tape volumes that are to be used to contain exported files. This parameter is optional. The items in the list are separated by commas, with no intervening spaces. Any volume name used by ADSM cannot contain any embedded blanks or equal signs. A volume name must be specified if SCRATCH=NO and PREVIEW=NO. If you do not specify a volume name, then scratch volumes are used.

Use the following naming conventions to specify volume names for each device type:

REMOVABLEFILE
Specify 1 to 8 alphanumeric characters, with no embedded blanks or periods.

4MM, 8MM, 3570, DLT, QIC, or GENERICTAPE
Specify 1 to 6 alphanumeric characters, for example DSMT01.

FILE
Specify any supported file name, directory, or fully qualified directory, for example d:\win32app\ibm\adsm\server\data1.dsm.

Examples

Task

Before exporting the server, determine how many objects will be exported, and the total size in bytes required to export the entire server and all active backup and archived files.

The number and type of objects exported are reported to the server console and in the activity log.

Command: `export server filedata=allactive preview=yes`

Output:

```
ANR0609I EXPORT SERVER started as process 2.
ANS5104I Process number 2 started.
```

Related Commands

Table 84. Commands Related to EXPORT SERVER

Command	Description
CANCEL PROCESS	Cancels a background server process.
EXPORT ADMIN	Copies administrative information to external media.
EXPORT NODE	Copies client node information to external media.
EXPORT POLICY	Copies policy information to external media.
IMPORT SERVER	Restores all or part of the server from external media.
QUERY ACTLOG	Searches for and displays messages from the server activity log.
QUERY PROCESS	Displays information about one or all background server processes.

EXTEND DB (Increase the Assigned Capacity of the Database)

Use the EXTEND DB command to increase the amount of space that can be used by the database within all the database volumes previously allocated to ADSM.

Attention: The size of an allocated database, recovery log, or storage pool volume cannot be changed once it has been defined to the ADSM server. ADSM uses the initial size allocation of the volume at the time it is defined to the server to calculate data placement for later retrieval.

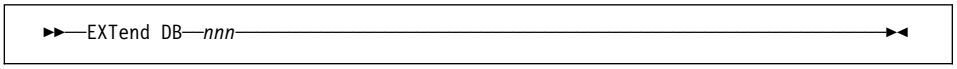
You can use this command after you define a database volume, via the DEFINE DBVOLUME command, to increase the assigned capacity of the database. To increase the capacity of the database, you must extend the database in 4MB increments. If you do not specify the extension in 4MB increments, ADSM rounds the number to the next 4MB partition. For example, if you extend the database by 1MB, ADSM extends the capacity of the database by 4MB.

The EXTEND DB command can be initiated while users are accessing the server. Use the QUERY DB command to determine how much you can increase the assigned capacity of the database.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Parameters

nnn

Specifies the number of megabytes to be added to the assigned capacity of the database. This parameter is required. The value should be in increments of 4MB.

Examples

Task

Extend the assigned capacity of the database by 52MB.

Command: `extend db 52`

Output:

```
ANR2248I Database assigned capacity has been extended.
```

Related Commands

Table 85. Commands Related to EXTEND DB

Command	Description
CANCEL PROCESS	Cancels a background server process.
DEFINE DBCOPY	Creates a volume copy of a database volume.
DEFINE DBVOLUME	Assigns a volume to be used for database storage.
QUERY DB	Displays allocation information about the database.
REDUCE DB	Attempts to free up a database volume by reducing usable storage within the volumes defined.

EXTEND LOG (Increase the Assigned Capacity of the Recovery Log)

Use the EXTEND LOG command to increase the amount of space that can be used by the recovery log within all the recovery log volumes previously allocated to ADSM.

Attention: The size of an allocated database, recovery log, or storage pool volume cannot be changed once it has been defined to the ADSM server. ADSM uses the initial size allocation of the volume at the time it is defined to the server to calculate data placement for later retrieval.

You can use this command after you define a recovery log volume, via the DEFINE LOGVOLUME command, to increase the assigned capacity of the recovery log. To increase the capacity of the recovery log, you must extend the recovery log in 4MB increments. If you do not specify the extension in 4MB increments, ADSM rounds the number to the next 4MB partition. For example, if you extend the recovery log by 1MB, ADSM extends the recovery log by 4MB.

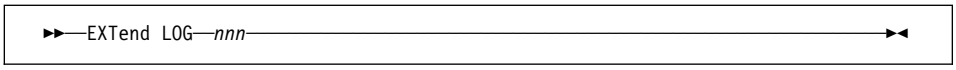
The EXTEND LOG command can be initiated while users are accessing the server. Use the QUERY LOG command to determine how much you can increase the assigned capacity of the recovery log.

This command can generate a background process that can be canceled with the CANCEL PROCESS command. If an EXTEND LOG background process is canceled, the log may be partially extended. To display information on background processes, use the QUERY PROCESS command.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Parameters

nnn

Specifies the number of megabytes to be added to the assigned capacity of the recovery log. This parameter is required. The value should be in increments of 4MB.

Examples

Task

Extend the assigned capacity of the recovery log by 4MB.

Command: `extend log 4`

Output:

```
ANR2269I Recovery log extension process initiated
(process ID 5).
ANR0307I Recovery log extend in progress; 4 megabytes
of 4 formatted.
ANR2268I Recovery log assigned capacity has been extended.
```

Related Commands

Table 86. Commands Related to EXTEND LOG

Command	Description
CANCEL PROCESS	Cancels a background server process.
DEFINE LOGVOLUME	Defines a disk volume to the recovery log.
DEFINE LOGCOPY	Creates a volume copy of a recovery log volume.
QUERY LOG	Displays allocation information about the recovery log.
QUERY PROCESS	Displays information about one or all background server processes.
REDUCE LOG	Attempts to free up a log volume by reducing usable storage within the volumes defined.

GRANT AUTHORITY (Add Administrator Authority)

Use the GRANT AUTHORITY command to grant an administrator one or more administrative privilege classes.

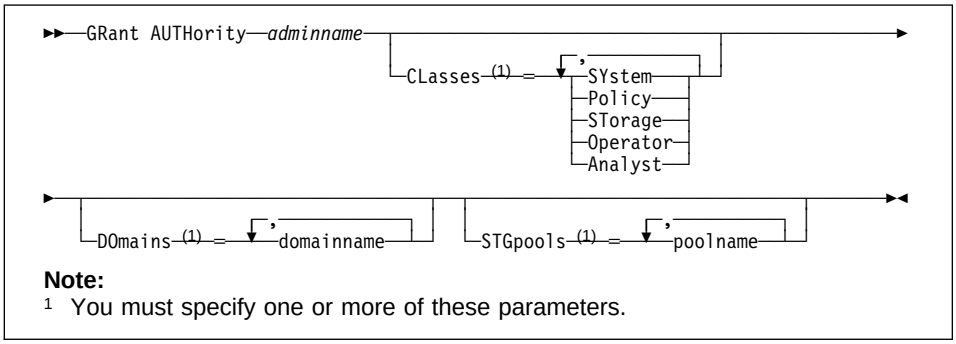
You can use this command to grant administrative privilege classes to an administrator that has not been granted any administrative privilege, or to add additional privilege classes to an administrator.

You cannot grant restricted privilege to an unrestricted policy or storage administrator. To do this, you must use the REVOKE AUTHORITY command to remove the administrator's unrestricted privilege, then use this command to grant restricted privilege to the administrator.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Note:
1 You must specify one or more of these parameters.

Parameters

adminname
Specifies the name of the administrator being granted an administrative privilege class. This parameter is required.

CLasses=*classes*
Specifies one or more privilege classes to be granted to an administrator. This parameter is optional when either the DOMAINS or STGPOOLS parameters are specified; otherwise, this parameter is required. You can specify more than one privilege class by delimiting each with a comma. Possible classes are:

SYstem
Specifies that you want to grant system privilege to an administrator. Do not specify additional privilege classes or the DOMAINS or STGPOOLS parameters when granting system privilege to an administrator. A system administrator has the highest level of authority in ADSM. A system administrator can issue any administrative command and has authority to

manage all policy domains and all storage pools. Only a system administrator can grant authority to other administrators.

Policy
Specifies that you want to grant policy privilege to an administrator. If the DOMAINS parameter is not specified, unrestricted policy privilege is granted. An unrestricted policy administrator can issue commands that affect all existing policy domains as well as any policy domains that are defined in the future. An unrestricted policy administrator cannot define, delete, or copy policy domains. A restricted policy administrator can be upgraded to an unrestricted policy administrator by using the GRANT AUTHORITY command with CLASSES=POLICY and no DOMAINS parameter.

STorage
Specifies that you want to grant storage privilege to an administrator. If the STGPOOLS parameter is not specified, unrestricted storage privilege is granted. An unrestricted storage administrator can issue all commands that allocate and control storage resources for the server. An unrestricted storage administrator can issue commands that affect all existing storage pools as well as any storage pools that are defined in the future. An unrestricted storage administrator cannot define or delete storage pools. A restricted storage administrator can be upgraded to an unrestricted storage administrator by using the GRANT AUTHORITY command with CLASSES=STORAGE and no STGPOOLS parameter.

Operator
Specifies that you want to grant operator privilege to an administrator. An administrator with operator privilege can issue commands that control the immediate operation of the server and the availability of storage media.

Analyst
Specifies that you want to grant analyst privilege to an administrator. An administrator with analyst privilege can issue commands that reset the counters which track server statistics.

DOmains=*domainname*
Specifies that you want to grant restricted policy privilege to an administrator. If the DOMAINS parameter is specified, then CLASSES=POLICY is optional.

Restricted policy privilege permits an administrator to issue a subset of the policy commands for the domains to which the administrator is authorized. You can use this parameter to grant additional policy domain authority to a restricted policy administrator. This parameter is optional. You can specify more than one policy domain by delimiting each policy domain name with a comma.

You can use a pattern-matching expression to specify a name. Authority for all matching policy domains is granted.

STGpools=*poolname*
Specifies that you want to grant restricted storage privilege to an administrator. If the STGPOOLS parameter is specified, then CLASSES=STORAGE is optional.

GRANT AUTHORITY

Restricted storage privilege permits you to issue a subset of the storage commands for the storage pools to which the administrator is authorized. You can use this parameter to grant additional storage pool authority to a restricted storage administrator. This parameter is optional. You can specify more than one storage pool by delimiting each storage pool name with a comma.

You can use a pattern-matching expression to specify a name. Authority for all matching storage pools is granted.

Examples

Task 1

Grant system privilege to administrator LARRY.

Command: `grant authority larry classes=system`

Output:

```
ANR2076I System privilege granted to administrator LARRY.
```

Task 2

Specify additional policy domains that can be managed by the restricted policy administrator CLAUDIA.

Command: `grant authority claudia domains=employee_records,prog1`

Output:

```
ANR2078I Restricted policy privilege granted to
administrator CLAUDIA - policy domain EMPLOYEE_RECORDS.
ANR2078I Restricted policy privilege granted to
administrator CLAUDIA - policy domain PROG1.
```

Task 3

Provide administrator TOM with unrestricted storage privilege and restricted policy privilege for the domains whose names start with EMP.

Command: `grant authority tom classes=storage domains=emp*`

Output:

```
ANR2078I Restricted policy privilege granted to
administrator TOM - policy domain EMPLOYEE_RECORDS.
ANR2079I Unrestricted storage privilege granted
to administrator TOM.
```

Related Commands

Table 87. Commands Related to GRANT AUTHORITY

Command	Description
QUERY ADMIN	Displays information about one or more ADSM administrators.
REVOKE AUTHORITY	Revokes one or more privilege classes or restricts access to policy domains and storage pools.

HALT (Shut Down the Server)

Use the HALT command to shut down the server. The HALT command forces an abrupt shutdown and results in the canceling of all administrative and client node sessions, even if they are not completed.

Any in-progress transactions interrupted by this command are rolled back when you restart the server. If the QUIESCE option is specified, transaction activity is halted when current transactions have completed, and then the server is shutdown.

The QUIESCE option is recommended *only* if you plan to perform a stand-alone database dump by using the DSMSERV DUMPDB command immediately following server shutdown. For additional information about the DSMSERV DUMPDB command and related commands, see Appendix A, “Miscellaneous Utilities” on page 705.

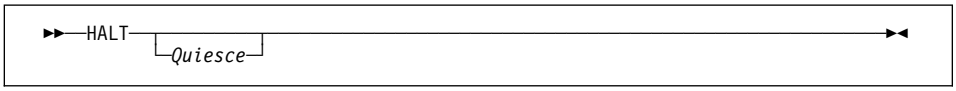
It is recommended to use the HALT command only after all administrative and client node sessions are completed or canceled. In order to shut down the server without severely impacting administrative and client node sessions, perform the following steps:

1. Use the DISABLE command to prevent new client node sessions from starting.
2. Use the QUERY SESSIONS command to identify any existing administrative and client node sessions.
3. Notify any existing administrative and client node sessions that you plan to shut down the server (you must do this outside of ADSM).
4. Use the CANCEL SESSIONS command to cancel any existing administrative or client node sessions.
5. Issue the HALT command to shut down the server and stop any administrative and client node sessions.

Privilege Class

To issue this command, you must have system privilege or operator privilege.

Syntax



Parameters

Quiesce

Specifies that all database transaction activity should be halted when current transactions complete. This option should only be used when you are planning to perform a stand-alone database dump using the DSMSERV DUMPDB command to dump database contents to sequential media, such as tape.

The default results with any in-progress transactions interrupted by this command are rolled back when you restart the server.

When using the QUIESCE option on the HALT command, the server attempts to stop all database update transactions against the database and record database pages to stable media so that a consistent image of the database can be dumped with the DSMSERV DUMPDB command. This attempt to stop update activity may be retried a number of times, and may even fail if there are many transactions in progress on the server. If this failure occurs, the HALT command stops processing and the server continues to run. If this occurs, you can cancel all client sessions, cancel all background server processes, and re-issue the HALT QUIESCE command. The HALT command without the QUIESCE option will always cause the server to halt successfully.

The QUIESCE option is recommended *only* if you plan to do a database dump by using the DSMSERV DUMPDB command immediately after halting. Because ADSM supports online database backup (BACKUP DB command), the DSMSERV DUMPDB command should be rarely, if ever, needed. For additional information about the DSMSERV DUMPDB command and related commands, see Appendix A, "Miscellaneous Utilities" on page 705.

You should not use the HALT command until after administrative and client node sessions and server processes have ended. If there is a great deal of database transaction activity, the QUIESCE option may not properly halt the server. To halt the server without severely affecting administrative and client node sessions, do the following:

1. Use the DISABLE command to prevent new client node sessions from starting.
2. Use the QUERY SESSIONS command to identify any existing administrative and client node sessions.
3. Notify any existing administrative and client node sessions that you plan to shut down the server (you must do this outside of ADSM).
4. Use the CANCEL SESSION ALL command to cancel any existing sessions.
5. Display and stop all server processes, by issuing the QUERY PROCESS command followed by the CANCEL PROCESS command.
6. After all client sessions have ended and all server processes have finished, issue the HALT QUIESCE command.

Examples

Task 1

From the server console, shut down the server abruptly. All user activity stops immediately and no new activity is allowed to start.

HALT

Command: `halt`

Output:

```
ANR0991I ADSM server shut down complete.
```

Task 2

From an administrative client, shut down the server abruptly. All user activity stops immediately and no new activity is allowed to start.

Command: `halt`

Output:

```
ANR2234W This command will halt the server; if the command
is issued from a remote client, it may not be possible to
restart the server from the remote location.
Do you wish to proceed? (Y/N)
```

Type Y and press the ENTER key. A message similar to the following is displayed:

```
ANS5103I Highest return code was 50.
```

Task 3

Before performing the stand-alone database dump by using the DSMSERV DUMPDB command, shut down the ADSM server with the QUIESCE option.

Command: `halt quiesce`

Output:

```
ANR2106I HALT: Quiescing database update activity.
ANR2107I HALT: Database update activity is now quiesced.
ANR0991I ADSM server shutdown complete.
ANR5963I ADSM server termination complete.
```

The stand-alone dump can now be performed.

Related Commands

Table 88. Commands Related to HALT

Command	Description
CANCEL PROCESS	Cancels a background server process.
CANCEL SESSION	Cancels one or all active sessions with the server.
DISABLE	Prevents new clients from accessing ADSM but permits existing sessions to continue.
ENABLE	Resumes server activity following the DISABLE command.
QUERY PROCESS	Displays information about one or all background server processes.
QUERY SESSION	Displays information about all active administrator and client sessions with ADSM.

HELP (Get Help on Commands and Error Messages)

Use the HELP command to display information about administrative commands and error messages from the server and administrative command line client. For the best usability, issue the HELP command from an administrative command line client.

You can access the help facility by entering one of the following command strings:

- Help
- Help *help_menu_number*
- Help *commandname*
- Help *commandname subcommandname*
- Help *error_msg_number*

The HELP command (with no operands) displays a menu with a list of selections that provide information on using the command line interface and a list of the ADSM administrative commands.

The Help *help_menu_number* command displays the help text for a specific menu selection from the help menu.

The Help *commandname* command displays the help text specific to that command. If this command has subcommand names, you will also receive a list of the subcommand names. You can then select specific help related to the subcommand name.

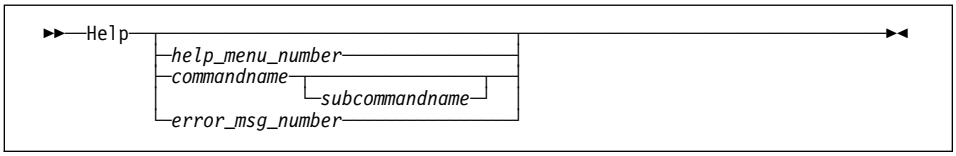
The Help *commandname subcommandname* command displays the help text specific to the command and its associated subcommands.

The Help *error_msg_number* command displays the help text specific to the error message. You can get help information on server messages (prefixed by ANR) and client messages (prefixed by ANS).

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

help_menu_number
Specifies the number of your selection from the help menu. This parameter is optional.

commandname
Specifies the name of the administrative command you want to display. This parameter is optional.

subcommandname
Specifies the subcommand name associated with the name of administrative command that you want to display. This parameter is optional.

error_msg_number
Specifies the number of the error message for which you want to display information. This parameter is optional. You can get help information on server messages (prefixed by ANR) and client messages (prefixed by ANS). You do not have to include the prefix and severity code when specifying an error message number.

Examples

Task 1

Display the help menu for the command-line interface.

Command: `help`

Output:

```
The following help sections are available:
 1 - Using Syntax Diagrams
 2 - Entering Administrative Commands
 3 - Using the Server Console Session
 4 - Using the Administrative Client
 5 - Using the Administrative Client Options
 6 - Using Continuation Characters
 7 - Using Console Mode
 8 - Using Mount Mode
 9 - Using Batch Mode
10 - Using Interactive Mode
11 - Redirecting Command Output to a File
12 - Using Macros to Issue Commands
13 - Using Commands Based on Privilege Classes
14 - Commands Requiring System Privilege
15 - Commands Requiring Policy Privilege
16 - Commands Requiring Storage Privilege
17 - Commands Requiring Operator Privilege
18 - Commands Requiring Analyst Privilege
19 - Commands Any Administrator Can Issue
```

Task 2

Display help information using the help menu in Example 1.

Command: `help 19`

HELP

Output:

Information on commands that can be issued by any administrator is displayed.

Task 3

Display help information on the REMOVE commands.

Command: `help remove`

Output:

```
REMOVE
______

 Use the REMOVE commands to remove an object from ADSM.

The following is a list of REMOVE commands for ADSM:

     "REMOVE ADMIN (Delete an Administrator)"

     "REMOVE NODE (Delete a Client Node)"
```

Task 4

Display help information on the error message ANR7800I.

Command: `Help 7800`

Output:

```
ANR7800I  DSMSERV GENERATED AT time ON date.
EXPLANATION:  The ADSM server module was generated at the indicated
date and time.
SYSTEM ACTION:  Server operation continues.
USER RESPONSE:  None.
```

Related Commands

None.

IMPORT ADMIN (Import Administrator Information)

Use the IMPORT ADMIN command to import administrator and authority definitions for one or more administrators from export media to the ADSM server.

The IMPORT ADMIN command imports administrator information such as:

- Administrator name, password, and contact information
- Administrator privilege classes the administrator has been granted

The IMPORT ADMIN command allows administrator information to be copied to another server. In order to copy ADSM data and then restore it to a new server, the sequential device must be supported on both platforms.

ADSM client data can be moved between ADSM servers via export and import processing, if the same removable media type is supported on both platforms.

This command is useful for permitting retrieval of the server information so that the information can be copied to a new server.

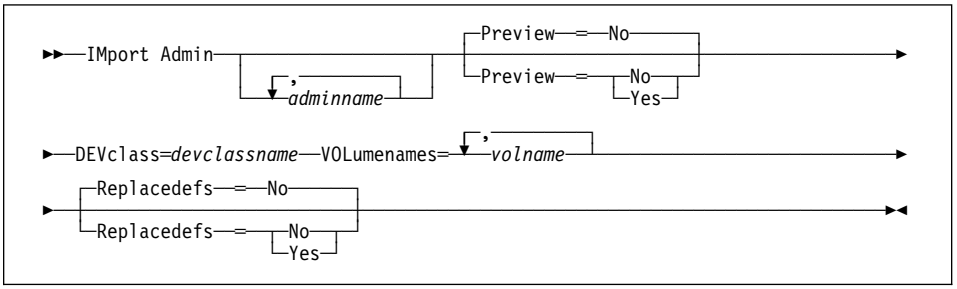
You can use the QUERY ACTLOG command to view the actual status information indicating the size and the success or failure of the import operation. You can also view this information from the server console.

This command generates a background process that can be canceled with the CANCEL PROCESS command. If an IMPORT ADMIN background process is canceled, some of the data is already imported. To display information on background processes, use the QUERY PROCESS command.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

adminname

Specifies the name of an administrator for which you want to import administrator information. This parameter is optional. You can specify a list of administrators for which administrator information is to be imported. The items in the list are

separated by commas, with no intervening spaces. You can use pattern-matching expressions to specify names. All matching administrators are included in the list. If you do not specify a value for this parameter, information related to all administrators found on the import media is imported.

Preview=*value*
Specifies whether you want to preview the results of the import operation, without actually importing administrator information. For the import commands, the PREVIEW=YES option will require that export volumes be mounted to generate the preview statistics. This parameter is optional. The default value is NO. Possible values are:

No
Specifies that the information is to be imported.

Yes
Specifies that you want to preview the results of the import operation, without actually importing the administrator information. Information on the number and types of objects imported, together with the number of bytes transferred are reported to the server console and the activity log.

DEVclass=*devclassname*
Specifies the device class from which import data is to be read. This parameter is required. You cannot specify the DISK device class.

If the mount limit for the device class specified has already been reached (all drives are busy) when the import runs, ADSM automatically cancels lower priority operations, such as reclamation, to make a mount point available for the import.

VOLumenames=*volname*
Specifies the name of a volume from which you want to import information. This parameter is required. You can specify a list of volumes from which server information is to be imported. The list of volumes needs to be in the same sequential order as they were exported in. Any volume name used by ADSM cannot contain any embedded blanks or equal signs. The items in the list are separated by commas, with no intervening spaces.

Use the following naming conventions to specify volume names for each device type:

REMOVABLEFILE
Specify 1 to 8 alphanumeric characters, with no embedded blanks or periods.

4MM, 8MM, 3570, DLT, QIC, or GENERICTAPE
Specify 1 to 6 alphanumeric characters, for example DSMT01.

FILE
Specify any supported file name, directory, or fully qualified directory, for example d:\win32app\ibm\adsm\server\data1.dsm.

Replacedefs=*value*

Specifies whether to replace administrator definitions that already exist on the target server. The default value is NO. Possible values are:

No

Specifies that definitions are not to be replaced by imported objects.

Yes

Specifies that definitions are to be replaced by the imported objects.

Examples

Task

From a server, import the administrator information for all defined administrators from 8mm tape (assuming a device class of MENU1).

The number and type of objects imported are reported to the system console and in the activity log.

Command: `import admin devclass=menu1`

Output:

```
ANR0609I IMPORT ADMIN started as process 19.
ANS5104I Process number 19 started.
```

Related Commands

Table 89. Commands Related to IMPORT ADMIN

Command	Description
CANCEL PROCESS	Cancels a background server process.
EXPORT ADMIN	Copies administrative information to external media.
IMPORT NODE	Restores client node information from external media.
IMPORT POLICY	Restores policy information from external media.
IMPORT SERVER	Restores all or part of the server from external media.
QUERY ACTLOG	Searches for and displays messages from the server activity log.
QUERY PROCESS	Displays information about one or all background server processes.

IMPORT NODE (Import Client Node Information)

Use the IMPORT NODE command to import client node definitions from the ADSM server to sequential media. Client node definitions include information such as:

- User ID, password, and contact information
- Name of the policy domain to which the client belongs
- File compression status
- Whether the user has the authority to delete backed up or archive files from data storage
- Whether the client node ID was locked at the time of export

Optionally, the IMPORT NODE command imports node data information such as:

- File space definitions
- Data from files migrated from HSM client nodes
- Archive or backup file copy data
- Access authorization information pertaining to the file spaces imported.

The IMPORT NODE command allows node information to be copied to another server. In order to copy ADSM data and then restore it to a new server, the sequential device must be supported on both platforms.

ADSM client data can be moved between ADSM servers via export and import processing, if the same removable media type is supported on both platforms.

This command is useful for permitting retrieval of server information for copying the information to a new server.

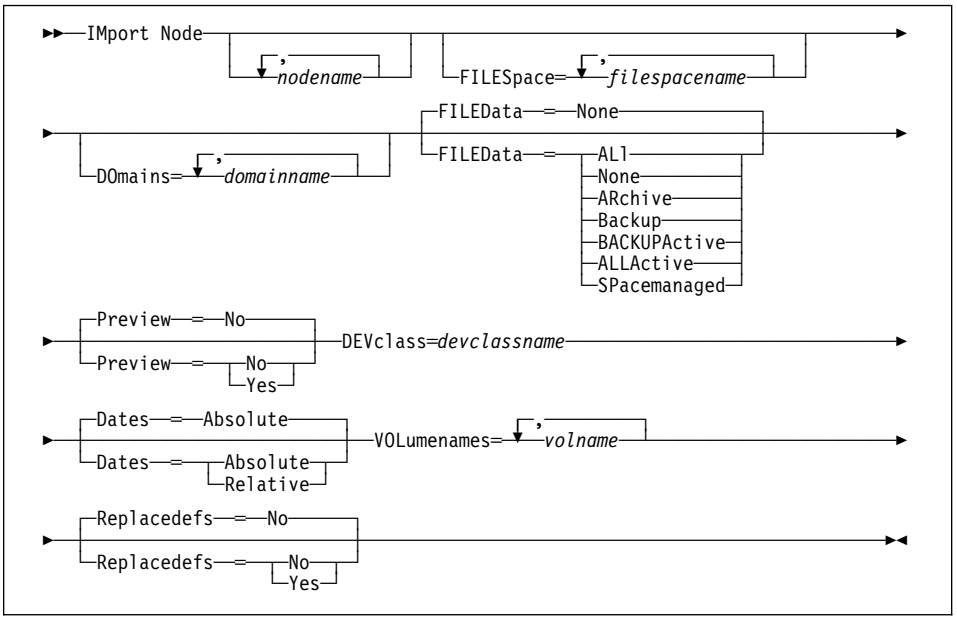
You can use the QUERY ACTLOG command to view the actual status information indicating the size and the success or failure of the import operation. You can also view this information from the server console.

This command generates a background process that can be canceled with the CANCEL PROCESS command. If an IMPORT NODE background process is canceled, some of the data is already imported. To display information on background processes, use the QUERY PROCESS command.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

nodename

Specifies the name of a client node for which you want to import client node information. This parameter is optional. You can specify a list of node names for which node information is to be imported. The items in the list are separated by commas, with no intervening spaces. You can use pattern-matching expressions to specify names. All matching nodes are included in the list. If you do not specify a value for this parameter, information related to all nodes is imported.

FILESpace=*filespacename*

Specifies the name of a file space for which you want import file space information. This parameter is optional.

You can specify a list of file space names for which data information is to be imported. The items in the list are separated by commas, with no intervening spaces. You can use a pattern-matching expression to specify a name. All matching names are included in the list. If you do not specify a value for this parameter, information related to all files space names is imported.

Note: Existing file spaces are not replaced. New file spaces are created when identical names are encountered.

DOmains=*domainname*

Specifies the names of the policy domains to which nodes must be assigned in order for node information to be imported. This parameter is optional. You can specify a list of policy domains from which node information is to be imported. The items in the list are separated by commas, with no intervening spaces. You

can use a pattern-matching expression to specify a name. All matching domains are included in the list. If you do not specify a value for this parameter, node information related to all domains is imported.

FILEData=*type*
Specifies the type of files that should be imported for all nodes specified and found on the export media. This parameter is optional. The default value is NONE.

The device class used by the file data is determined by the device class for the storage pool. If it is the same device class specified in this command, then two drives are needed to import the node information. The mount limit value for the device class needs to be set to at least 2.

The following descriptions mention *active* and *inactive* backup file copies. An active backup file copy is the most recent backup copy for a file that still exists on the client workstation. All other backup file copies are called inactive copies. Possible values are:

ALl
Specifies that ADSM imports all backup versions of files, all archived files, and all files migrated from a user's local file system.

None
Specifies that no files are to be imported; only node definitions are to be imported.

ARchive
Specifies that only archived files are to be imported.

Backup
Specifies that only backup versions, whether active or inactive, are to be imported.

BACKUPActive
Specifies that only active backup versions are to be imported.

ALLActive
Specifies that ADSM imports all active backup versions of files, all archived files, and all files migrated from a user's local file system.

SPacemanaged
Specifies that only files that have been migrated from a user's local file system are to be imported.

Preview=*value*
Specifies whether you want to preview the results of the import operation, without actually importing information. For the import commands, the PREVIEW=YES option will require that all export volumes be mounted to generate the preview statistics. This parameter is optional. The default value is NO. Possible values are:

No
Specifies that the node information is to be imported.

Yes
Specifies that you want to preview the results of the import operation, without actually importing files. Information on the number and types of objects imported, together with the number of bytes transferred are reported to the server console and the activity log.

DEVclass=*devclassname*
Specifies the device class from which import data is to be read. You cannot specify the DISK device class. This parameter is required.

If the mount limit for the device class specified has already been reached (all drives are busy) when the import runs, ADSM automatically cancels lower priority operations, such as reclamation, to make a mount point available for the import operation.

Dates=*value*
Specifies whether the recorded backup or archive dates for client node file copies are set to the values specified when the files were exported (Absolute), or are adjusted relative to the date of import (Relative). The default value is ABSOLUTE.

If the export media has been idle for some time after export (sitting on a shelf for six months, for example), the original backup or archive dates may be old enough to trigger immediate roll-off of file copies when the data is imported into a server. The Relative specification for this value will adjust for time elapsed since export so that the file copies are not immediately rolled off.

For example, assume that an export tape contains an archive file copy that was archived 5 days prior to the export operation. If the export media is saved for 6 months and then imported, the archive file will appear to have been inserted six months and 5 days ago by default (Dates=Absolute) and may be subject to immediate roll-off depending upon the retention value that is specified in the file's management class. Specifying Dates=Relative will result in resetting the archive date for the file to 5 days ago during import, even though the actual file was archived six months and 5 days ago. The DATES=RELATIVE parameter thus adjusts file backup and archive dates for the time that has elapsed since the export operation occurred.

Possible values are:

ABSOLUTE
Specifies the date for file copies are set to the values specified when the files were exported.

RELATIVE
Specifies the date for file copies are adjusted to the date of import.

VOLumenames=*volname*
Specifies the name of a volume from which you want to import volume information. This parameter is required. You can specify a list of volumes from

which server information is to be imported. Any volume name used by ADSM cannot contain any embedded blanks or equal signs. The items in the list are separated by commas, with no intervening spaces.

Use the following naming conventions to specify volume names for each device type:

REMOVABLEFILE
Specify 1 to 8 alphanumeric characters, with no embedded blanks or periods.

4MM, 8MM, 3570, DLT, QIC, or GENERICTAPE
Specify 1 to 6 alphanumeric characters, for example DSMT01.

FILE
Specify any supported file name, directory, or fully qualified directory, for example d:\win32app\ibm\adsm\server\data1.dsm.

Replacedefs=*value*
Specifies whether node definitions that exist on the server should be replaced by imported objects having the same name. Existing file spaces are not replaced. New file spaces are created when identical file space names are encountered. The default value is NO. Possible values are:

No
Specifies that objects are not to be replaced by imported objects.

Yes
Specifies that objects are to be replaced by the imported objects.

Examples

Task

From a server, import the node definitions and active backup data for all nodes defined in the STANDARD policy domain from a file (assuming a device class of DEPT).

The number and type of objects imported are reported to the server console and in the activity log.

Command:
```
import node domains=standard devclass=dept filedata=backupactive
```

Output:

```
ANR0609I IMPORT NODE started as process 32.
ANS5104I Process number 32 started.
```

Related Commands

Table 90. Commands Related to IMPORT NODE

Command	Description
CANCEL PROCESS	Cancels a background server process.
EXPORT NODE	Copies client node information to external media.
IMPORT ADMIN	Restores administrative information from external media.
IMPORT POLICY	Restores policy information from external media.
IMPORT SERVER	Restores all or part of the server from external media.
QUERY ACTLOG	Searches for and displays messages from the server activity log.
QUERY PROCESS	Displays information about one or all background server processes.

IMPORT POLICY (Import Policy Information)

Use the IMPORT POLICY command to import policy information for one or more policy domains from export media to the ADSM server.

The IMPORT POLICY command imports policy information such as:

- Policy domain definitions
- Policy set definitions, including the active policy set
- Management class definitions, including the default management class
- Backup copy group and archive copy group definitions
- Schedule definitions and client node associations

The IMPORT POLICY command allows policy information to be copied to another server. In order to back up ADSM data and then restore it to a new server, the sequential device must be supported on both platforms.

ADSM client data can be moved between ADSM servers via export and import processing, if the same removable media type is supported on both platforms.

This command is useful for permitting retrieval of the server information for copying the information to a new server.

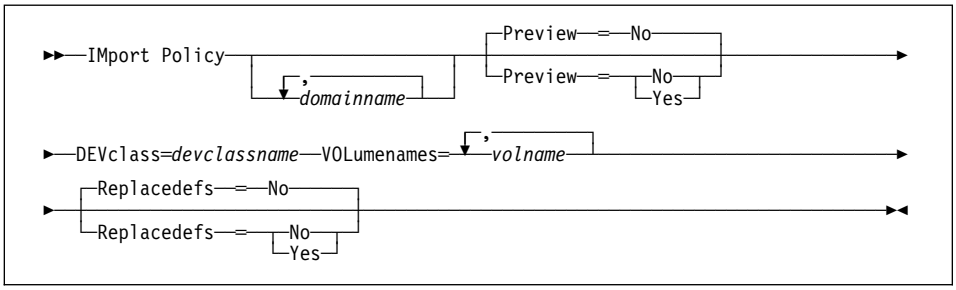
You can use the QUERY ACTLOG command to view the actual status information indicating the size and the success or failure of the import operation. You can also view this information from the server console.

This command generates a background process that can be canceled with the CANCEL PROCESS command. If an IMPORT POLICY background process is canceled, some of the data is already imported. To display information on background processes, use the QUERY PROCESS command.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

domainname
Specifies a list of policy domains for which policy information is to be imported. If you specify more than one policy domain, separate the names with commas, with no intervening spaces. You can use pattern-matching expressions to specify names. The default (*) is to import the information related to all policy domains defined on the export media.

Preview=*value*
Specifies whether you want to preview the results of the import operation, without actually importing information. For the import commands, the PREVIEW=YES option will require that all export volumes be mounted to generate the preview statistics. This parameter is optional. The default value is NO. Possible values are:

No
Specifies that the information is to be imported.

Yes
Specifies that you want to preview the results of the import operation, without actually importing files. Information on the number and types of objects imported, together with the number of bytes transferred are reported to the server console and the activity log.

DEVclass=*devclassname*
Specifies the device class from which import data is to be read. You cannot specify the DISK device class. This parameter is required.

If the mount limit for the device class specified has already been reached (all drives are busy) when the import runs, ADSM automatically cancels lower priority operations, such as reclamation, to make a mount point available for the import.

VOLumenames=*volname*
Specifies the name of a volume from which you want to import volume information. This parameter is required. You can specify a list of volumes from which server information is to be imported. Any volume name used by ADSM cannot contain any embedded blanks or equal signs. The items in the list are separated by commas, with no intervening spaces.

Use the following naming conventions to specify volume names for each device type:

REMOVABLEFILE
Specify 1 to 8 alphanumeric characters, with no embedded blanks or periods.

4MM, 8MM, 3570, DLT, QIC, or GENERICTAPE
Specify 1 to 6 alphanumeric characters, for example DSMT01.

FILE
Specify any supported file name, directory, or fully qualified directory, for example d:\win32app\ibm\adsm\server\data1.dsm.

IMPORT POLICY

Replacedefs=*value*
Specifies whether objects (such as domains, policy sets) that exist on the server should be replaced by imported objects having the same name. The default value is NO. Possible values are:

Yes
Specifies that objects are to be replaced by the imported objects.

No
Specifies that objects are not to be replaced by imported objects.

Examples

Task

Import the policy information related to all domains whose names begin with a D from 3 volumes (EXP001, EXP002, EXP003) on 8mm tape (assuming a device class of 8MM).

The number and type of objects imported are reported to the system console and in the activity log.

Command: `import policy d* devclass=8mm volumenames=exp001,exp002,exp003`

Output:

```
ANR0609I IMPORT POLICY started as process 21.
ANS5104I Process number 21 started.
```

Related Commands

Table 91. Commands Related to IMPORT POLICY

Command	Description
CANCEL PROCESS	Cancels a background server process.
EXPORT POLICY	Copies policy information to external media.
IMPORT ADMIN	Restores administrative information from external media.
IMPORT NODE	Restores client node information from external media.
IMPORT SERVER	Restores all or part of the server from external media.
QUERY ACTLOG	Searches for and displays messages from the server activity log.
QUERY PROCESS	Displays information about one or all background server processes.

IMPORT SERVER (Import the Server)

Use the IMPORT SERVER command to copy all or part of the server control information and client file data (if specified) from export media to the ADSM server. You can also view this information from the server console.

The IMPORT SERVER command imports server control information and client node data such as:

- Policy domain definitions
- Policy set definitions
- Management class and copy group definitions
- Schedule definitions and node associations
- Administrator definitions
- Client node definitions

Optionally, the IMPORT SERVER command imports server data information such as:

- File space definitions
- Data from files migrated from HSM client nodes
- Archive or backup file copy data
- Access authorization information pertaining to the file spaces exported.

The IMPORT SERVER command allows all global server control information (such as policy data and administrator information) to be copied to another server. In order to back up ADSM data and then restore it to a new server, the sequential device must be supported on both platforms.

ADSM client data can be moved between ADSM servers via export and import processing, if the same removable media type is supported on both platforms.

This command is useful for permitting retrieval of the server information for copying the information to a new server.

You can use the QUERY ACTLOG command to view the actual status information indicating the size and the success or failure of the import operation.

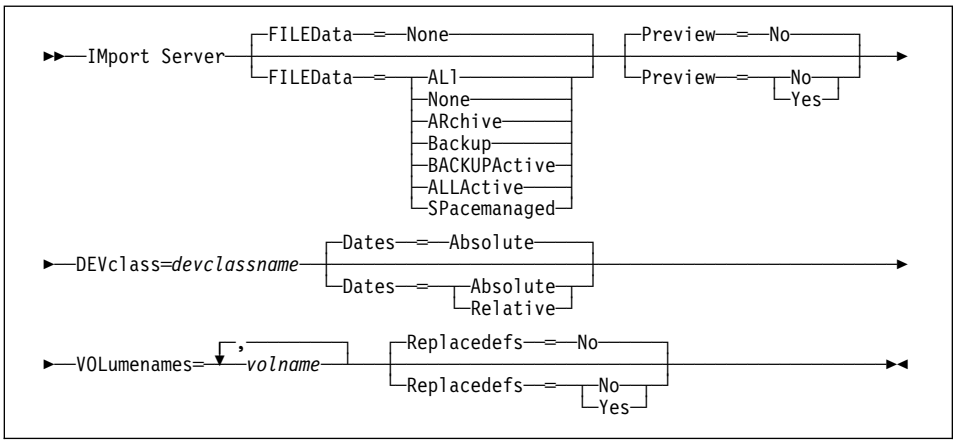
This command generates a background process that can be canceled with the CANCEL PROCESS command. If an IMPORT SERVER background process is canceled, some of the data is already imported. To display information on background processes, use the QUERY PROCESS command.

IMPORT SERVER

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

FILEData=*type*

Specifies the type of files that should be imported for all nodes defined to the server. This parameter is optional. The default value is NONE.

The device class used by the file data is determined by the device class for the storage pool. If it is the same device class specified in this command, then two drives are needed to import server information. The mount limit value for the device class needs to be set to at least 2.

The following descriptions mention *active* and *inactive* backup file copies. An active backup file copy is the most recent backup copy for a file that still exists on the client workstation. All other file copies are called inactive copies. Possible values are:

ALl

Specifies that ADSM imports all backup versions of files, all archived files, and all files migrated from a user's local file system.

None

Specifies that no files are to be imported; only server definitions are to be imported.

ARchive

Specifies that only archived files are to be imported.

Backup

Specifies that only backup versions, whether active or inactive, are to be imported.

BACKUPActive
Specifies that only active backup versions are to be imported.

ALLActive
Specifies that ADSM imports all active backup versions of files, all archived files, and all files migrated from a user's local file system.

SPacemanaged
Specifies that only files which have been migrated from a user's local file system are to be imported.

Preview=*value*
Specifies whether you want to preview the results of the import operation, without actually importing server information. For the import commands, the PREVIEW=YES option will require that all export volumes be mounted to generate the preview statistics. This parameter is optional. The default value is NO. Possible values are:

No
Specifies that the server information is to be imported.

Yes
Specifies that you want to preview the results of the import operation, without actually importing files. Information on the number and types of objects imported, together with the number of bytes transferred are reported to the server console and the activity log.

DEVclass=*devclassname*
Specifies the device class from which import data is to be read. You cannot specify the DISK device class. This parameter is required.

If the mount limit for the device class specified has already been reached (all drives are busy) when the import runs, ADSM automatically cancels lower priority operations, such as reclamation, to make a mount point available for the import.

Dates=*value*
Specifies whether the recorded backup or archive dates for client node file copies are set to the values specified when the files were exported (Absolute), or are adjusted relative to the date of import (Relative). The default value is ABSOLUTE.

If the export media has been idle for some time after export (sitting on a shelf for six months, for example), the original backup or archive dates may be old enough to trigger immediate roll-off of file copies when the data is imported into a server. The Relative specification for this value will adjust for time elapsed since export so that the file copies are not immediately rolled off.

For example, assume that an export tape contains an archive file copy that was archived 5 days prior to the export operation. If the export media is saved for 6 months and then imported, the archive file will appear to have been inserted six months and 5 days ago by default (Dates=Absolute) and may be subject to immediate roll-off depending upon the retention value that is specified in the file's management class. Specifying DATES=RELATIVE results in resetting the

archive date for the file to 5 days ago during import, even though the actual file was archived six months and 5 days ago. DATES=RELATIVE parameter thus adjusts file backup and archive dates for the time that has elapsed since the export operation occurred.

Possible values are:

Absolute
Specifies the date for file copies are set to the values specified when the files were exported.

Relative
Specifies the date for file copies are adjusted to the date of import.

VOLumenames=*volname*
Specifies the name of a volume from which you want to import volume information. This parameter is required. You can specify a list of volumes from which server information is to be imported. Any volume name used by ADSM cannot contain any embedded blanks or equal signs. The items in the list are separated by commas, with no intervening spaces.

Use the following naming conventions to specify volume names for each device type:

REMOVABLEFILE
Specify 1 to 8 alphanumeric characters, with no embedded blanks or periods.

4MM, 8MM, 3570, DLT, QIC, or GENERICTAPE
Specify 1 to 6 alphanumeric characters, for example DSMT01.

FILE
Specify any supported file name, directory, or fully qualified directory, for example d:\win32app\ibm\adsm\server\data1.dsm.

Replacedefs=*value*
Specifies whether objects (such as domains, policy sets) that exist on the server should be replaced by imported objects having the same name. Existing file spaces are not replaced. New file spaces are created when identical names are encountered. The default value is NO. Possible values are:

No
Specifies that objects are not to be replaced by imported objects.

Yes
Specifies that objects are to be replaced by the imported objects.

Examples

Task

Before importing the server control information, determine how many objects are imported and the total number of bytes copied to import the server control information and all archived files from three volumes (exp001,exp002,exp003) on 8MM tape.

The number and type of objects imported is reported to the server console and in the activity log.

Command:

```
import server filedata=archive devclass=8mm
volumenames=exp001,exp002,exp003 preview=yes
```

Output:

```
ANR0609I IMPORT SERVER started as process 2.
ANS5104I Process number 2 started.
```

Related Commands

Table 92. Commands Related to IMPORT SERVER

Command	Description
CANCEL PROCESS	Cancels a background server process.
EXPORT SERVER	Copies all or part of the server to external media.
IMPORT ADMIN	Restores administrative information from external media.
IMPORT NODE	Restores client node information from external media.
IMPORT POLICY	Restores policy information from external media.
QUERY ACTLOG	Searches for and displays messages from the server activity log.
QUERY PROCESS	Displays information about one or all background server processes.

INSERT MACHINE (Insert Machine Characteristics Information or Recovery Instructions)

This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

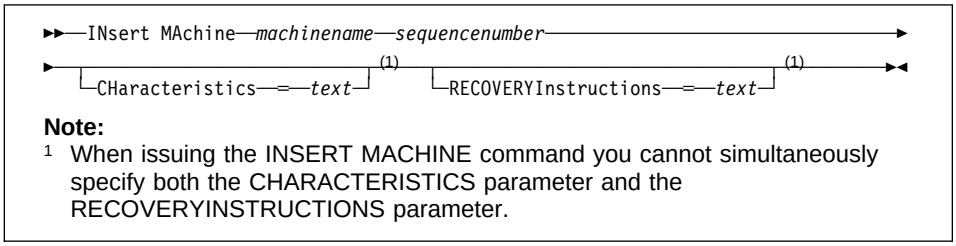
Use the INSERT MACHINE command to insert machine characteristics or machine recovery instructions into the ADSM database. A script can be written to read files containing recovery instructions or machine characteristics and generate the appropriate INSERT commands. For information about writing and using a script file, refer to the *ADSM Administrator's Guide*.

This command is provided for your use in documenting, in the ADSM server database, the machine information required to recover an ADSM client machine should a disaster occur. The ADSM server database will be used to store this information for you, and QUERY commands are provided to retrieve the information should you need to reference it in the case of a disaster. The information provided by this command is NOT used by the server in any way to coordinate disaster recovery or to manage the server under normal operation. The information provided in this command is solely determined by you in planning for client machine disaster recovery.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Note:
1 When issuing the INSERT MACHINE command you cannot simultaneously specify both the CHARACTERISTICS parameter and the RECOVERYINSTRUCTIONS parameter.

Parameters

machinename
Specifies the name of the machine whose characteristics or recovery instructions are to be updated. The machine name must have been previously defined to ADSM with the DEFINE MACHINE command.

sequencenumber
Specifies the sequence number that the line of text will have in the ADSM database.

CHaracteristics=*text*
Specifies a line of text that contains information describing machine characteristics. If you specify the CHARACTERISTICS parameter, you cannot specify the RECOVERYINSTRUCTIONS parameter. The text must be enclosed

in quotation marks if it contains any blank characters. The maximum length of the text is 1024.

RECOVERYInstructions=*text*
Specifies a line of text that contains machine recovery instructions. If you specify the RECOVERYINSTRUCTIONS parameter, you cannot specify the CHARACTERISTICS parameter. The text must be enclosed in quotation marks if it contains any blank characters. The maximum length of the text is 1024.

Examples

Task

For the machine named DISTRICT5, insert a line of machine characteristics text stating, “Machine owner is Mary Smith” on line 1.

Command:
```
insert machine district5 1 characteristics='Machine owner is mary smith'
```

Output: None

Related Commands

Table 93. Commands Related to INSERT MACHINE

Command	Description
DEFINE MACHINE	Defines a machine for DRM.
DELETE MACHINE	Deletes an existing machine.
QUERY MACHINE	Displays information about one or more machines.

LOCK ADMIN (Lock Out an Administrator)

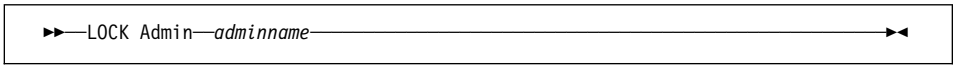
Use the LOCK ADMIN command to prevent an administrator from accessing the server. By using the LOCK ADMIN and UNLOCK ADMIN commands, you can temporarily restrict an administrator from accessing the server. The administrator is locked out until a system administrator uses the UNLOCK ADMIN command to reestablish access for the administrator.

You cannot issue the LOCK ADMIN command against the SERVER_CONSOLE administrative ID.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

adminname
Specifies the name of the administrator to be locked out. This parameter is required.

Examples

Task

Lock out the administrator CLAUDIA.

Command: `lock admin claudia`

Output:

```
ANR2072I Administrator CLAUDIA locked.
```

Related Commands

Table 94. Commands Related to LOCK ADMIN

Command	Description
QUERY ADMIN	Displays information about one or more ADSM administrators.
UNLOCK ADMIN	Enables a locked administrator to access ADSM.

LOCK NODE (Lock Out a Client Node)

Use the LOCK NODE command to prevent a client node from accessing the server.

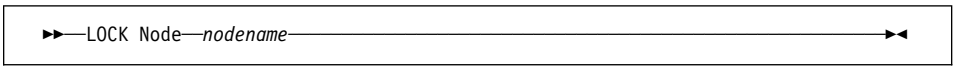
By using the LOCK NODE command, you can restrict a client node from accessing the server. The client node is locked out until a system administrator uses the UNLOCK NODE command to reestablish access for the client node.

A locked client cannot perform backup and archive operations, regardless of whether the operations have been scheduled to occur.

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the policy domain to which the client node belongs.

Syntax



Parameters

nodename
Specifies the name of the client node to be locked out. This parameter is required.

Examples

Task

Lock the client node SMITH.

Command: `lock node smith`

Output:

```
ANR2064I Node SMITH locked.
```

LOCK NODE

Related Commands

Table 95. Commands Related to LOCK NODE

Command	Description
QUERY NODE	Displays partial or complete information about one or more clients.
UNLOCK NODE	Enables a locked user in a specific policy domain to access the server.

MACRO (Invoke a Macro)

Use the MACRO command to invoke a file that contains one or more ADSM administrative commands to be performed.

Note: You cannot schedule MACRO or QUERY ACTLOG commands.

You cannot run macros from the server console. You can include MACRO commands within a macro to invoke other macros up to ten levels deep. A macro invoked from the batch or interactive mode of the administrative client is called a *high-level* macro. Any macros invoked from within the high-level macro are called *nested* macros.

Writing commands in a macro can be especially helpful when you want to issue commands that contain several parameters. You might also want to write macros to process related commands in a specific order. After you create a macro, you can update the information it contains and use it again, or you can copy the macro, make changes to the copy, then run the copy.

To document its purpose and function, add comments to your macro file by entering a slash and an asterisk (/*), which identifies the beginning of the comment. Then enter the comment and an asterisk and a slash (*/) to indicate the end of the comment. You can enter a comment on a line by itself, or enter it on a line that contains a command or part of a command. You cannot nest comments or span comments on more than one line. For more information, see “Using Macros to Issue Commands” on page 21.

If you have a series of commands that process successfully via the command-line, but are unsuccessful when issued within a macro, there are probably dependencies between commands. It is possible that a command issued within a macro cannot be processed successfully until a previous command, that is issued within the same macro, is committed. Either of the following actions allow successful processing of these commands within a macro:

- Insert a COMMIT command before the command dependent on a previous command. For example, if COMMAND C is dependent upon COMMAND B you would insert a COMMIT command before COMMAND C. An example of this macro is:

```
COMMAND A
COMMAND B
COMMIT
COMMAND C
```

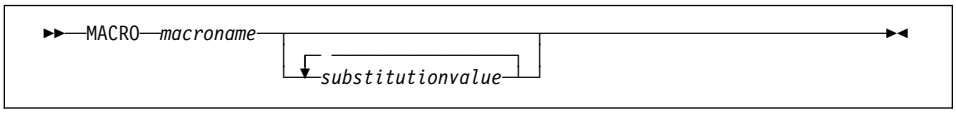
- Start the administrative client session using the ITEMCOMMIT option. This causes each command within a macro to be committed before the next command is processed.

Privilege Class

Any administrator can issue this command.

MACRO

Syntax



Parameters

macroname
Specifies the name of the macro. This parameter is required.

substitutionvalue
Specifies the value for a substitution variable in a macro. This parameter is optional. You can enter values for substitution variables to run a macro with substitution variables. When you use substitution variables, you can reuse a macro whenever you need to perform the same task for different objects or with different parameter values. Each substitution value must be delimited with a space. If you want to specify a value that contains blanks, you must enclose the value in quotation marks.

Examples

Task 1

Use the macro file REGNG to register and grant authority to a new administrator.

Macro Contents:

```
/* Register and grant authority to new administrator */
REGister Admin jones passwd        -
CONtactinfo="x1235"
GRant AUTHority jones              -
CLasses=Policy
```

Command: `macro regng`

Output:

```
ANS5101I Server command: 'REGister Admin jones passwd
contact=x1235'
ANR2068I Administrator JONES registered.
ANS5101I Server command: 'GRant AUTHority jones
CLasses=policy'
ANR2077I Unrestricted policy privilege granted to
administrator JONES.
```

Task 2

Use the macro file AUTHRG, containing substitution variables, to register and grant authority to a new administrator.

When you run the macro, you then enter the values you want to pass to the server to process the command.

Macro Contents:

```
/*   Registers and authorizes a new administrator */
REGister Admin %1 %2  -        /*  Enter userid and password  */
CONtact=%3         /* Enter contact info (in quotes if nec.) */
GRant AUTHority %1  -        /*  Server uses variable already */
-                                        /*  defined by you */
CLasses=%4                     /*  Enter the privilege class  */
```

Command: `macro authrg jones passwd x1235 Policy`

Output:

```
ANS5101I Server command: 'REGISTER ADMIN jones passwd
CONtactinfo=x1235'
ANR2068I Administrator JONES registered.
ANS5101I Server command: 'GRANT AUTHority jones
CLasses=Policy'
ANR2077I Unrestricted policy privilege granted to
administrator JONES.
```

Related Commands

Table 96. Commands Related to MACRO

Command	Description
COMMIT	Makes changes to the database permanent.
ROLLBACK	Discards any uncommitted changes to the database since the last COMMIT was executed.

MOVE DATA (Move Files on a Storage Pool Volume)

Use the MOVE DATA command to move data from either a primary or copy storage pool volume to other available storage pool volumes.

Restrictions:

1. You cannot move data from a primary storage pool volume to a copy storage pool.
2. You cannot move data on a copy storage pool volume to a different storage pool.

For additional information about storage pools, refer to *ADSM Administrator's Guide*.

Multiple sequential access volume mounts are required to move files that span volumes.

When moving files off of a random access volume, any cached copies of files on the volume (assuming caching is enabled) are erased. The MOVE DATA command is the only way to manually remove cached random access volume copies. (ADSM automatically removes cached files when the space they occupy is needed for primary files.)

If you are attempting to move files to volumes within the same storage pool, sufficient space must be available on the volumes or the operation fails.

You can use this command to move files from an offsite volume in a copy storage pool. Because the offsite volume cannot be mounted, the server obtains the active files on the offsite volume from either a primary storage pool or another copy storage pool. These files are then written to the destination volumes in the original copy storage pool.

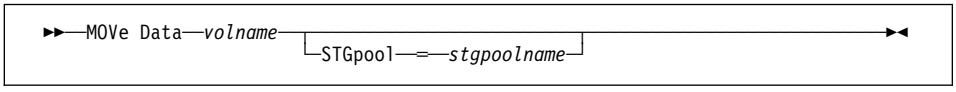
This command can generate a background process that can be canceled with the CANCEL PROCESS command. If a MOVE DATA background process is canceled, some files may have already moved prior to the cancellation. To display information on background processes, use the QUERY PROCESS command.

Do not use the MOVE DATA command if a restore process (RESTORE STGPOOL or RESTORE VOLUME) is running. The MOVE DATA command could cause the restore to be incomplete.

Privilege Class

To issue this command, you must have system privilege, unrestricted storage privilege, or restricted storage privilege for the storage pool to which the volume belongs and also for the new storage pool, if one is specified.

Syntax



Parameters

volname
Specifies the name of the storage pool volume where the file to be moved currently resides. This parameter is required.

STGpool=*stgpoolname*
Specifies the primary storage pool name to which you want to move files from a primary storage pool volume. This parameter is optional and does not apply to copy storage pool volumes. If you do not specify a value for this parameter, files are moved to other volumes within the same storage pool.

Examples

Task

Move files from storage pool volume STGVOL.1 to any available volumes assigned to 8MMPOOL.

Command: `move data stgvol.1 stgpool=8mmpool`

Output:

```
ANR1140I Move Data process started for volume
/home/dsmserv/build/stgvol.1 (process ID 205).
```

Related Commands

Table 97. Commands Related to MOVE DATA

Command	Description
CANCEL PROCESS	Cancels a background server process.
DEFINE VOLUME	Assigns a volume to be used for storage within a specified storage pool.
DELETE VOLUME	Deletes a volume from a storage pool.
MOVE DRMEDIA	Moves DRM media onsite and offsite.
QUERY ACTLOG	Searches for and displays messages from the server activity log.
QUERY DRMEDIA	Displays information about disaster recovery volumes.
QUERY PROCESS	Displays information about one or all background server processes.

MOVE DRMEDIA (Move Disaster Recovery Media Offsite and Back Onsite)

This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

Use the MOVE DRMEDIA command to identify and track volumes that are to be moved offsite for disaster recovery protection.

The following diagram is an overview of the recovery media life cycle:

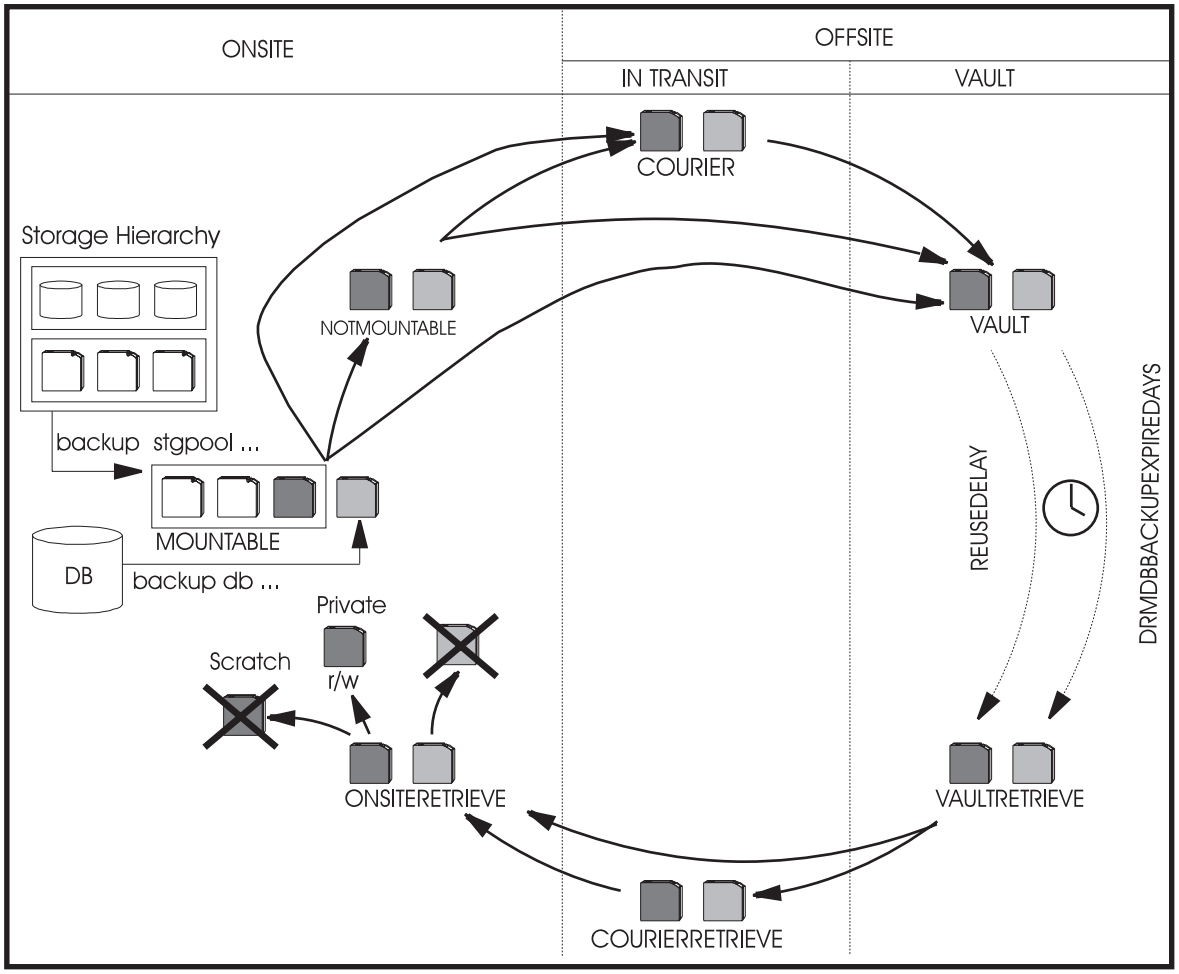


Figure 1. Recovery media life cycle

Use the MOVE DRMEDIA command to identify the expired or empty volumes that are to be moved back to onsite location for reuse. MOVE DRMEDIA command does not process any two-sided volumes that have a REMOVABLEFILE device type.

MOVE DRMEDIA

This command processes one or more database backup and copy storage pool volumes.

This command generates a background process that can be cancelled with the CANCEL PROCESS command. To display information on background processes, use the QUERY PROCESS command.

You can use the QUERY ACTLOG command to view whether the MOVE DRMEDIA command was successful. You can also view this information from the server console.

The MOVE DRMEDIA command defines a staged process that allows volumes to transition through the following states. You may choose to transition your offsite volumes through each of the following states or may choose to simplify your volume movements by skipping some of the states using the TOSTATE parameter.

MOUNTABLE
Volumes in this state contain valid data and are accessible for onsite processing.

NOTMOUNTABLE
Volumes in this state are onsite, contain valid data, and not available for onsite processing.

COURIER
Volumes in this state are with the courier and being moved to an offsite location.

VAULT
Volumes in this state contain valid data and are at the offsite location. There is no MOVE DRMEDIA command to move the volumes in this state to any state.

VAULTRETRIEVE
Volumes in this state do not contain valid data and are at the offsite vault. Copy storage pool volumes are empty and met REUSEDELAY days and database backup volumes are associated with the series that are expired based on the SET DRMDBBACKUPEXPIREDAYS command. These volumes are to be reused.

COURIERRETRIEVE
Volumes in this state do not contain valid data and are with the courier and being moved back to the onsite location.

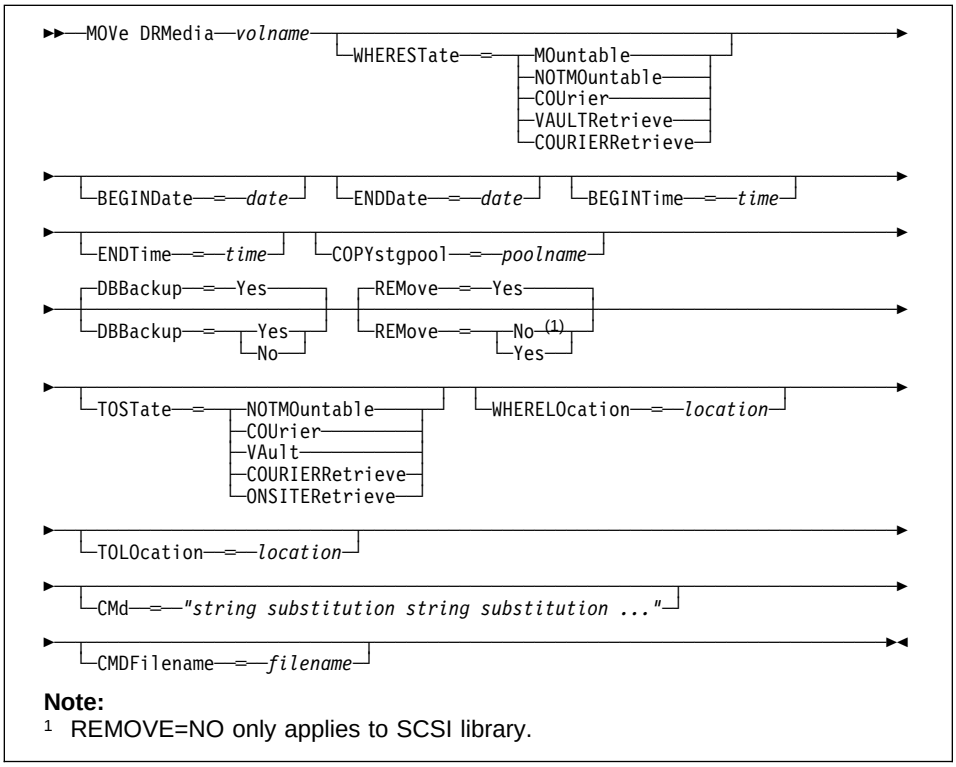
ONSITERETRIEVE
Volumes in this state do not contain valid data, are at the onsite location, and not managed by DRM. The volume records of the database backup and scratch copy storage pool volumes are deleted from the ADSM database. The volume records of the private copy storage pool volumes are updated with the READWRITE access mode in ADSM database.

MOVE DRMEDIA

Privilege Class

To issue this command, you must have system, unrestricted storage, or operator privilege.

Syntax



Note:
1 REMOVE=NO only applies to SCSI library.

Parameters

volname
Specifies the name of the database backup or copy storage pool volume to be processed. This parameter is required. You can use a pattern- matching expression to specify this name. All matching volumes are considered for processing. If you use pattern-matching expression, you must specify WHERESTATE.

WHERESTate=*statevalue*
Specifies the state of volumes to be processed. This parameter is used to restrict processing to volumes that are currently in the specified state. This parameter is required if the TOSTATE is not specified. If you use a pattern-matching expression for the volume name, you must specify WHERESTATE. For more information, see “Destination State/Location Determination Table:” on page 325 and “State Transition Table” on page 326.

Possible values are:

MOuntable
Specifies that volumes are to transition from the MOUNTABLE state to the NOTMOUNTABLE state if the TOSTATE is not specified. If the volumes are in an automated library, MOVE DRMEDIA will eject the volumes out of the library before transition the volumes to the destination state. Volumes in the MOUNTABLE state contain valid data and are available for onsite processing.

NOTMOuntable
Specifies that volumes are to transition from the NOTMOUNTABLE state to the COURIER state if the TOSTATE is not specified. Volumes in the NOTMOUNTABLE state are onsite, contain valid data, and not available for onsite processing.

COUrier
Specifies that volumes are to transition from the COURIER state to the VAULT state. The only valid destination state for the volumes in COURIER state is VAULT. Volumes in the COURIER state are with the courier and being moved to an offsite location.

VAULTRetrieve
Specifies that volumes are to transition from the VAULTRETIEVE state to the COURIERRETRIEVE state if the TOSTATE is not specified. Volumes in the VAULTRETRIEVE state do not contain valid data and are at the offsite vault.

COURIERRetrieve
Specifies that volumes are to transition from the COURIERRETIEVE state back to the onsite location. The only valid destination state for the volumes in COURIERRETRIEVE state is ONSITERETRIEVE. The volume records of the database backup and scratch copy storage pool volumes are deleted from the ADSM database. Volumes in the COURIERRETRIEVE state are with the courier and being moved back to the onsite location.

BEGINDate=*date*
Specifies the beginning date used to select volumes for processing. Volumes are considered eligible if the MOVE DRMEDIA command has transitioned the state of the volume on or after the specified date. The default is the earliest date for which volume information exists. Possible values are:

MM/DD/YYYY
Specifies that you want to process volumes that were transitioned into their current state on or after a specific date, using MM/DD/YYYY format (for example, 01/31/1995).

TODAY
Specifies that you want to process volumes that were transitioned into their current state today.

TODAY-*numdays* **or -***numdays*
Specifies that you want to process volumes that were transitioned into their current state beginning with a date determined by today minus a specific number of days. The maximum value for the number of days is 9999.

For example, to move volumes beginning with records transitioned into their current state a week ago, you can specify TODAY-7 or simply -7.

ENDate=*date*
Specifies the ending date used to select volumes for processing. Volumes are considered eligible if the MOVE DRMEDIA command has transitioned the state of the volume on or before the specified date. The default is the current date. Possible values are:

MM/DD/YYYY
Specifies that you want to process volumes that were transitioned into their current state on or before a specific date, using MM/DD/YYYY format (for example, 01/31/1995).

TODAY
Specifies that you want to process volumes that were transitioned into their current state ending with today.

TODAY-*numdays* **or -***numdays*
Specifies that you want to process volumes that were transitioned into their current state ending with a date determined by today minus a specific number of days. The maximum value for the number of days is 9999.

For example, to move volumes beginning with records transitioned into their current state a week ago, you can specify TODAY-7 or simply -7.

BEGINTime=*time*
Specifies the beginning time used to select volumes for processing. Volumes are considered eligible if the MOVE DRMEDIA command has transitioned the state of the volume on or after the specified time and date. The default is midnight (00:00:00) on the date specified with the BEGINDATE parameter. Possible values are:

HH:MM:SS
Specifies that you want to process volumes that were transitioned into their current state on or after a specific time on the specified date, using HH:MM:SS format (for example, 12:33:28).

NOW
Specifies that you want to process volumes that were transitioned into their current state beginning with the current time on the specified begin date.

NOW+*numhours:numminutes* **or +***numhours:numminutes*
Specifies that you want to process volumes that were transitioned into their current state beginning with a time determined by the current time plus a specific number of hours (and, optionally, minutes) on the specified date.

NOW-*numhours:numminutes* **or -***numhours:numminutes*
Specifies that you want to process volumes that were transitioned into their current state beginning with a time determined by the current time minus a specific number of hours (and, optionally, minutes) on the specified date.

ENDTime=*time*
Specifies the ending time used to select volumes for processing. Volumes are considered eligible if the MOVE DRMEDIA command has transitioned the state of the volume on or before the specified time and date. The default is 23:59:59. Possible values are:

HH:MM:SS
Specifies that you want to process volumes that were transitioned into their current state on or before a specific time on the specified date, using HH:MM:SS format (for example, 12:33:28).

NOW
Specifies that you want to process volumes that were transitioned into their current state beginning with the current time on the specified begin date.

NOW+*numhours:numminutes* **or +***numhours:numminutes*
Specifies that you want to process volumes that were transitioned into their current state ending with a time determined by the current time plus a specific number of hours (and, optionally, minutes) on the specified date.

NOW-*numhours:numminutes* **or -***numhours:numminutes*
Specifies that you want to process volumes that were transitioned into their current state ending with a time determined by the current time minus a specific number of hours (and, optionally, minutes) on the specified date.

COPYstgpool=*poolname*
Specifies the name of the copy storage pool that is used to limit the selection of volumes for processing. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching storage pools are processed. The copy storage pools specified with this parameter override the copy storage pools specified on the SET DRMCOPYSTGPOOL command. If you do not specify a copy storage pool name, all volumes in the specified state, except MOUNTABLE state, are considered for processing. See SET DRMCOPYSTGPOOL command for processing the volumes in the MOUNTABLE state.

DBBackup=*dbvalue*
Specifies whether database backup volumes are included in the selection of volumes for processing. This parameter is optional. The default is to consider database backup volumes for processing. Possible values are:

Yes
Specifies to consider database backup volumes for processing.

No
Specifies to not consider database backup volumes for processing.

MOVE DRMEDIA

REMove=*removevalue*

Specifies whether ADSM ejects the volumes from the library during MOVE DRMEDIA processing. This parameter is optional. The default is YES. Possible values are:

Yes

Specifies that the volume is ejected from the library during MOVE DRMEDIA processing. The volume entry is deleted from the ADSM library inventory. This option applies to all automated libraries.

No

Specifies that the volume is not ejected from a SCSI library during MOVE DRMEDIA processing. This option deletes the volume entry from the ADSM library inventory and leaves the volume in its slot.

TOSTate=*statevalue*

Specifies the destination state of the volumes being processed. This parameter is required if WHERESTATE is not specified. If TOSTATE is specified without specifying WHERESTATE, the volume name has to be explicitly specified, pattern-matching is not allowed. For more information, see "Destination State/Location Determination Table:" on page 325 and "State Transition Table" on page 326.

Possible values are:

NOTMOuntable

Specifies that volumes are to transition to the NOTMOUNTABLE state. This value is only valid when the volumes being processed have a MOUNTABLE state. If the volumes are in an automated library, MOVE DRMEDIA will eject the volumes out of the library before transition the volumes to NOTMOUNTABLE state.

COUrier

Specifies that volumes are to transition to the COURIER state. This value is only valid when the volumes being processed have a MOUNTABLE or NOTMOUNTABLE state. If the volumes are in an automated library, MOVE DRMEDIA will eject the volumes out of the library before transition the volumes to COURIER state.

VAult

Specifies that volumes are to transition to the VAULT state. This value is only valid when the volumes being processed have a MOUNTABLE, NOTMOUNTABLE, or COURIER state. If the volumes are in an automated library, MOVE DRMEDIA will eject the volumes out of the library before transition the volumes to VAULT state.

COURIERRetrieve

Specifies that volumes are to transition to the COURIERRETRIEVE state. This value is only valid when the volumes being processed have a VAULTRETRIEVE state.

ONSITERetrieve
Specifies that volumes are to transition to the ONSITERETRIEVE state. This value is only valid when the volumes being processed have a VAULTRETRIEVE or COURIERRETRIEVE state. The volume records are deleted from the ADSM database for the database backup and scratch copy storage pool volumes that are transition to the ONSITERETRIEVE state.

WHERELOcation=*location*
Specifies the from location of the volumes being processed. This parameter is optional. This parameter is used to restrict processing to volumes that are in the specified location. The maximum length of the location specified is 255 characters. The location must be enclosed in quotation marks if it contains any blank characters.

TOLOcation=*location*
Specifies the destination location of the volumes being processed. This parameter is optional. The maximum length of the location specified is 255 characters. The location must be enclosed in quotation marks if it contains any blank characters. If the destination location is not specified with the TOLOCATION, the location defined by the DRM SET command for the state that the volume is transition to will be used.

CMd=*"string substitution string substitution ..."*
Specifies the creation of executable commands. This parameter is optional. You must enclose your executable command specification in quotation marks. The maximum length of the executable command specification is 255 characters. For each volume successfully processed by MOVE DRMEDIA command, DRM writes the associated commands to a file. The filename used by DRM is specified with the CMDFILENAME parameter, the SET DRMCMDFILENAME command, or the default name generated by the MOVE DRMEDIA command. If the length of the line written exceeds 255 characters, it is split into multiple lines and a continuation character, +, is added to all but the last line of the command. You may need to alter the continuation character according to the requirements of the product that executes the commands.

If you do not specify CMD or specify a "" for CMD, MOVE DRMEDIA will not generate any executable commands.

string
Specifies the string to build an executable command to process the volume name and/or volume location obtained by MOVE DRMEDIA command. You can specify any free form text for the string. Do not use embed quotation marks. For example, the following is a valid executable command specification:

```
CMD="CHECKIN LIBVOL LIB8MM &VOL STATUS=SCRATCH"
```

The following is an invalid executable command specification:

```
CMD=""CHECKIN LIBVOL LIB8MM" &VOL STATUS=SCRATCH"
```

substitution
Specifies a substitution variable to tell MOVE DRMEDIA to substitute a value for the variable. The possible substitution variables are:

&VOL
Specifies the volume name is to be substitued for &VOL. You can specify the lowercase characters, &vol. No spaces or blanks between ampersand, &, and VOL. If there are spaces or blanks between ampersand and VOL, MOVE DRMEDIA will treat them as strings and no substitution will be set. If &VOL is not specified, no volume name is set in the executable command.

&LOC
Specifies the volume location is to be substituted for &LOC. You can specify lowercase characters, &loc. No spaces or blanks between ampersand, &, and LOC. If there are spaces or blanks between ampersand and LOC, MOVE DRMEDIA will treat them as strings and no substitution will be set. If &LOC is not specified, no location name is set in the executable command.

&VOLDSN
Specifies the volume data set name is to be substituted for &VOLDSN. An example of a copy storage pool tape volume data set name using the default prefix ADSM is ADSM.BFS. An example of a database backup tape volume data set name using a prefix ADSM221 defined with the device class is ADSM221.DBB. If &VOLDSN is not specified, no volume data set name is set in the executable command.

&NL
Specifies the new line character is to be substitued for &NL. When &NL is specified, MOVE DRMEDIA command will split the command at the position where the &NL is and will not append any continuation character. The user is responsible for specifying the proper continuation character before the &NL if one is required. The user is also responsible for the length of the line written. If the &NL is not specified and the length of the command line exceeds 255, the command line is split into multiple lines and a continuation character, +, is added to all but the last line of the command.

CMDFilename=*filename*
Specifies the full path file name for containing the command string specified with CMD. This parameter is optional. The maximum length of the file name is 259 characters. If you do not specify a file name or specify a "" with the CMDFILENAME, the file name specified with the SET DRMCMDFILENAME will be used. If you do not specify a file name with the SET DRMCMDFILENAME, MOVE DRMEDIA will generate a file name by appending the 'exec.cmd' to the directory representing this "instance" of the ADSM server which is typically the directory that the ADSM server was originally installed from. MOVE DRMEDIA automatically allocates the file name specified or generated. If the file name

exists, MOVE DRMEDIA will attempt to use it and the existing data, if any, in the file will be over written. If this should happen and the executable commands in the file have not been run, issue QUERY DRMEDIA command to re-build the executable commands for the desired date and volume transition. If the MOVE DRMEDIA command fails and none of the command string specified with the CMD parameter has been written for the volume successfully moved, then the allocated file name is deleted.

Destination State/Location Determination Table:

The following table shows how DRM determines the volume's destination state and location:

1. Destination state:
   - TOSTATE specified.
   - The next state of the WHERESTATE specified, if the TOSTATE is not specified.
2. Destination location:
   - TOLOCATION specified.
   - The location of the TOSTATE specified, if the TOLOCATION is not specified.
   - The location of the next state of the WHERESTATE specified, if the TOLOCATION and TOSTATE are not specified.

Parameters Specified	Destination State	Destination Location
WHERESTATE	The next state of the WHERESTATE	Location of the next state
WHERESTATE TOSTATE	TOSTATE	Location of the TOSTATE
WHERESTATE TOLOCATION	The next state of the WHERESTATE	TOLOCATON
WHERESTATE TOSTATE TOLOCATION	TOSTATE	TOLOCATION
TOSTATE	TOSTATE	Location of the TOSTATE
TOSTATE WHERELOCATION	TOSTATE	Location of the TOSTATE
TOSTATE WHERELOCATION TOLOCATION	TOSTATE	TOLOCATION

MOVE DRMEDIA

State Transition Table

The following tables show the eligible state transition:

Volume's Current State	Destination State			
	MOUNTABLE	NOTMOUNT-ABLE	COURIER	VAULT
MOUNTABLE	N	Y	Y	Y
NOTMOUNTABLE	N	N	Y	Y
COURIER	N	N	N	Y
VAULT	N	N	N	N
VAULTRETRIEVE	N	N	N	N
COURIERRETRIEVE	N	N	N	N
ONSITERETRIEVE	N	N	N	N

Volume's Current State	Destination State		
	VAULT-RETRIEVE	COURIER-RETRIEVE	ONSITE-RETRIEVE
MOUNTABLE	N	N	N
NOTMOUNTABLE	N	N	N
COURIER	N	N	N
VAULT	N	N	N
VAULTRETRIEVE	N	Y	Y
COURIERRETRIEVE	N	N	Y
ONSITERETRIEVE	N	N	N

Examples

Task 1

Move DRM media that is in the NOTMOUNTABLE state to the COURIER state.

Command:

```
move drmedia * wherestate=notmountable
```

Output:

```
ANR0609I MOVE DRMEDIA started as process 10.
ANS5104I Process number 10 started.
```

Command: `QUERY ACTLOG search="MOVE DRMEDIA"`

Output:

```
01/11/1996 11:12:24      ANR0610I MOVE DRMEDIA started by HSIAO as
                          process 10.
01/11/1996 11:12:25      ANR6683I MOVE DRMEDIA: Volume TAPE0P was moved
                          from NOTMOUNTABLE state to COURIER.
01/11/1996 11:12:25      ANR6683I MOVE DRMEDIA: Volume TAPE1P was moved
                          from NOTMOUNTABLE state to COURIER.
01/11/1996 11:12:25      ANR6683I MOVE DRMEDIA: Volume DBTP02 was moved
                          from NOTMOUNTABLE state to COURIER.
01/11/1996 11:12:25      ANR6683I MOVE DRMEDIA: Volume DBTP01 was moved
                          from NOTMOUNTABLE state to COURIER.
01/11/1996 11:12:25      ANR6682I MOVE DRMEDIA command ended: 4 volumes
                          processed.
01/11/1996 11:12:25      ANR0611I MOVE DRMEDIA started by HSIAO as
                          process 10 has ended.
```

Task 2

Move DRM media that is in the MOUNTABLE state to the COURIER state. If the media is in an automated library, MOVE DRMEDIA ejects the media out of the library before changing them to the COURIER state.

Command: `move drmedia * wherestate=mountable TOSTate=COUrier`

Output:

```
ANR0609I MOVE DRMEDIA started as process 12.
ANS5104I Process number 12 started.
```

Command: `QUERY ACTLOG search="MOVE DRMEDIA"`

Output:

```
01/12/1996 10:12:24      ANR0610I MOVE DRMEDIA started by HSIAO as
                          process 12.
01/12/1996 10:12:24      ANR6696I MOVE DRMEDIA: CHECKOUT LIBVOLUME for
                          volume TAPE01 in library LIB8MM starting.
01/12/1996 10:12:24      ANR6697I MOVE DRMEDIA: CHECKOUT LIBVOLUME for
                          volume TAPE01 in library LIB8MM completed
                          successful.
01/12/1996 10:12:25      ANR6683I MOVE DRMEDIA: Volume TAPE01 was moved
                          from MOUNTABLE state to COURIER.
01/12/1996 10:12:25      ANR6696I MOVE DRMEDIA: CHECKOUT LIBVOLUME for
                          volume TAPE02 in library LIB8MM starting.
01/12/1996 10:12:25      ANR6697I MOVE DRMEDIA: CHECKOUT LIBVOLUME for
                          volume TAPE02 in library LIB8MM completed
                          successful.
01/12/1996 10:12:25      ANR6683I MOVE DRMEDIA: Volume TAPE02 was moved
                          from MOUNTABLE state to COURIER.
01/12/1996 10:12:25      ANR6696I MOVE DRMEDIA: CHECKOUT LIBVOLUME for
                          volume DBTP05 in library LIB8MM starting.
01/12/1996 10:12:25      ANR6697I MOVE DRMEDIA: CHECKOUT LIBVOLUME for
                          volume DBTP05 in library LIB8MM completed
                          successful.
01/12/1996 10:12:25      ANR6683I MOVE DRMEDIA: Volume DBTP05 was moved
                          from MOUNTABLE state to COURIER.
01/12/1996 10:12:25      ANR6696I MOVE DRMEDIA: CHECKOUT LIBVOLUME for
                          volume DBTP04 in library LIB8MM starting.
01/12/1996 10:12:25      ANR6697I MOVE DRMEDIA: CHECKOUT LIBVOLUME for
                          volume DBTP04 in library LIB8MM completed
                          successful.
01/12/1996 10:12:25      ANR6683I MOVE DRMEDIA: Volume DBTP04 was moved
                          from MOUNTABLE state to COURIER.
01/12/1996 10:12:25      ANR6682I MOVE DRMEDIA command ended: 4 volumes
                          processed.
01/12/1996 10:12:25      ANR0611I MOVE DRMEDIA started by HSIAO as
                          process 12 has ended.
```

Task 3

Move DRM media that is in the VAULTRETRIEVE state to the ONSITERETRIEVE state, and generate a CHECKIN LIBVOL command for each volume successfully processed in a file, c:\drm\move\exec.cmd

Command:

```
move drmedia * wherestate=vaultretrieve tostate=onsiteretrieve
cmdfilename=c:\drm\move\exec.cmd cmd="checkin libvol lib8mm &vol
status=scratch"
```

Output:

```
ANR0609I MOVE DRMEDIA started as process 15.
ANS5104I Process number 15 started.
```

Command: `query actlog search="MOVE DRMEDIA"`

Output:

```
01/13/1996 09:12:24      ANR0610I MOVE DRMEDIA started by HSIAO as
                          process 15.
01/13/1996 09:12:24      ANR6684I MOVE DRMEDIA: Volume CSTP01 was
                          delete.
01/13/1996 09:12:24      ANR6684I MOVE DRMEDIA: Volume CSTP02 was
                          delete.
01/13/1996 09:12:24      ANR6684I MOVE DRMEDIA: Volume DBTP10 was
                          delete.
01/13/1996 09:12:24      ANR6684I MOVE DRMEDIA: Volume DBTP11 was
                          delete.
01/13/1996 09:12:27      ANR6682I MOVE DRMEDIA command ended: 4 volumes
                          processed.
01/13/1996 09:12:42      ANR0611I MOVE DRMEDIA started by HSIAO as
                          process 15 has ended.
```

Output: MOVE DRMEDIA also created the executable commands in c:\drm\move\exec.cmd:

```
checkin libvol lib8mm CSTP01 status=scratch
checkin libvol lib8mm CSTP02 status=scratch
checkin libvol lib8mm DBTP10 status=scratch
checkin libvol lib8mm DBTP11 status=scratch
```

Note: The above checkin commands can be executed by issuing the ADSM MACRO command with c:\drm\move\exec.cmd as the macro name.

Related Commands

Table 98 (Page 1 of 2). Commands Related to MOVE DRMEDIA

Command	Description
BACKUP DB	Backs up the ADSM database to sequential access volumes.
BACKUP STGPOOL	Backs up a primary storage pool to a copy storage pool.
CANCEL PROCESS	Cancels a background server process.
CHECKOUT LIBVOLUME	Checks a storage volume out of an automated library.
DISMOUNT VOLUME	Dismounts a sequential, removable volume by the volume name.
PREPARE	Creates a recovery plan file
QUERY ACTLOG	Searches for and displays messages from the server activity log.

MOVE DRMEDIA

Table 98 (Page 2 of 2). Commands Related to MOVE DRMEDIA

Command	Description
QUERY DRMSTATUS	Displays DRM system parameters.
QUERY PROCESS	Displays information about one or all background server processes.
QUERY DRMEDIA	Displays information about disaster recovery volumes.
SET DRMCHECKLABEL	Specifies whether ADSM should read volume labels during MOVE DRMEDIA command processing.
SET DRMCOPYSTGPOOL	Specifies that copy storage pools are managed by DRM.
SET DRMCOURIERNAME	Specifies the name of the courier for the disaster recovery media.
SET DRMDBBACKUPEXPIREDAYS	Specifies criteria for database backup series expiration.
SET DRMVAULTNAME	Specifies the name of the vault where DRM media is stored.
SET DRMCMDFILENAME	Specifies a file name for containing DRM executable commands.
SET DRMFILEPROCESS	Specifies whether the MOVE DRMEDIA command processes files associated with a device type of file.
SET DRMNOTMOUNTABLENAME	Specifies the location name of the DRM media to be sent offsite.

PREPARE (Create a Recovery Plan File)

This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

The objective of the PREPARE command is to generate a recovery plan file. The recovery plan file contains the information required for recovery of an ADSM server to the point in time represented by the last database backup operation that has completed prior to issuing the PREPARE command. The recovery plan file contains the information and procedures necessary to assist with the recovery of the ADSM server. The information in the plan file includes:

- Site-specific server recovery instructions as defined by the administrator (for example, contact names and telephone numbers).
- The sequence of steps necessary to recover an ADSM server.
- List of ADSM database backup and copy storage pool volumes required to perform the recovery. The location where the volumes reside is included.
- Devices required to read the database backup and copy storage pool volumes.
- Space requirements for the ADSM database and recovery log.
- Copy of ADSM server options file, device configuration file, and volume history information file.
- Commands for performing server database recovery and primary storage pool recovery.

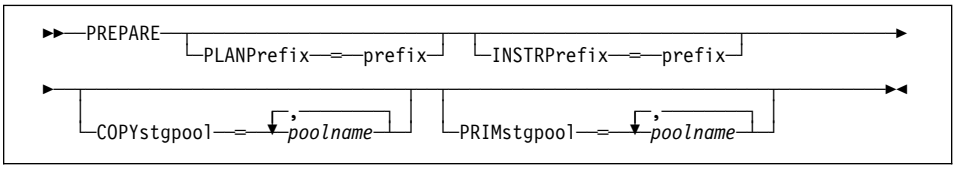
This command generates a background process that can be cancelled with the CANCEL PROCESS command. To display information on background processes, use the QUERY PROCESS command.

You can use the QUERY ACTLOG command to view whether the PREPARE command was successful. You can also view this information from the server console.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

PLANPrefix=*prefix*

Specifies the prefix portion of the path name used to generate a recovery plan filename. This parameter is optional. The maximum length is 200 characters.

To build a unique recovery plan filename, the sortable date and time format yyyymmdd.hhmmss (for example, 19951115.051421) is appended to the prefix. If this parameter is not specified, refer to the section "When the PLANPREFIX Parameter is Not Specified," to see how the prefix is selected.

When the PLANPREFIX Parameter is Specified

For the prefix, you can specify:

1. A directory path
2. A directory path followed by a string
3. A string

The following describes the rules for possible prefix specifications:

1. To specify a directory path for the prefix, end the prefix with the backslash (\) delimiter. The PREPARE command appends to the prefix the date and time information using the *yyyymmdd.hhmmss* format. For example, a PREPARE command is issued with the following parameter:

   ```
   PLANPREFIX=c:\adsmsrv\recplans\
   ```

   The resulting recovery plan filename is the following:

   ```
   c:\adsmsrv\recplans\19951115.051421
   ```

   Note: Remember that if you issue the PREPARE command from the ADSM Administrative command line client and the backslash is the last character in the command line, the backslash will be interpreted as a continuation character. To avoid this, simply place the prefix value within quotes. For example:

   ```
   PLANPREFIX="c:\adsmsrv\recplans\"
   ```

2. If the prefix is a directory path followed by a string, the PREPARE command assumes that the last component (that is, the string) is to be used as part of the filename. The PREPARE command appends to the prefix the date and time information using the *.yyyymmdd.hhmmss* format (note the period prior to the date and time). For example, a PREPARE command is issued with the following parameter:

   ```
   PLANPREFIX=c:\adsmsrv\recplans\accounting
   ```

   The resulting recovery plan filename is the following:

   ```
   c:\adsmsrv\recplans\accounting.19951115.051421
   ```

3. If the prefix is only a string (that is, the string is not preceded with a directory path), the PREPARE command appends to the prefix the date and time information using the *.yyyymmdd.hhmmss* format (again, note the period prior to the date and time). The directory path used by the PREPARE command is the directory representing this "instance" of the ADSM server which is typically the directory that the ADSM server was originally installed from. For example, if the directory representing this instance of the server is c:\win32app\ibm\adsm\server2 and a PREPARE command is issued with the following parameter:

```
PLANPREFIX=shipping
```

The resulting recovery plan filename is the following:

```
c:\win32app\ibm\adsm\server2\shipping.19951115.051421
```

When the PLANPREFIX Parameter is Not Specified

If the PLANPREFIX parameter is not specified, the prefix is selected in the following order:

1. The prefix defined by the SET DRMPLANPREFIX command, if it has been defined. For additional information, see the SET DRMPLANPREFIX command.
2. If the SET DRMPLANPREFIX command is not defined, the directory path used by the PREPARE command is the directory representing this "instance" of the ADSM server which is typically the directory that the ADSM server was originally installed from. For example, if the directory representing this instance of the server is the following:

   ```
   c:\win32app\ibm\adsm\server2
   ```

   The resulting recovery plan filename is the following:

   ```
   c:\win32app\ibm\adsm\server2\19951115.051421
   ```

INSTRPrefix=*prefix*

Specifies the prefix portion of the path name used by the PREPARE command to locate the files that contain the recovery instructions. This parameter is optional. The maximum length is 200 characters. If this parameter is not specified, refer to the section “When the INSTRPREFIX Parameter is Not Specified.”

These site specific recovery instructions can include:

- General ADSM server recovery instructions. To find the file containing these instructions, the PREPARE command appends to the instruction prefix the string *RECOVERY.INSTRUCTIONS.GENERAL*.
- Offsite ADSM server tapes instructions. To find the file containing these instructions, the PREPARE command appends to the instruction prefix the string *RECOVERY.INSTRUCTIONS.OFFSITE*.
- ADSM server software install instructions. To find the file containing these instructions, the PREPARE command appends to the instruction prefix the string *RECOVERY.INSTRUCTIONS.INSTALL*.
- ADSM server database recovery instructions. To find the file containing these instructions, the PREPARE command appends to the instruction prefix the string *RECOVERY.INSTRUCTIONS.DATABASE*.
- ADSM server primary storage pool recovery instructions - To find the file containing these instructions, The PREPARE command appends to the instruction prefix the string *RECOVERY.INSTRUCTIONS.STGPOOL*.

When the INSTRPREFIX Parameter is Specified

For the prefix, you can specify:

1. A directory path
2. A directory path followed by a string
3. A string

The following describes the rules for possible prefix specifications:

- To specify a directory path for the prefix, end the prefix with the backslash (\) delimiter. The PREPARE command appends to the prefix the appropriate recovery plan file stanza name. For example, a PREPARE command is issued with the following parameter:

  ```
  INSTRPREFIX=c:\adsmsrv\recinstr\
  ```

  The PREPARE command obtains the recovery instructions from the following files:

  ```
  c:\adsmsrv\recinstr\RECOVERY.INSTRUCTIONS.GENERAL
  c:\adsmsrv\recinstr\RECOVERY.INSTRUCTIONS.OFFSITE
  c:\adsmsrv\recinstr\RECOVERY.INSTRUCTIONS.INSTALL
  c:\adsmsrv\recinstr\RECOVERY.INSTRUCTIONS.DATABASE
  c:\adsmsrv\recinstr\RECOVERY.INSTRUCTIONS.STGPOOL
  ```

  Note: Remember that if you issue the PREPARE command from the ADSM Administrative command line client and the backslash is the last character in the command line, the backslash will be interpreted as a continuation character. To avoid this, simply place the prefix value within quotes. For example:

  ```
  INSTRPREFIX="c:\adsmsrv\recinstr\"
  ```

- If the prefix is a directory path followed by a string, the PREPARE command assumes that the last component (that is, the string) is to be used as part of the filename. The PREPARE command appends to the prefix the appropriate recovery plan file stanza name. For example, a PREPARE command is issued with the following parameter:

  ```
  INSTRPREFIX=c:\adsmsrv\recinstr\accounts
  ```

  The PREPARE command obtains the recovery instructions from the following files:

  ```
  c:\adsmsrv\recinstr\accounts.RECOVERY.INSTRUCTIONS.GENERAL
  c:\adsmsrv\recinstr\accounts.RECOVERY.INSTRUCTIONS.OFFSITE
  c:\adsmsrv\recinstr\accounts.RECOVERY.INSTRUCTIONS.INSTALL
  c:\adsmsrv\recinstr\accounts.RECOVERY.INSTRUCTIONS.DATABASE
  c:\adsmsrv\recinstr\accounts.RECOVERY.INSTRUCTIONS.STGPOOL
  ```

- If the prefix is only a string (that is, the string is not preceded with a directory path name) the PREPARE command appends to the prefix the appropriate recovery plan file stanza name. If the prefix is only a string the directory path used by the PREPARE command is the directory representing this "instance" of the ADSM server which is typically the directory that the ADSM server was originally installed from. For example, if the directory representing this instance of the server is c:\win32app\ibm\adsm\server2 and a PREPARE command is issued with the following parameter:

```
INSTRPREFIX=dock
```

The PREPARE command obtains the recovery instructions from the following files:

```
c:\win32app\ibm\adsm\server2\dock.RECOVERY.INSTRUCTIONS.GENERAL
c:\win32app\ibm\adsm\server2\dock.RECOVERY.INSTRUCTIONS.OFFSITE
c:\win32app\ibm\adsm\server2\dock.RECOVERY.INSTRUCTIONS.INSTALL
c:\win32app\ibm\adsm\server2\dock.RECOVERY.INSTRUCTIONS.DATABASE
c:\win32app\ibm\adsm\server2\dock.RECOVERY.INSTRUCTIONS.STGPOOL
```

When the INSTRPREFIX Parameter is Not Specified

If the INSTRPREFIX parameter is not specified, the prefix is selected in the following order:

1. The prefix defined by the SET DRMINSTRPREFIX command, if it has been defined. For additional information, see the SET DRMINSTRPREFIX command.
2. If the SET DRMINSTRPREFIX command is not defined, the directory path used by the PREPARE command is the directory representing this "instance" of the ADSM server which is typically the directory that the ADSM server was originally installed from. For example, if the directory representing this instance of the server is c:\win32app\ibm\adsm\server2, the PREPARE command obtains the recovery instructions from the following files:

```
c:\win32app\ibm\adsm\server2\RECOVERY.INSTRUCTIONS.GENERAL
c:\win32app\ibm\adsm\server2\RECOVERY.INSTRUCTIONS.OFFSITE
c:\win32app\ibm\adsm\server2\RECOVERY.INSTRUCTIONS.INSTALL
c:\win32app\ibm\adsm\server2\RECOVERY.INSTRUCTIONS.DATABASE
c:\win32app\ibm\adsm\server2\RECOVERY.INSTRUCTIONS.STGPOOL
```

COPYstgpool=*name*

Specifies a list of copy storage pool names. This parameter is optional. The list should contain the copy storage pools that are used during backup of the primary storage pools specified by the PRIMSTGPOOL parameter or its defaults. The PREPARE command collects the volume information for these storage pools and generates the appropriate plan file stanzas. Separate each storage pool name with a comma and no intervening spaces. You can use pattern-matching expressions for each storage pool name. The default is determined in the following order:

1. If a list has been defined with the SET DRMCOPYSTGPOOL command, the PREPARE command uses this list.
2. If a list has not been defined with the SET DRMCOPYSTGPOOL command, all copy storage pools defined to the server are eligible for PREPARE command processing.

PRIMstgpool=*name*

Specifies a list of primary storage pool names. This parameter is optional. The list should contain the primary storage pools you want to restore. PREPARE generates the appropriate plan file stanzas for these storage pools. Separate

each storage pool name with a comma and no intervening spaces. You can use pattern-matching expressions for each storage pool name. The default is determined in the following order:

1. If a list has been defined with the SET DRMPRIMSTGPOOL command, the PREPARE command uses this list.
2. If a list has not been defined with the SET DRMPRIMSTGPOOL command, all primary storage pools defined to the server are eligible for PREPARE command processing.

Examples

Task

Issue the PREPARE command and query the activity log to check the results.

Command: `prepare`

Output:

```
ANR0609I PREPARE started as process 12.
ANS5104I Process number 12 started.
```

Command: `query actlog search=prepare`

Output:

```
09/03/1995 12:01:13  ANR0610I PREPARE started by BOB as process 12.
09/03/1995 12:01:13  ANR6918W PREPARE: Recovery instructions file
                      c:\drmtest\prepare\RECOVERY.INSTRUCTIONS.DATABASE
                      not found.
09/03/1995 12:01:13  ANR6918W PREPARE: Recovery instructions file
                      c:\drmtest\prepare\RECOVERY.INSTRUCTIONS.STGPOOL
                      not found.
09/03/1995 12:01:13  ANR6913W PREPARE: No volumes with backup data
                      exist in copy storage pool CSTORAGEP.
09/03/1995 12:01:13  ANR6913W PREPARE: No volumes with backup data
                      exist in copy storage pool CSTORAGEPSM.
09/03/1995 12:01:14  ANR6920W PREPARE: Generated replacement volume
                      name BACK4X@ is not valid for device class 8MM.
                      Original volume name: BACK4X. Stanza is
                      PRIMARY.VOLUMES.REPLACEMENT macro.
09/03/1995 12:01:14  ANR6900I PREPARE: The recovery plan file
                      c:\drmtest\prepare\r.p.19950903.120113
                      was created.
09/03/1995 12:01:14  ANR0611I PREPARE: Started by BOB as process
                      12 has ended.
```

Related Commands

Table 99. Commands Related to PREPARE

Command	Description
BACKUP DB	Backs up the ADSM database to sequential access volumes.
BACKUP STGPOOL	Backs up a primary storage pool to a copy storage pool.
CANCEL PROCESS	Cancels a background server process.
MOVE DRMEDIA	Moves DRM media onsite and offsite.
QUERY ACTLOG	Searches for and displays messages from the server activity log.
QUERY DRMSTATUS	Displays DRM system parameters.
QUERY PROCESS	Displays information about one or all background server processes.
SET DRMCOPYSTGPOOL	Specifies that copy storage pools are managed by DRM.
SET DRMINSTRPREFIX	Specifies the prefix portion of the path name for the recovery plan instructions.
SET DRMPLANVPOSTFIX	Specifies the replacement volume names in the recovery plan file.
SET DRMPLANPREFIX	Specifies the prefix portion of the path name for the recovery plan.
SET DRMPRIMSTGPOOL	Specifies that primary storage pools are managed by DRM.

QUERY ACTLOG (Search Activity Log for Messages)

Use the QUERY ACTLOG command to search the server activity log for messages, selected by a range of time or date, message number, or string expression. If you do not specify any parameters for this command, all messages that were generated in the last hour are displayed.

Note: You cannot schedule the QUERY ACTLOG command using the DEFINE SCHEDULE command (central scheduling).

The activity log contains all messages that are sent to the server console under normal operation. These messages include session start and termination, background process messages, sequential access media mount information, and inventory expiration. Responses to commands entered at the server console are not recorded in the activity log unless the command affects or starts a background process or client session. In addition, all error messages are retained in the activity log.

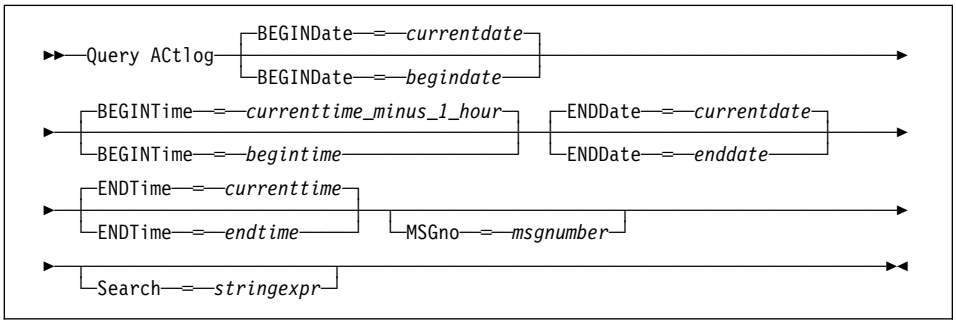
To minimize the processing time when querying the activity log, you should:

- Minimize the length of the time range for querying messages
- Restrict the message number or text string to those for which information is required

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

BEGINDate=*date*

Specifies the beginning date of the range for the messages to be displayed, in MM/DD/YYYY format. This parameter is optional. All messages, meeting the time range criteria, that occurred after this date are displayed. The default value is the current date. Possible values are:

MM/DD/YYYY

Specifies that you want to display information beginning with records created on a specific date, using MM/DD/YYYY format (for example, 01/31/1995).

TODAY
Specifies that you want to display information beginning with records created on the current date.

TODAY–*numdays* **or** –*numdays*
Specifies that you want to display information beginning with records created on the current date minus a specific number of days. The maximum value for the number of days is 9999.

For example, to display information beginning with records created a week ago, you can specify TODAY–7 or simply –7.

BEGINTime=*currenttime_minus_1_hour*
Specifies the beginning time of the range for messages to be displayed, in HH:MM format. All messages, meeting the time range criteria, that occurred after this time are displayed. This parameter is optional. If you do not specify a value for this parameter, all messages that have occurred in the last hour are displayed.

Possible values are:

HH:MM:SS
Specifies that you want to display information beginning with records created at a specific time on the specified begin date using HH:MM:SS format (for example, 12:33:28).

NOW
Specifies that you want to display information beginning with records created on or before the current time on the specified begin date.

NOW+*numhours:numminutes* **or** +*numhours:numminutes*
Specifies that you want to display information beginning with records created on or before the current time plus a specific number of hours (and, optionally, minutes) on the specified begin date.

For example, if you issue the QUERY ACTLOG command at 9:00 with BEGINTime=NOW+3 or BEGINTime=+3, ADSM displays records with a time of 12:00 or later on the specified begin date.

NOW–*numhours:numminutes* **or** –*numhours:numminutes*
Specifies that you want to display information beginning with records created on or before the current time minus a specific number of hours (and, optionally, minutes) on the specified begin date.

For example, if you issue the QUERY ACTLOG command at 9:00 with BEGINTime=NOW–3:30 or BEGINTime=–3:30, ADSM displays records with a time of 5:30 or later on the specified begin date.

ENDDate=*date*
Specifies the ending date of the range for messages to be displayed, in MM/DD/YYYY format. This parameter is optional. All messages, meeting the time range criteria, that have occurred before this date are displayed. If you do not specify a value for this parameter, the current date is used. All the dates and times used are server date and time. Possible values are:

MM/DD/YYYY
Specifies that you want to display information ending with records created on a specific date using MM/DD/YYYY format (for example, 02/28/95).

TODAY
Specifies that you want to display information ending with records created on the current date.

TODAY–*numdays* **or** –*numdays*
Specifies that you want to display information ending with records created on or before the current date minus a specific number of days. The maximum value for the number of days is 9999.

For example, to display all volume history information created up to yesterday, you can specify TODAY–1 or simply –1.

ENDTime=*currenttime*
Specifies the ending time of the range for messages to be displayed, in HH:MM format. All messages, meeting the time range criteria, that have occurred before this time are displayed. This parameter is optional. If you do not specify a value for this parameter, all messages are displayed up to the time that you issued this command.

Possible values are:

HH:MM:SS
Specifies that you want to display information ending with records created on or before a specific time on the specified end date using HH:MM:SS format (for example, 12:33:28).

NOW
Specifies that you want to display information ending with records created on or before the current time on the specified end date.

NOW+*numhours:numminutes* **or** +*numhours:numminutes*
Specifies that you want to display information ending with records created on or before the current time plus a specific number of hours (and, optionally, minutes) on the specified end date.

For example, if you issue the QUERY ACTLOG command at 9:00 with ENDTime=NOW+3 or ENDTime=+3, ADSM displays records with a time of 12:00 or later on the specified end date.

NOW–*numhours:numminutes* **or** –*numhours:numminutes*
Specifies that you want to display information beginning with records created on or before the current time minus a specific number of hours (and, optionally, minutes) on the specified end date.

For example, if you issue the QUERY ACTLOG command at 9:00 with ENDTime=NOW–3:30 or ENDTime=–3:30, ADSM displays records with a time of 5:30 or later on the specified end date.

MSGno=*msgnumber*
Specifies an integer that defines the number of the message to be displayed from the activity log. This is the numeric part of the message without the ANR prefix or the message type suffix (that is, I, W, E, S, or D). This parameter is optional. If you do not specify a value for this parameter, all activity log messages are displayed.

Search=*stringexpr*
Specifies a string expression that you want to search for in the activity log. This parameter is optional. The string expression must be enclosed in quotation marks if it contains blanks. You can use a pattern-matching expression to specify this string. All matching strings are displayed. If you do not specify a value for this parameter, all strings are displayed.

Examples

Task 1

Search the activity log for all messages appearing on April 27, 1995 (04/27/95), between 14:57 and 15:39.

Command: `query actlog begindate=04/27/l995 begintime=14:57 endtime=15:39`

Output:

```
Date/Time            Message
-------------------- ----------------------------------------------------
04/27/1995 14:57:30  ANR0402I Session 17 started for administrator
                      TOMC (AS400).
04/27/1995 15:19:43  ANR0811I Inventory client file expiration
                      started.
04/27/1995 15:19:43  ANR0812I Inventory client file expiration
                      complete: 0 files deleted.
04/27/1995 15:31:30  ANR0482W Session 17 terminated - idle more than
                      15 minute(s).
04/27/1995 15:38:35  ANR0402I Session 18 started for administrator
                      TOMC (AS400).
```

where:

Date/Time
Specifies the date and time that the message was generated.

Message
Specifies the message.

Task 2

Search the activity log for any message that contains the string “delete.” The output includes only messages produced during the past hour.

Command: `query actlog search=delete`

Output:

```
Date/Time            Message
-------------------- ----------------------------------------------------
08/27/1995 15:19:43  ANR0812I Inventory client file expiration
                      complete: 0 files deleted.
```

where:

Date/Time
Specifies the date and time that the message was generated.

Message
Specifies the message.

Task 3

Display messages from the activity log that contain the text string export. Search the activity log for messages that occurred on May 5, 1995 (05/05/1995) after 10:00.

Command: `query actlog begindate=05/05/l995 begintime=10:00 search=export*`

Output:

```
Date/Time            Message
-------------------- ------------------------------------------------
05-05-1995 10:00:27  ANR1360I Export volume EXP001 opened (sequence
                      number 1).
05-05-1995 10:00:27  ANR0610I EXPORT SERVER started by JANET
                      as process 4.
05-05-1995 10:00:27  ANR0639I EXPORT SERVER: Processing domain
                      ACCDOMAIN.
05-05-1995 10:00:27  ANR0639I EXPORT SERVER: Processing domain
                      STANDARD.
05-05-1995 10:00:27  ANR0640I EXPORT SERVER: Processing policy set
                      ACTIVE in policy domain ACCDOMAIN.
05-05-1995 10:00:27  ANR0640I EXPORT SERVER: Processing policy set
                      STANDARD in policy domain ACCDOMAIN.
05-05-1995 10:00:27  ANR0640I EXPORT SERVER: Processing policy set
                      ACTIVE in policy domain STANDARD.
05-05-1995 10:00:27  ANR0640I EXPORT SERVER: Processing policy set
                      STANDARD in policy domain STANDARD.
05-05-1995 10:00:27  ANR0641I EXPORT SERVER: Processing management
                      class STANDARD in domain ACCDOMAIN, set ACTIVE.
05-05-1995 10:00:27  ANR0641I EXPORT SERVER: Processing management
                      class STANDARD in domain ACCDOMAIN, set
                      STANDARD.
05-05-1995 10:00:27  ANR0641I EXPORT SERVER: Processing management
                      class STANDARD in domain STANDARD, set ACTIVE.
05-05-1995 10:00:27  ANR0641I EXPORT SERVER: Processing
                      management class MC in domain STANDARD, set
                      STANDARD.
05-05-1995 10:00:27  ANR0641I EXPORT SERVER: Processing management
                      class STANDARD in domain STANDARD, set STANDARD.
05-05-1995 10:00:28  ANR0643I EXPORT SERVER: Processing archive copy
                      group in domain ACCDOMAIN, set ACTIVE,
                      management class STANDARD.
```

where:

Date/Time
Specifies the date and time that the message was generated.

Message
Specifies the message.

Related Commands

Table 100. Command Related to QUERY ACTLOG

Command	Description
SET ACTLOGRETENTION	Specifies the number of days to retain log records in the activity log.

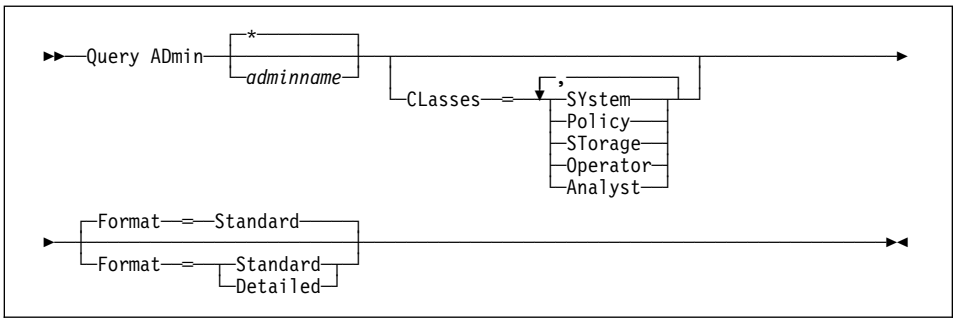
QUERY ADMIN (Display Information on One or More Administrators)

Use the QUERY ADMIN command to display information on one or more administrators.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

adminname

Specifies the name of the administrator for which you want to display information. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching administrator names are included. If you do not specify a value for this parameter, all administrators are displayed.

CLasses=*classes*

Specifies that you want to restrict output to those administrators which have been granted at least one of the specific privilege classes. This parameter is optional. You can specify more than one privilege class in a list, with each name delimited with a comma and no intervening spaces. If you do not specify a value for this parameter, information on all specified administrators is displayed, regardless of privilege class. Possible values are:

SYstem

Specifies that you want to display information on system administrators. A system administrator has the highest level of authority in ADSM. A system administrator can issue any administrative command and has authority to manage all policy domains and all storage pools. Only a system administrator can grant authority to other administrators.

Policy

Specifies that you want to display information on policy administrators (unrestricted and restricted). A policy administrator can issue commands that relate to policy management objects such as policy domains, policy sets, management classes, copy groups, and schedules.

STorage
Specifies that you want to display information on storage administrators (unrestricted and restricted). A storage administrator can issue commands that allocate and control storage resources for the server.

Operator
Specifies that you want to display information on operator administrators. An administrator with operator privilege can issue commands that affect the immediate operation of the server, including server availability and physical media.

Analyst
Specifies that you want to display information on analyst administrators. An administrator with analyst privilege can issue commands that reset the counters which track server performance.

Format=*formatvalue*
Specifies how the information is displayed. This parameter is optional. The default value is STANDARD. Possible values are:

Standard
Specifies that partial information is displayed for the specified administrators.

Detailed
Specifies that complete information is displayed for the specified administrators.

Examples

Task 1

Display partial information on all administrators.

Command: `query admin`

Output:

```
Administrator   Days Since  Days Since   Locked?   Privilege Classes
Name           Last Access    Password
                                 Set
-------------  -----------  ----------  ---------  ------------------
ADMIN                   <1          <1      No     System
SERVER_CONSOLE                          No     System
```

where:

Administrator Name
Specifies the name of the administrator.

Days Since Last Access
Specifies the number of days since the administrator last accessed the server.

QUERY ADMIN

Days Since Password Set
Specifies the number of days since the administrator's password was defined or most recently updated.

Locked?
Specifies whether the administrator is locked out of the system.

Privilege Classes
Specifies the privilege classes for which the administrator has authority.

Task 2

Display complete information for the administrator named ADMIN.

Command: `query admin admin format=detailed`

Output:

```
       Administrator Name: ADMIN
    Last Access Date/Time: 05/31/1996 14:09:18
   Days Since Last Access: <1
   Password Set Date/Time: 05/31/1996 13:02:56
  Days Since Password Set: 1
                  Locked?: No
                  Contact:
         System Privilege:Yes
         Policy Privilege: **Included with system privilege
        Storage Privilege:**Included with system privilege
        Analyst Privilege:**Included with system privilege
       Operator Privilege:**Included with system privilege
   Registration Date/Time:05/31/1996 13:02:56
Registering Administrator:SERVER_CONSOLE
```

where:

Administrator Name
Specifies the name of the administrator.

Last Access Date/Time
Specifies the date and time that the administrator last accessed the server.

Days Since Last Access
Specifies the number of days since the administrator last accessed the server.

Password Set Date/Time
Specifies the date and time that the administrator's password was defined or most recently updated.

Days Since Password Set
Specifies the number of days since the administrator's password was defined or most recently updated.

Locked?
Specifies whether the administrator is locked out of the system.

Contact
Specifies any contact information for the administrator.

System Privilege
Specifies whether the administrator has been granted system privilege.

Policy Privilege
Specifies whether the administrator has been granted unrestricted policy privilege or the names of any policy domains that the restricted policy administrator can manage.

Storage Privilege
Specifies whether the administrator has been granted unrestricted storage privilege or the names of any storage pools that the restricted storage administrator can manage.

Analyst Privilege
Specifies whether the administrator has been granted analyst privilege.

Operator Privilege
Specifies whether the administrator has been granted operator privilege.

Registration Date/Time
Specifies the date and time that the administrator was registered.

Registering Administrator
Specifies the name of the administrator who registered the administrator.

Related Commands

Table 101. Commands Related to QUERY ADMIN

Command	Description
GRANT AUTHORITY	Assigns one or more privilege classes to an administrator.
REGISTER ADMIN	Defines a new administrator without granting administrative authority.
REMOVE ADMIN	Removes an administrator from the list of registered administrators.
RENAME ADMIN	Changes an ADSM administrator's name.
REVOKE AUTHORITY	Revokes one or more privilege classes or restricts access to policy domains and storage pools.

QUERY ASSOCIATION

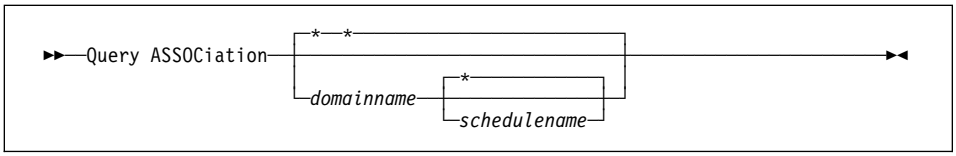
QUERY ASSOCIATION (Query Client Node Associations with a Schedule)

Use the QUERY ASSOCIATION command to display the client nodes associated with one or more schedules. Client nodes that are associated with a schedule perform backup or archive operations according to that schedule.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

domainname

Specifies the name of the policy domain that you want to display. You can use a pattern-matching expression to specify this name. All matching policy domain names are displayed. If you do not specify a value for this parameter, all existing policy domains are queried. If you specify a domain name, you do not have to specify a schedule name.

schedulename

Specifies the name of the schedule that you want to display. You can use a pattern-matching expression to specify this name. All matching schedule names are displayed. If you do not specify a value for this parameter, all existing schedules are queried. If you specify a schedule name, you must also specify a policy domain name.

Examples

Task 1

Display all the clients that are associated with each schedule that belongs to the EMPLOYEE_RECORDS policy domain.

Command: `query association employee_records *`

Output:

```
Policy Domain Name: EMPLOYEE_RECORDS
     Schedule Name: WEEKLY_BACKUP
  Associated Nodes: JOE JOHNSON LARRY SMITH SMITHERS TOM
```

where:

Policy Domain Name
Specifies the name of the policy domain to which the schedule belongs.

Schedule Name
Specifies the name of the schedule that belongs to the specified policy domain.

Associated Nodes
Specifies the names of the clients that are currently associated with the specified schedule.

Task 2

Display all the clients that are assigned to the DOMAIN1 policy domain and associated with the WINTER schedule.

Command: `query association domain1 winter`

Output:

```
Policy Domain Name: DOMAIN1
     Schedule Name: WINTER
  Associated Nodes: DAVE DAVID LARRY MARIE
```

where:

Policy Domain Name
Specifies the name of the policy domain to which the schedule belongs.

Schedule Name
Specifies the name of the schedule that belongs to the specified policy domain.

Associated Nodes
Specifies the names of the clients that are currently associated with the specified schedule.

QUERY ASSOCIATION

Related Commands

Table 102. Commands Related to QUERY ASSOCIATION

Command	Description
DEFINE ASSOCIATION	Associates one or more clients with a schedule.
DELETE ASSOCIATION	Deletes the association between one or more clients and a schedule.

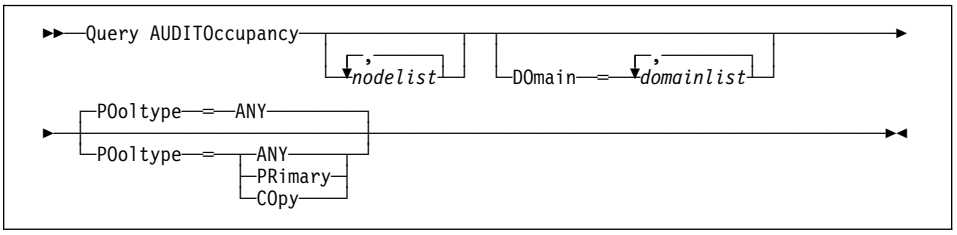
QUERY AUDITOCCUPANCY (Query Client Node Storage Utilization)

Use the QUERY AUDITOCCUPANCY command to display information about the client node server storage utilization. The displayed information is current as of the last license audit processed by the ADSM server. You can use this information to determine if and where client node storage utilization needs to be balanced. This information can also assist with billing clients for storage usage.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

nodelist

Specifies a list of nodes for which server storage utilization information is to be displayed. You can specify more than one node by separating the node names with commas, with no intervening spaces. This parameter is optional. You can use pattern-matching expressions to specify names. The default (*) is to query all client nodes. You can also limit this list by policy domain via the optional DOMAIN parameter.

DOmain=*domainlist*

Specifies a list of policy domains to restrict which nodes are displayed. This parameter is optional. Only nodes belonging to the specified policy domains are displayed. You can specify more than one policy domain by separating the policy domain names with commas, with no intervening spaces. You can use pattern-matching expressions to specify names.

POoltype=*value*

Specifies whether to display storage usage in primary storage pools only, copy storage pools only, or both primary and copy storage pools. This parameter is optional. The default is ANY. Possible values are:

ANY

Specifies that the storage usage displayed includes files stored in both primary and copy storage pools. The value presented is the total for the two pools.

PRimary

Specifies that storage usage in primary storage pools is displayed.

QUERY AUDITOCCUPANCY

COpy
Specifies that storage usage in copy storage pools is displayed.

Examples

Task

Display combined storage utilization in primary and copy storage pools.

Command: `query auditoccupancy`

Output:

```
License information as of last audit on 05/22/1996 14:49:51.

Client Node Name          Backup    Archive  Space-Managed    Total
                         Storage    Storage  Storage Used   Storage
                       Used (MB)  Used (MB)          (MB) Used (MB)
---------------------  --------- ---------- ------------  ---------
CLIENT                       245         20             0        265
SMITH                        245         20             0        265
SMITHERS                     245         20             0        265
JOHNSON                      300         15             0        320
JOE                          245         20             0        265
TOM                          300         15             0        320
LARRY                        245         20             0        265
```

where:

Client Node Name
Specifies the name of the client node.

Backup Storage Used (MB)
Specifies, in megabytes, the total backup storage utilization for the node.

Archive Storage Used (MB)
Specifies, in megabytes, the total archive storage utilization for the node.

Space-Managed Storage Used (MB)
Specifies, in megabytes, the amount of server storage used to store files migrated from the client node.

Total Storage Used (MB)
Specifies, in megabytes, the total client storage utilization (for backup, archive, and space management) for the node.

Related Commands

Table 103. Commands Related to QUERY AUDITOCCUPANCY

Command	Description
AUDIT LICENSES	Checks for compliance with defined licenses.
QUERY LICENSE	Displays information about licenses and audits.
QUERY STATUS	Displays the settings of server parameters, such as those selected by the SET commands.
REGISTER LICENSE	Registers a new license with the ADSM server.
SET LICENSEAUDITPERIOD	Specifies the number of days between automatic license audits.

QUERY CONTENT (Query the Contents of a Storage Pool Volume)

Use the QUERY CONTENT command to display information about one or more files currently residing in a storage pool volume. This command can also be used to identify files that have been found to be damaged and files that have been backed up to a copy storage pool.

This command is useful when a volume is damaged or before you:

- Request the server to fix any inconsistencies between a volume and the database
- Move files from one volume to another volume
- Delete a volume from a storage pool

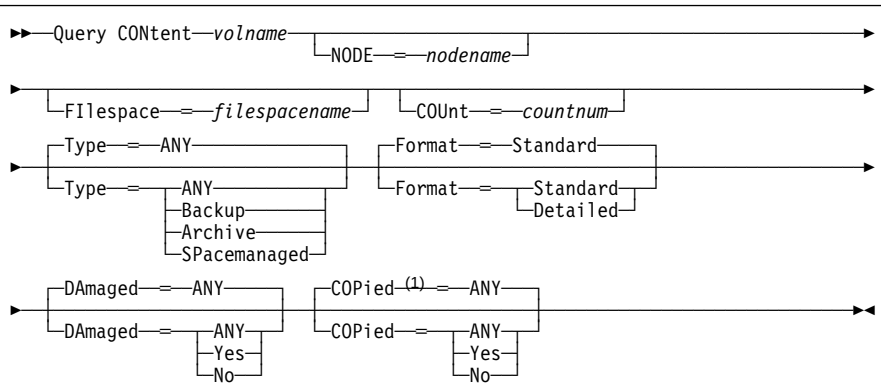
Because the results of this command can take a long time to execute and can be extremely large, it is recommended that you use the COUNT parameter to limit the number of files displayed.

Note: Files in cache that are marked as damaged are never displayed.

Privilege Class

Any administrator can issue this command.

Syntax



Note:
1 Use this parameter only for volumes in primary storage pools.

Parameters

volname
Specifies the name of the volume to be queried. This parameter is required.

NODE=*nodename*
Specifies the name of the backup-archive client or space management client associated with the file space to be queried. This parameter is optional. You

can use a pattern-matching expression to specify this name. If you do not specify a name, all backup-archive and space management clients are included.

FIlespace=*filespacename*
Specifies the name of the file space to queried. This parameter is optional. You can use a pattern-matching expression to specify this name. File space names are case-sensitive. If you do not specify a file space name, all file spaces are included.

COUnt=*countnum*
Specifies the number of files to be displayed. This parameter is optional. You can specify either a negative integer or a positive integer. If you specify a positive integer, *n*, the first *n* files are displayed. If you specify a negative integer, *-n*, the last *n* files are displayed in *reverse* order. You cannot specify COUNT=0. If you do not specify a value for this parameter, all files are displayed.

Type=*filetype*
Specifies the type of file space to be queried. This parameter is optional. The default value is ANY. Possible values are:

ANY
Specifies that all types of files in the specified storage pool volume are queried: backup versions of files, archived copies of files, and files migrated from one or more client nodes.

Backup
Specifies that only backup file spaces are queried.

Archive
Specifies that only archive file spaces are queried.

SPacemanaged
Specifies that only space management file spaces (files migrated from one or more client nodes) are queried.

Format=*formatvalue*
Specifies how the information is displayed. This parameter is optional. The default value is STANDARD. Possible values are:

Standard
Specifies that partial information is displayed for the specified storage pool volume.

Detailed
Specifies that complete information is displayed for the specified storage pool volume.

DAmaged=*value*
Specifies whether to restrict the query output either to files that are known to be damaged, or to files that are not known to be damaged. This parameter is optional. The default value is ANY.

QUERY CONTENT

Possible values are:

ANY
Specifies that files are displayed regardless of whether the files have been found to be damaged.

Yes
Specifies that only files that have been damaged are displayed. These are files that were found to have data integrity errors when a user attempted to restore, retrieve, or recall the file, or when an AUDIT VOLUME operation was run.

No
Specifies that only files *not* known to have data integrity errors are displayed.

COPied=*value*
Specifies whether to restrict the query output either to files that are backed up to a copy storage pool, or to files that are not backed up to a copy storage pool. This parameter is optional. The default value is ANY. Possible values are:

ANY
Specifies that files are displayed regardless of whether the files are backed up to a copy storage pool. Primary and cached file copies are displayed.

Yes
Specifies that the only files displayed are those for which at least one, usable backup copy exists in a copy storage pool. A file is not displayed if its copy in the copy storage pool is known to have data integrity errors. Cached file copies are not displayed, because these files are never restored.

Use COPIED=YES to identify primary files that can be restored using the RESTORE VOLUME or RESTORE STGPOOL command.

No
Specifies that the only files displayed are those for which no usable backup copies exist in a copy storage pool. Cached file copies are not displayed, because these files are never restored.

Use COPIED=NO to identify primary files that cannot be restored using the RESTORE VOLUME or RESTORE STGPOOL command.

Examples

Task 1

Query the contents of the volume named PAYROLL.STG1. Only display the first four files of the output.

Command: `query content payroll.stg1 count=4`

Output:

```
Node Name  Type Filespace  Client's Name for File
                Name
---------- ---- ---------- ----------------------
BIGBUCKS   Bkup OS2C       \ AUTOEXEC.BAT
BIGBUCKS   Bkup OS2C       \ CONFIG.SYS
BIGBUCKS   Bkup OS2C       \ MRFILEPM.DBG
BIGBUCKS   Bkup OS2C       \ OS2KRNL
```

where:

Node Name
Specifies the name of the node to which the specified file belongs.

Type
Specifies the type of file, either BACKUP or ARCHIVE.

Filespace Name
Specifies the name of the file space to which the specified file belongs.

Client's Name for File
Specifies the name of the file.

Task 2

Query the contents of the volume named STGVOL.1. Only display the last 3 files of the output.

Command: `query content stgvol.1 count=-3 format=detailed`

QUERY CONTENT

Output:

```
             Node Name: BILL
                  Type: Bkup
        Filespace Name: DDRIVE
Client's Name for File: \APPS\TRASHCAN\TOOLKIT\ASM\
                        OS2INC\ VLPT.INC
           Stored Size: 435
        Segment Number: 1/1
          Cached Copy?: Yes

             Node Name: BILL
                  Type: Bkup
        Filespace Name: DDRIVE
Client's Name for File: \APPS\TRASHCAN\TOOLKIT\ASM\
                        OS2INC\ VKBD.INC
           Stored Size: 2,358
        Segment Number: 1/1
          Cached Copy?: Yes

             Node Name: BILL
                  Type: Bkup
        Filespace Name: DDRIVE
Client's Name for File: \APPS\TRASHCAN\TOOLKIT\ASM\
                        OS2INC\ VDOS.INC
           Stored Size: 962
        Segment Number: 1/1
          Cached Copy?: Yes
```

where:

Node Name
Specifies the name of the node to which the specified file belongs.

Type
Specifies the type of file, either BACKUP or ARCHIVE.

Filespace Name
Specifies the name of the file space to which the specified file belongs.

Client's Name for File
Specifies the name of the file.

Stored Size
Specifies the size of the file, in bytes.

Segment Number
Specifies whether the file is stored across multiple volumes. For example, if the specified file is stored across two volumes, the segment number indicates *1/2* (the first part of the file is stored on the specified volume) or *2/2* (the second part

of the file is stored on the specified volume). If the segment number is *1/1*, the file is completely stored on the specified volume.

Cached Copy?
Specifies whether the specified file is a cached copy of a migrated file.

Related Commands

Table 104. Commands Related to QUERY CONTENT

Command	Description
BACKUP STGPOOL	Backs up a primary storage pool to a copy storage pool.
DEFINE VOLUME	Assigns a volume to be used for storage within a specified storage pool.
DELETE VOLUME	Deletes a volume from a storage pool.
RESTORE STGPOOL	Restores files to a primary storage pool from copy storage pools.
RESTORE VOLUME	Restores files stored on specified volumes in a primary storage pool from copy storage pools.
UPDATE VOLUME	Updates the attributes of one or more storage pool volumes.

QUERY COPYGROUP

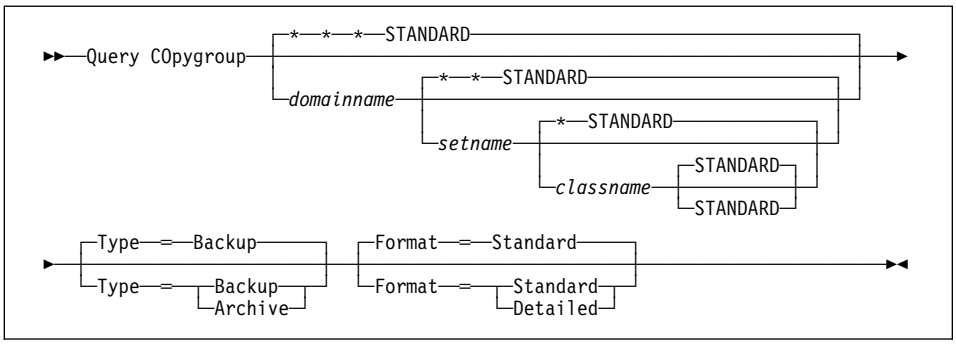
QUERY COPYGROUP (Query One or More Copy Groups)

Use the QUERY COPYGROUP command to display information about one or more copy groups.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

domainname

Specifies the name of the policy domain associated with the copy group to be queried. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching policy domains are queried. If you do not specify a value for this parameter, all policy domains are queried. You must specify this parameter when querying an explicitly named copy group.

setname

Specifies the name of the policy set associated with the copy group to be queried. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching policy sets are queried. If you do not specify a value for this parameter, all policy sets are queried. You must specify this parameter when querying an explicitly named copy group.

classname

Specifies the name of the management class associated with the copy group to be queried. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching management classes are queried. If you do not specify a value for this parameter, all management classes are queried. You must specify this parameter when querying an explicitly named copy group.

STANDARD

Specifies the name of the copy group. This parameter is optional. The name of the copy group must be STANDARD. If you do not specify a value for this parameter, the system defaults to STANDARD.

Type=*type*
Specifies the type of copy group to be queried. This parameter is optional. The default value is BACKUP. Possible values are:

Backup
Specifies that you want to query backup copy groups.

Archive
Specifies that you want to query archive copy groups.

Format=*formatvalue*
Specifies how the information is displayed. This parameter is optional. The default value is STANDARD. Possible values are:

Standard
Specifies that partial information is displayed for the specified copy group.

Detailed
Specifies that complete information is displayed for the specified copy group.

Examples

Task 1

Display complete information on the backup copy group assigned to the ACTIVEFILES management class in the VACATION policy set of the EMPLOYEE_RECORDS policy domain.

Command:
```
query copygroup employee_records vacation activefiles
format=detailed
```

Output:

```
            Policy Domain Name: EMPLOYEE_RECORDS
               Policy Set Name: VACATION
               Mgmt Class Name: ACTIVEFILES
               Copy Group Name: STANDARD
               Copy Group Type: Backup
         Versions Data Exists: 5
        Versions Data Deleted: 1
        Retain Extra Versions: 30
          Retain Only Version: 60
                    Copy Mode: Absolute
           Copy Serialization: Shared Static
               Copy Frequency: 3
             Copy Destination: BACKUPPOOL
Last Update by (administrator): ADMIN
         Last Update Date/Time: 05/31/1996 13:15:47
```

where:

QUERY COPYGROUP

Policy Domain Name
Specifies the name of the policy domain.

Policy Set Name
Specifies the name of the policy set.

Mgmt Class Name
Specifies the name of the management class.

Copy Group Name
Specifies the name of the copy group. This name must be STANDARD.

Copy Group Type
Specifies the type of the copy group.

Versions Data Exists
Specifies the maximum number of backup versions that are retained by the server for files that are on the client's file system.

Versions Data Deleted
Specifies the maximum number of backup versions that are retained by the server for files that have been deleted from the client's file system.

Retain Extra Versions
Specifies how many days ADSM retains a backup version after that version becomes inactive (that is, a more recent backup version is stored).

Retain Only Version
Specifies the retention time, in days, for the last backup version of a file that has been deleted from the client's file system.

Copy Mode
Specifies whether files in the copy group are backed up depending on whether the file has been modified since the last backup. The copy mode value is only used for incremental backup, this value is ignored during selective backup. This value can be MODIFIED or ABSOLUTE.

Copy Serialization
Specifies whether a file can be in use during a backup operation.

Copy Frequency
Specifies the minimum interval in days between backups.

Copy Destination
Specifies the name of the storage pool where the backup copy group's files are to reside.

Last Update by (administrator)
Specifies the name of the administrator that defined or most recently updated the copy group.

Last Update Date/Time
Specifies the date and time that the administrator defined or most recently updated the copy group.

Task 2

Display complete information on the archive copy group STANDARD that is assigned to the ACTIVEFILES management class in the VACATION policy set of the EMPLOYEE_RECORDS policy domain.

Command:
```
query copygroup employee_records vacation activefiles
type=archive format=detailed
```

Output:

```
            Policy Domain Name: EMPLOYEE_RECORDS
               Policy Set Name: VACATION
               Mgmt Class Name: ACTIVEFILES
               Copy Group Name: STANDARD
               Copy Group Type: Archive
                Retain Version: 730
            Copy Serialization: Shared Static
                Copy Frequency: Comand
                     Copy Mode: Comand
              Copy Destination: ARCHIVEPOOL
Last Update by (administrator): ADMIN
         Last Update Date/Time: 05/31/1996 13:15:47
```

where:

Policy Domain Name
Specifies the name of the policy domain.

Policy Set Name
Specifies the name of the policy set.

Mgmt Class Name
Specifies the name of the management class.

Copy Group Name
Specifies the name of the copy group. This name must be STANDARD.

Copy Group Type
Specifies the type of the copy group.

Retain Version
Specifies the number of days to keep an archive copy.

Copy Serialization
Specifies whether a file can be in use during an archive operation.

Copy Frequency
Specifies the copy frequency of the copy group. For archive copy groups, this value must be CMD.

QUERY COPYGROUP

Copy Mode
Specifies that files in the copy group are archived regardless of whether they have been modified. For archive copy groups, this value must be ABSOLUTE.

Copy Destination
Specifies the name of the storage pool where the archive copy group's files are to reside.

Last Update by (administrator)
Specifies the name of the administrator that defined or most recently updated the copy group.

Last Update Date/Time
Specifies the date and time that the administrator defined or most recently updated the copy group.

Related Commands

Table 105. Commands Related to QUERY COPYGROUP

Command	Description
DEFINE COPYGROUP	Defines a copy group for backup or archive processing within a specified management class.
DELETE COPYGROUP	Deletes a backup or archive copy group from a policy domain and policy set.
UPDATE COPYGROUP	Changes one or more attributes of a copy group.

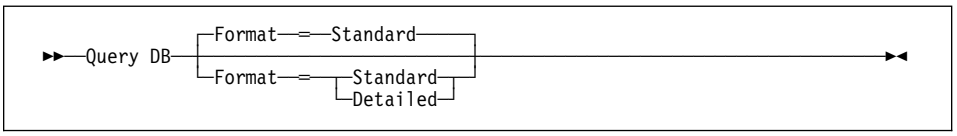
QUERY DB (Display Information on the Database)

Use the QUERY DB command to display allocation information for the database, including information about utilization, expansion, and reduction abilities.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

Format=*formatvalue*

Specifies how the information is displayed. This parameter is optional. The default value is STANDARD. Possible values are:

Standard

Specifies that partial information is displayed for the database.

Detailed

Specifies that complete information is displayed for the database.

Examples

Task 1

Display statistical information about the database.

Command: `query db`

Output:

```
Available Assigned   Maximum   Maximum    Page  Total  Used %Util  Max.
    Space Capacity Extension Reduction    Size  Pages Pages       %Util
     (MB)     (MB)      (MB)      (MB) (bytes)
--------- -------- --------- --------- ------- ------ ----- ----- -----
        8        4         4         0   4,096  1,024    94   9.2   9.2
```

where:

Available Space (MB)

Specifies the amount of space available in the database, in megabytes.

QUERY DB

Assigned Capacity (MB)
Specifies the assigned storage capacity for the database, in megabytes.

Maximum Extension (MB)
Specifies the maximum amount the database can be extended, in megabytes.

Maximum Reduction (MB)
Specifies the maximum amount the database can be reduced, in megabytes.

Page Size (bytes)
Specifies the page size, in bytes.

Total Pages
Specifies the total number of pages available in the database. A page is a unit of allocation within database volumes. The total number of pages will always be a multiple of the Assigned Capacity value, by a factor of 256 (1 megabyte/256 pages).

Used Pages
Specifies the total number of pages currently being used by the database.

%Util
Specifies the current utilization value as a percentage of the value for the assigned capacity.

Max. %Util
Specifies the maximum occupancy for the database, as a percentage of the available space. This value specifies the highest capacity occupied, or "high water mark" for database utilization. You can reset this value with the RESET DBMAXUTILIZATION command.

Task 2

Display statistical information about the database in complete detail.

Command: `query db format=detailed`

Output:

```
         Available Space (MB): 8
       Assigned Capacity (MB): 4
       Maximum Extension (MB): 4
       Maximum Reduction (MB): 0
            Page Size (bytes): 4,096
           Total Usable Pages: 1,024
                   Used Pages: 94
                        %Util: 9.2
                  Max. %Util: 9.2
             Physical Volumes: 3
            Buffer Pool Pages: 64
        Total Buffer Requests: 4,702
               Cache Hit Pct.: 97.68
              Cache Wait Pct.: 0.00
          Backup in Progress?: No
   Type of Backup In Progress:
  Incrementals Since Last Full: 0
Changed Since Last Backup (MB): 0.37
          Percentage Changed: 100.00
Last Complete Backup Date/Time:
```

where:

Available Space (MB)
Specifies the amount of space available in the database, in megabytes.

Assigned Capacity (MB)
Specifies the assigned storage capacity for the database, in megabytes.

Maximum Extension (MB)
Specifies the maximum amount the database can be extended, in megabytes.

Maximum Reduction (MB)
Specifies the maximum amount the database can be reduced, in megabytes.

Page Size (bytes)
Specifies the page size, in bytes.

Total Usable Pages
Specifies the total number of pages available in the database. A page is a unit of allocation within database volumes. The total number of pages will always be a multiple of the Assigned Capacity value, by a factor of 256 (1 megabyte/256 pages).

QUERY DB

Used Pages

Specifies the total number of pages currently being used by the database.

%Util

Specifies the current utilization as a percentage value of the assigned capacity.

Max. %Util

Specifies the maximum occupancy for the database, as a percentage of the available space. This value specifies the highest capacity occupied, or "high water mark" for database utilization. You can reset this value with the RESET DBMAXUTILIZATION command.

Physical Volumes

Specifies the number of volumes defined to the database, including database copies.

Buffer Pool Pages

Specifies the number of pages in the database buffer pool. This value is determined by the value for the BUFFPOOLSIZE option. The default value for the BUFFPOOLSIZE option is 512 kilobytes (128 pages).

Total Buffer Requests

Specifies the cumulative number of requests for database pages, since the last RESET BUFPOOL command (or since the server was last started). You can reset this value with the RESET BUFPOOL command.

Cache Hit Pct.

Specifies, as a percentage of the total number of database requests, the number of requests for a database page that is already in the database buffer pool. Requesting pages that are already in the buffer pool increases database performance. You can reset this value with the RESET BUFPOOL command.

Cache Wait Pct.

Specifies, as a percentage, the number requests for a database buffer pool page that was unavailable (because all database buffer pool pages are occupied). If this number is greater than 0.0, you should increase the size of the buffer pool with the BUFFPOOLSIZE option. You can reset this value with the RESET BUFPOOL command.

Backup in Progress?
Specifies whether a backup of the database is in progress.

Type of Backup in Progress
Specifies whether the type of backup of the database is a full or incremental backup.

Incremental Since Last Full
Specifies the number of incremental backups that have been run since the last full backup of the database was done.

Changed Since Last Backup (MB)
Specifies the database pages (in megabytes) that have changed since the last backup of the database.

Percentage Changed
Specifies, as a percentage, the number of database pages that changed since the last backup of the database.

Last Complete Backup Date/Time
Specifies the data and time of the last complete backup of the database.

Related Commands

Table 106. Commands Related to QUERY DB

Command	Description
BACKUP DB	Backs up the ADSM database to sequential access volumes.
DEFINE DBCOPY	Creates a volume copy of a database volume.
DEFINE DBVOLUME	Assigns a volume to be used for database storage.
EXTEND DB	Extends usable database storage within the volumes previously allocated for its use.
EXTEND LOG	Extends usable log storage within the volumes previously allocated for its use.
REDUCE DB	Attempts to free up a database volume by reducing usable storage within the volumes defined.
REDUCE LOG	Attempts to free up a log volume by reducing usable storage within the volumes defined.
RESET BUFPOOL	Resets the buffer pool statistics for the database.
RESET DBMAXUTILIZATION	Resets the maximum utilization statistic for the database.

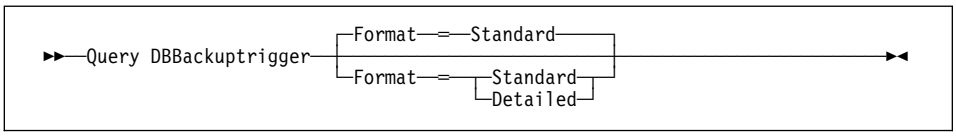
QUERY DBBACKUPTRIGGER (Query the Database Backup Trigger)

Use the QUERY DBBACKUPTRIGGER command to display the current settings for the database backup trigger.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

Format=*formatvalue*

Specifies how the information is displayed. This parameter is optional. The default value is STANDARD. Possible values are:

Standard

Specifies that partial information is displayed for the database backup trigger.

Detailed

Specifies that complete information is displayed for the database backup trigger.

Examples

Task

Display the current settings for the database backup trigger.

Command: `query dbbackuptrigger format=detailed`

Output:

```
            Full Device Class: FILE
     Incremental Device Class: FILE
          Log Full Percentage: 50
   Incrementals Between Fulls: 6
Last Update by (administrator): JANET
         Last Update Date/Time: 05/31/1995 11:15:35
```

where:

Full Device Class

Specifies the name of the device class used for full backups.

Incremental Device Class
Specifies the name of the device class used for incremental backups.

Log Full Percentage
Specifies the percentage of space used for the recovery log at which ADSM performs an automatic backup of the database.

Incrementals Between Fulls
Specifies the number of incremental backups ADSM runs between full backups of the database.

Last Update by (administrator)
Specifies the name of the administrator that most recently updated the database.

Last Update Date/Time
Specifies when the administrator most recently updated the database.

Related Commands

Table 107. Commands Related to QUERY DBBACKUPTRIGGER

Command	Description
DEFINE DBBACKUPTRIGGER	Defines a trigger for automatic ADSM database backups.
DELETE DBBACKUPTRIGGER	Deletes the database backup trigger.
UPDATE DBBACKUPTRIGGER	Changes one or more attributes of the database backup trigger.

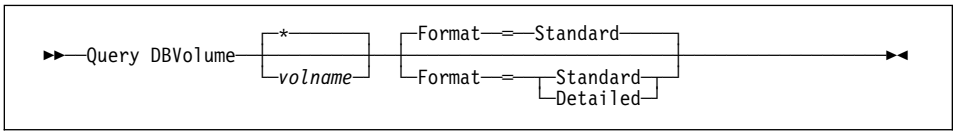
QUERY DBVOLUME (Display Information on One or More Database Volumes)

Use the QUERY DBVOLUME command to display information on one or more database volumes, including available, allocated, and free space on the volume. This command displays information about the specified database volume and any database volume copies.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

volname

Specifies the name of the database volume to be queried. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching volume names are displayed. If you do not specify a volume name, information on all database volumes is displayed.

Format=*formatvalue*

Specifies how the information is displayed. This parameter is optional. The default value is STANDARD. Possible values are:

Standard

Specifies that partial information for the specified database volumes is displayed.

Detailed

Specifies that complete information for the specified database volumes is displayed.

Examples

Task 1

Display information on the database volume named db1.dsm, located in the server directory.

Command: `query dbvolume db1.dsm`

Output:

```
Volume Name       Copy    Volume Name      Copy    Volume Name  Copy
(Copy 1)          Status  (Copy 2)         Status  (Copy 3)     Status
----------------  ------  ---------------- ------  ----------   -------
L:\WIN32APP\IBM-  Sync'd  L:\WIN32APP\IBM- Sync'd                Undef-
 \ADSM\SERVER\D-           \ADSM\SERVER\D-                      ined
 B1.DSM                    B3.DSM
```

where:

Volume Name (Copy *n*)
Specifies the name of the database volume. The output displays status of the three volume copies (Copy 1, Copy 2, and Copy 3).

Copy Status
Specifies the status of the database volume. Possible values are:

Offline
The volume is varied offline.

Stale
The volume is not synchronized with the other volumes in the database and cannot be used for storage.

Sync'd
The volume is synchronized with the other volumes in the database and can be used for storage.

Undefined
No volume has been defined.

QUERY DBVOLUME

Task 2

Display information in detail on the database volume named db1.dsm.

Command: `query dbvolume db1.dsm format=detailed`

Output:

```
Volume Name (Copy 1): L:\WIN32APP\IBM\ADSM\SERVER\DB1.DSM
         Copy Status: Sync'd
Volume Name (Copy 2): L:\WIN32APP\IBM\ADSM\SERVER\DB3.DSM
         Copy Status: Sync'd
Volume Name (Copy 3):
         Copy Status: Undefined
Available Space (MB): 4
Allocated Space (MB): 4
     Free Space (MB): 0
```

where:

Volume Name (Copy *n*)
Specifies the name of the database volume. The output displays status of the three volume copies (Copy 1, Copy 2, and Copy 3).

Copy Status
Specifies the status of the database volume. Possible values are:

Offline
The volume is varied offline.

Stale
The volume is not synchronized with the other volumes in the database and cannot be used for storage.

Sync'd
The volume is synchronized with the other volumes in the database and can be used for storage.

Undefined
No volume has been defined.

Available Space (MB)
Specifies the total amount of space that is available, both allocated and free, for the database volume, in megabytes.

Allocated Space
Specifies the amount of space allocated to the database volume, in megabytes.

Free Space
Specifies the amount of unassigned space for this mirror set that can be allocated for use, in megabytes.

Related Commands

Table 108. Commands Related to QUERY DBVOLUME

Command	Description
DEFINE DBCOPY	Creates a volume copy of a database volume.
DEFINE DBVOLUME	Assigns a volume to be used for database storage.
DELETE DBVOLUME	Deletes a volume from the database.
VARY	Specifies whether a disk volume is available to the server for use.

QUERY DEVCLASS

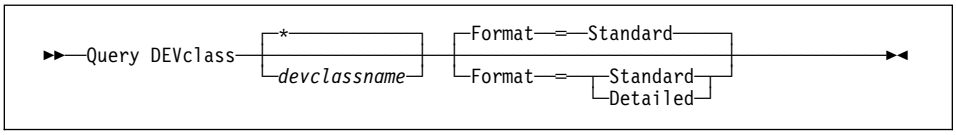
QUERY DEVCLASS (Display Information on One or More Device Classes)

Use the QUERY DEVCLASS command to display information on one or more device classes.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

devclassname

Specifies the name of the device class to be queried. This parameter is optional. You can use wildcard characters to specify this name. All matching device classes are displayed. If you do not specify a value for this parameter, all device classes are displayed.

Format=*formatvalue*

Specifies how the information is displayed. This parameter is optional. The default value is STANDARD. Possible values are:

Standard

Specifies that partial information is displayed for the specified device class.

Detailed

Specifies that complete information is displayed for the specified device class.

Examples

Task 1

Display information on all device classes.

Command: `query devclass`

Output:

```
Device     Device     Storage  Device Format  Est/Max  Mount
Class      Access        Pool  Type           Capacity Limit
Name       Strategy     Count                     (MB)

---------  ---------- -------  ------ ------  -------- -----
8MMTAPE    Sequential       1  8MM    DRIVE    6,144.0     2
DISK       Random           4
PLAINFIL-  Sequential       1  FILE                50.0     1
ES
```

where:

Device Class Name
Specifies the name of the device class.

Device Access Strategy
Specifies how data is written to the device class.

Storage Pool Count
Specifies the number of storage pools that are assigned to the device class.

Device Type
Specifies the device type of the device class.

Format
Specifies the recording format.

Est/Max Capacity (MB)
Specifies the estimated or maximum capacity of a volume associated with this device class.

Mount Limit
Specifies the maximum number of sequential access volumes that can be mounted concurrently.

QUERY DEVCLASS

Task 2

Display information in full detail on the PLAINFILES device class.

Command: `query devclass plainfiles format=detailed`

Output:

```
             Device Class Name: PLAINFILES
        Device Access Strategy: Sequential
            Storage Pool Count: 1
                   Device Type: FILE
                        Format:
         Est/Max Capacity (MB): 50.0
                   Mount Limit: 1
              Mount Wait (min):
         Mount Retention (min):
                  Label Prefix:
                  Drive Letter:
                       Library:
                     Directory:
Last Update by (administrator): ADMIN
          Last Update Date/Time: 05/31/1996 13:15:36
```

where:

Device Class Name
Specifies the name of the device class.

Device Access Strategy
Specifies how data is written to the device class.

Storage Pool Count
Specifies the number of storage pools that are assigned to the device class.

Device Type
Specifies the device type of the device class.

Format
Specifies the recording format.

Est/Max Capacity (MB)
Specifies the estimated or maximum capacity of a volume associated with this device class.

Mount Limit
Specifies the maximum number of sequential access volumes that can be mounted concurrently.

Mount Wait (min)
Specifies the maximum length of time, in minutes, to wait for a sequential access volume to be mounted.

Mount Retention (min)
Specifies the amount of time, in minutes, to retain an idle sequential access volume before dismounting it.

Label Prefix
Specifies the high-level qualifier of the data set name which the server writes into the sequential access media labels.

Drive Letter
Specifies the drive letter of the device.

Library
Specifies the name of the defined library object that contains the drives used by this device class.

Directory
Specifies, when applicable, the directory location of the file or files used in a device class.

Last Update by (administrator)
Specifies the administrator that made the last update to the device class.

Last Update Date/Time
Specifies the date and time of the last update.

Related Commands

Table 109. Commands Related to QUERY DEVCLASS

Command	Description
DEFINE DEVCLASS	Defines a device class that can be used for storage pools, importing, or exporting.
DELETE DEVCLASS	Deletes a device class name.
UPDATE DEVCLASS	Changes the attributes of a device class.

QUERY DOMAIN (Query One or More Policy Domains)

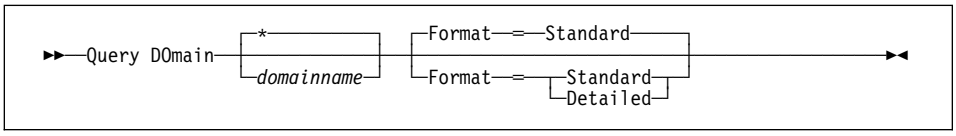
Use the QUERY DOMAIN command to display information on one or more policy domains. The QUERY DOMAIN command is useful in displaying the name of the policy set last activated and its default management class.

There is a difference between the "activated policy set," as displayed in the QUERY DOMAIN command and the "ACTIVE" policy set. When a policy set is activated, the contents of the policy set are copied to a policy set that has the reserved name ACTIVE. Once activated, there is no real relationship between the policy set that has been activated (copied to ACTIVE) and the contents of the ACTIVE policy set. The original policy set can still be modified, but the copied definitions in the ACTIVE policy set can only be modified by activating another policy set. Because of this copying process, you should not assume that the definitions in the policy set that was last activated are the same as those in the ACTIVE policy set; the original policy set may have been modified since activation.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

domainname

Specifies the name of the policy domain to be queried. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching policy domains are displayed. If you do not specify a value for this parameter, all policy domains are displayed.

Format=*formatvalue*

Specifies how the information is displayed. This parameter is optional. The default value is STANDARD. Possible values are:

Standard

Specifies that partial information is displayed for the specified policy domain.

Detailed

Specifies that complete information is displayed for the specified policy domain.

Examples

Task 1

Display partial information for all policy domains.

Command: `query domain`

Output:

```
Policy       Activated    Activated     Number of    Description
Domain       Policy       Default      Registered
Name         Set          Mgmt              Nodes
                          Class
---------    ---------    ---------    ----------    ------------------
EMPLOYEE-    VACATION     ACTIVEFI-             6
 _RECORDS                  LES
PROG1                                           0    Programming Group
                                                      Domain
PROG2                                           0    Programming Group
                                                      Domain
STANDARD     STANDARD     STANDARD               1    Installed default
                                                      policy domain
```

where:

Policy Domain Name
Specifies the name of the policy domain.

Activated Policy Set
Specifies the name of the policy set that was last activated in the domain.

Activated Default Mgmt Class
Specifies the assigned default management class for the policy set.

Number of Registered Nodes
Specifies the number of client nodes registered to the policy domain.

Description
Specifies a description of the policy domain.

QUERY DOMAIN

Task 2

Display information in full detail for the EMPLOYEE_RECORDS policy domain.

Command: `query domain employee_records format=detailed`

Output:

```
             Policy Domain Name: EMPLOYEE_RECORDS
          Activated Policy Set: VACATION
          Activation Date/Time: 05/31/1996 13:15:52
         Days Since Activation: <1
   Activated Default Mgmt Class: ACTIVEFILES
     Number of Registered Nodes: 6
                    Description:
 Backup Retention (Grace Period): 30
Archive Retention (Grace Period): 365
  Last Update by (administrator): ADMIN
          Last Update Date/Time: 05/31/1996 13:15:52
```

where:

Policy Domain Name
Specifies the name of the policy domain.

Activated Policy Set
Specifies the name of the policy set that was last activated in the domain.

Activation Date/Time
Specifies the date and time that the policy set was activated.

Days Since Activation
Specifies the number of days since the policy set was activated.

Activated Default Mgmt Class
Specifies the assigned default management class for the policy set.

Number of Registered Nodes
Specifies the number of client nodes registered to the policy domain.

Description
Specifies a description of the policy domain.

Backup Retention (Grace Period)
Specifies the number of days to retain inactive backup versions of files when any of the following conditions are present:

- A file's management class is changed, but neither the new management class nor default management class contains a backup copy group.
- The management class to which a file is bound no longer exists, and the default management class does not contain a backup copy group.

- The backup copy group is deleted from the management class to which a file is bound and the default management class does not contain a backup copy group.

Archive Retention (Grace Period)
Specifies the number of days to retain an archive file that meets either of the following conditions:

- The management class to which a file is bound no longer exists, and the default management class does not contain an archive copy group.
- The archive copy group is deleted from the management class to which a file is bound and the default management class does not contain an archive copy group.

Last Update by (administrator)
Specifies the name of the administrator that defined or most recently updated the policy domain.

Last Update Date/Time
Specifies when the administrator defined or most recently updated the storage pool.

Related Commands

Table 110. Commands Related to QUERY DOMAIN

Command	Description
COPY DOMAIN	Creates a copy of an existing policy domain.
DEFINE DOMAIN	Defines a policy domain that can be assigned to one or more clients.
DELETE DOMAIN	Deletes a policy domain along with any policy objects in the policy domain.
UPDATE DOMAIN	Changes the attributes of a policy domain.

QUERY DRIVE

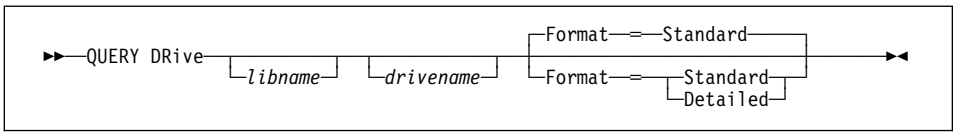
QUERY DRIVE (Display Information about a Drive)

Use the QUERY DRIVE command to display information about a drive located in a server-attached library.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

libname

Specifies the name of the library where the queried drive is located. This parameter is optional. You can use a pattern-matching expression to specify this name.

You must specify a value for this parameter if you specify DRIVENAME.

drivename

Specifies the name assigned to the drive. This parameter is optional. You can use a pattern-matching expression to specify this name.

Format=*formatvalue*

Specifies how the information is displayed. This parameter is optional. The default value is STANDARD. Possible values are:

Standard

Specifies that partial information is displayed for the drive.

Detailed

Specifies that complete information is displayed for the drive.

Examples

Task 1

Display information about all drives associated with your server.

Command: `query drive`

Output:

```
Library   Drive    Device    Device             Element
Name      Name     Type
--------  ------   --------  -------------      --------
AUTO      8MM.2    8MM       mt3.0.0.0            116
MANUAL    8MM.3    8MM       \\.\Tape0
```

where:

Library Name
Specifies the name of the library to which the drive is assigned.

Drive Name
Specifies the name assigned to the drive.

Device Type
Specifies the type of device.

Device
Specifies the name of the device that corresponds to the drive.

Element
Specifies the element address of the drive.

Task 2

Display information in full detail about the 8mm drive named DRIVE1 located in the library named AUTO.

Command: `query drive auto drive1 format=detailed`

Output:

```
                  Library Name: AUTO
                    Drive Name: DRIVE1
                   Device Type: 8MM
                        Device: mt3.0.0.0
                       Element: 118
 Last Update by (administrator): SERVER_CONSOLE
          Last Update Date/Time: 1996-05-13 15:25:03
```

where:

Library Name
Specifies the name of the library to which the drive is assigned.

QUERY DRIVE

Drive Name
Specifies the name assigned to the drive.

Device Type
Specifies the type of device.

Device
Specifies the name of the device that corresponds to the drive.

Element
Specifies the element address of the drive.

Last Update by (administrator)
Specifies who performed the last update to the drive.

Last Update Date/Time
Specifies the date and time when the last update occurred.

Related Commands

Table 111 provides references to related commands.

Table 111. Commands Related to QUERY DRIVE

Command	Description	Reference
AUDIT LIBRARY	Ensures that an automated library is in a consistent state.	Page 43
DEFINE LIBRARY	Defines an automated or manual library.	Page 142
DELETE LIBRARY	Deletes a library.	Page 222
QUERY LIBRARY	Displays information about one or more libraries.	Page 419
UPDATE DRIVE	Changes the attributes of a drive.	Page 641

QUERY DRMEDIA (Query Disaster Recovery Media)

This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

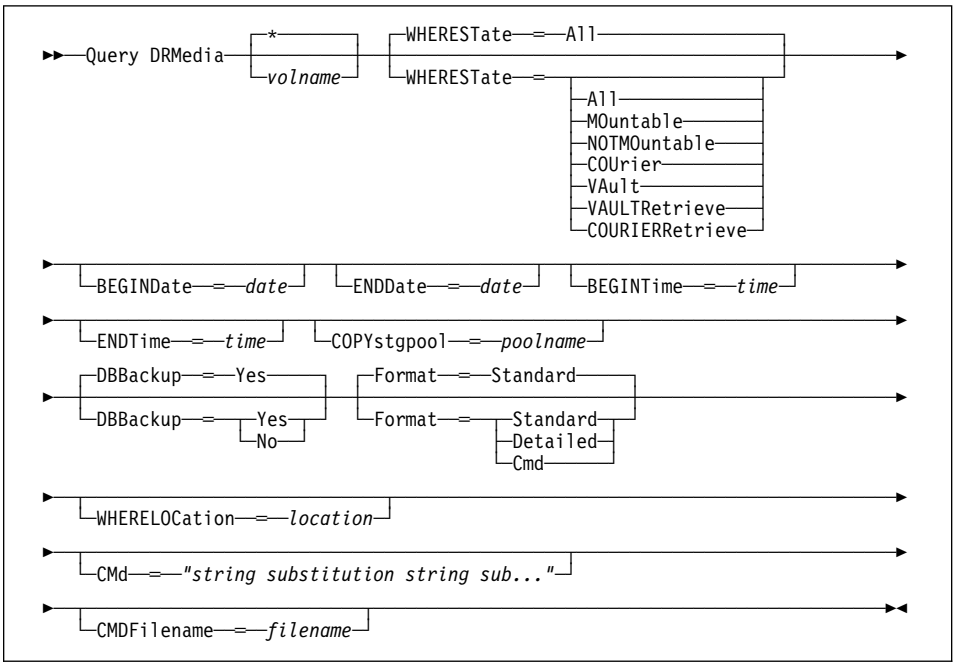
Use the QUERY DRMEDIA command to display information about disaster recovery volumes. Disaster recovery volumes include database backup and copy storage pool volumes.

QUERY DRMEDIA does not display any two-sided volumes that have a REMOVABLEFILE device type.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

volname

Specifies the name of the database backup and copy storage pool volumes to be queried. This parameter is optional. You can use a pattern- matching expression to specify this name. All matching volumes are considered for processing. If you do not specify this parameter, all database backup volumes and all copy storage pool volumes associated with the copy storage pools

defined by SET DRMCOPYSTGPOOL are considered for processing if COPYSTGPOOL is not specified with QUERY DRMEDIA command.

WHERESTate=*statevalue*
Specifies the state of volumes to be processed. This parameter is used to restrict processing to volumes that have the specified state. This parameter is optional. The default is ALL. Possible values are:

All
Specifies that volumes in all states are to be queried. The valid states are: MOUNTABLE, NOTMOUNTABLE, COURIER, VAULT, VAULTRETRIEVE, and COURIERRETRIEVE.

MOuntable
Specifies that volumes that are currently in the MOUNTABLE state are to be queried. Volumes in the MOUNTABLE state contain valid data and are accessible for onsite processing.

NOTMOuntable
Specifies that volumes that are currently in the NOTMOUNTABLE state are to be queried. Volumes in the NOTMOUNTABLE state are onsite, contain valid data, and not accessible for onsite processing.

COUrier
Specifies that volumes that are currently in the COURIER state are to be queried. Volumes in the COURIER state are with the courier and being moved to an offsite location.

VAult
Specifies the volumes that are currently in the VAULT state are to be queried. Volumes in the VAULT state are offsite, contain valid data, and are not accessible for onsite processing.

VAULTRetrieve
Specifies that volumes that are currently in the VAULTRETRIEVE state are to be queried. Volumes in the VAULTRETRIEVE state do not contain valid data and are at the offsite vault.

COURIERRetrieve
Specifies that volumes that are currently in the COURIERRETRIEVE state are to be queried. Volumes in the COURIERRETRIEVE state are with the courier and being moved back to the onsite location.

BEGINDate=*date*
Specifies the beginning date used to select volumes for query processing. Volumes are considered eligible if the MOVE DRMEDIA command has transitioned the state of the volume on or after the specified date. The default is the earliest date for which volume information exists. Possible values are:

MM/DD/YYYY
Specifies that you want to query volumes that were transitioned into their current state on or after a specific date, using MM/DD/YYYY format (for example, 01/31/1995).

TODAY
Specifies that you want to query volumes that were transitioned into their current state today.

TODAY-*numdays* **or -***numdays*
Specifies that you want to query volumes that were transitioned into their current state beginning with a date determined by today minus a specific number of days. The maximum value for the number of days is 9999.

For example, to move volumes beginning with records transitioned into their current state a week ago, you can specify TODAY-7 or simply -7.

ENDate=*date*
Specifies the ending date used to select volumes for query processing. Volumes are considered eligible if the MOVE DRMEDIA command has transitioned the state of the volume on or before the specified date. The default is the current date. Possible values are:

MM/DD/YYYY
Specifies that you want to query volumes that were transitioned into their current state on or before a specific date, using MM/DD/YYYY format (for example, 01/31/1995).

TODAY
Specifies that you want to query volumes that were transitioned into their current state ending with today.

TODAY-*numdays* **or -***numdays*
Specifies that you want to query volumes that were transitioned into their current state ending with a date determined by today minus a specific number of days. The maximum value for the number of days is 9999.

For example, to query volumes beginning with records transitioned into their current state a week ago, you can specify TODAY-7 or simply -7.

BEGINTime=*time*
Specifies the beginning time used to select volumes for query processing. Volumes are considered eligible if the MOVE DRMEDIA command has transitioned the state of the volume on or after the specified time and date. The default is midnight (00:00:00) on the date specified with the BEGINDATE parameter. Possible values are:

HH:MM:SS
Specifies that you want to query volumes that were transitioned into their current state on or after a specific time on the specified date, using HH:MM:SS format (for example, 12:33:28).

NOW
Specifies that you want to query volumes that were transitioned into their current state beginning with the current time on the specified begin date.

NOW+*numhours:numminutes* **or +***numhours:numminutes*
Specifies that you want to query volumes that were transitioned into their current state beginning with a time determined by the current time plus a specific number of hours (and, optionally, minutes) on the specified date.

NOW-*numhours:numminutes* **or -***numhours:numminutes*
Specifies that you want to query volumes that were transitioned into their current state beginning with a time determined by the current time minus a specific number of hours (and, optionally, minutes) on the specified date.

ENDTime=*time*
Specifies the ending time used to select volumes for query processing. Volumes are considered eligible if the MOVE DRMEDIA command has transitioned the state of the volume on or before the specified time and date. The default is 23:59:59. Possible values are:

HH:MM:SS
Specifies that you want to query volumes that were transitioned into their current state on or before a specific time on the specified date, using HH:MM:SS format (for example, 12:33:28).

NOW
Specifies that you want to query volumes that were transitioned into their current state beginning with the current time on the specified begin date.

NOW+*numhours:numminutes* **or +***numhours:numminutes*
Specifies that you want to query volumes that were transitioned into their current state ending with a time determined by the current time plus a specific number of hours (and, optionally, minutes) on the specified date.

NOW-*numhours:numminutes* **or -***numhours:numminutes*
Specifies that you want to query volumes that were transitioned into their current state ending with a time determined by the current time minus a specific number of hours (and, optionally, minutes) on the specified date.

COPYstgpool=*poolname*
Specifies the name of the copy storage pool that is used to limit the selection of volumes for processing. This parameter is optional. You can use a pattern-matching expression to specify this name. All volumes associated with the matching storage pool are considered for processing. The copy storage pools specified with this parameter override the copy storage pools specified with the SET DRMCOPYSTGPOOL command. If you do not specify a copy storage pool name, all volumes in the specified state, except MOUNTABLE state, are considered for processing. See SET DRMCOPYSTGPOOL command for processing the volumes in the MOUNTABLE state.

DBBackup=*dbvalue*
Specifies whether database backup volumes are included in the selection of volumes for processing. This parameter is optional. The default is to consider database backup volumes for processing. Possible values are:

Yes
Specifies to consider database backup volumes for processing.

No
Specifies to not consider database backup volumes for processing.

Format=*formatvalue*
Specifies how the information is displayed. This parameter is optional. The default value is STANDARD. Possible values are:

Standard
Specifies that partial information is displayed for the disaster recovery media.

Detailed
Specifies that complete information is displayed for the specified disaster recovery media.

Cmd
Specifies that executable commands are to be built for the disaster recovery media processed by QUERY DRMEDIA command. The executable command syntax is specified with the CMD parameter and the commands built by QUERY DRMEDIA will be in the file specified by CMDFILENAME, in the file name specified by SET DRMCMDFILENAME, or in the file name generated by QUERY DRMEDIA. If you want the commands to be displayed on the console only, specify a "" for the CMDFILENAME. If a FORMAT=CMD is specified but no command string is specified with CMD parameter, QUERY DRMEDIA command will not be performed.

WHERELOcation=*location*
Specifies the location of the volumes to be displayed. This parameter is optional. This parameter is used to restrict processing to volumes that are in the specified location. The maximum length of the location is 255 characters. The location must be enclosed in quotation marks if it contains any blank characters.

CMd=*"string substitution string substitution ..."*
Specifies the creation of executable commands. This parameter is optional. You must enclose your command specification in quotation marks. The maximum length of the command specification is 255 characters. For each volume successfully processed by the QUERY DRMEDIA, DRM writes the associated commands to a file. The filename used by DRM is specified with the CMDFILENAME parameter, the SET DRMCMDFILENAME command, or the default name generated by the QUERY DRMEDIA command. If the length of the command written exceeds 255 characters, it is split into multiple lines and a continuation character, +, is added to all but the last line of the command. You

may need to alter the continuation character according to the requirements of the product that executes the commands

If you do not specify CMD or specify a "" for CMD, QUERY DRMEDIA will not generate any executable commands. If an executable command string is specified with the FORMAT other than CMD, the executable command string specification is ignored and QUERY DRMEDIA command will not write any executable command line.

string
Specifies the string to build an executable command to process the volume name and/or volume location obtained by QUERY DRMEDIA command. You can specify any free form text for the string. Do not use embed quotation marks. For example, the following is a valid executable command specification:

```
CMD="CHECKIN LIBVOL LIB8MM &VOL STATUS=SCRATCH"
```

The following is an invalid executable command specification:

```
CMD=""CHECKIN LIBVOL LIB8MM" &VOL STATUS=SCRATCH"
```

substitution
Specifies a substitution variable to tell QUERY DRMEDIA to substitute a value for the variable. The possible substitution variables are:

&VOL
Specifies the volume name is to be substituted for &VOL. You can specify lowercase characters, &vol. No spaces or blanks are allowed between ampersand, &, and VOL. If there are spaces or blanks between ampersand and VOL, QUERY DRMEDIA will treat them as strings and no substitution will be set. If &VOL is not specified, no volume name is set in the executable command.

&LOC
Specifies the volume location is to be substituted for &LOC. You can specify lowercase characters, &loc. No spaces or blanks are allowed between ampersand, &, and LOC. If there are spaces or blanks between ampersand and LOC, QUERY DRMEDIA will treat them as strings and no substitution will be set. If &LOC is not specified, no location name is set in the executable command.

&VOLDSN
Specifies the volume data set name is to be substituted for &VOLDSN. An example of a copy storage pool tape volume data set name using the default prefix ADSM is ADSM.BFS. An example of a database backup tape volume data set name using a prefix ADSM221 defined with the device class is ADSM221.DBB. If &VOLDSN is not specified, no volume data set name is set in the executable command.

&NL

Specifies the new line character is to be substitued for &NL. When &NL is specified, QUERY DRMEDIA command will split the command at the position where the &NL is and will not append any continuation character. The user is responsible for specifying the proper continuation character before the &NL if one is required. The user is also responsible for the length of the line written. If the &NL is not specified and the length of the command line exceeds 255, the command line is split into multiple lines and a continuation character, +, is added to all but the last line of the command.

CMDFilename=*filename*

Specifies the full path file name that will contain the commands specified with CMD parameter when FORMAT=CMD is specified. This parameter is optional. The maximum length of the file name is 259 characters. If you do not specify any file name with CMDFILENAME, the file name specified with SET DRMCMDFILENAME will be used. If you do not specify a file name with the SET DRMCMDFILENAME, QUERY DRMEDIA will generate a file name by appending the 'exec.cmd' to the directory representing this "instance" of the ADSM server which is typically the directory that the ADSM server was originally installed from. If you specify a "" for the CMDFILENAME, the commands built are displayed on the console only. If desired, you can re-direct the commands displayed to a file using '>' or '>>' provided by the system. QUERY DRMEDIA automatically allocates the file name specified or generated. If the file name exists, QUERY DRMEDIA will attempt to use it and the existing data, if any, in the file will be over written. If the QUERY DRMEDIA command fails, the allocated file name is deleted.

Examples

Task 1

Display all volumes to be given to a courier for offsite storage.

Command: `query drmedia wherestate=notmountable format=standard`

Output:

```
Volume Name      State           Last Update          Automated
                                 Date/Time            LibName
---------------  --------------  -------------------  -----------------
TAPE01           Not mountable    09/20/1995 14:25:22
DBTP01           Not mountable    09/20/1995 14:25:22
DBTP03           Not mountable    09/20/1995 14:31:53
```

where:

QUERY DRMEDIA

Volume Name
Specifies the name of the database backup or copy storage pool volume.

State
Specifies the state of the database backup or copy storage pool volume.

Last Update Date/Time
Specifies the volume transition date/time

Automated LibName
Specifies the automated library name if the volume is in the library

Task 2

Display in full detail all volumes located at the vault.

Command: `query drmedia wherestate=vault format=detailed`

Output:

```
           Volume Name: DBTP02
                 State: Vault
 Last Update Date/Time: 09/20/1995 13:29:02
              Location: Ironmnt
           Volume Type: DBBackup
Copy Storage Pool Name:
     Automated LibName:

           Volume Name: TAPE3S
                 State: Vault
 Last Update Date/Time: 09/20/1995 13:29:02
              Location: Ironmnt
           Volume Type: DBBackup
Copy Storage Pool Name:
     Automated LibName:
```

where:

Volume Name
Specifies the name of the database backup or copy storage pool volume.

State
Specifies the state of the database backup or copy storage pool volume.

Last Update Date/Time
Specifies the volume transition date/time

Location
Specifies where the database backup or copy storage pool volume is stored.

Volume Type
Specifies the type of volume. Possible values are:

DBBackup
The volume is a database backup volume.

CopyStgPool
The volume is a copy storage pool volume.

Copy Storage Pool Name
Specifies the name of the copy storage pool where the volume is associated if the volume type is CopyStgPool.

Automated LibName
Specifies the automated library name if the volume is in the library

Related Commands

Table 112. Commands Related to QUERY DRMEDIA

Command	Description
BACKUP DB	Backs up the ADSM database to sequential access volumes.
BACKUP STGPOOL	Backs up a primary storage pool to a copy storage pool.
CHECKOUT LIBVOLUME	Checks a storage volume out of an automated library.
MOVE DRMEDIA	Moves DRM media onsite and offsite.
SET DRMCOPYSTGPOOL	Specifies that copy storage pools are managed by DRM.
SET DRMDBBACKUPEXPIREDAYS	Specifies criteria for database backup series expiration.
SET DRMCMDFILENAME	Specifies the file name for containing the executable commands
SET DRMFILEPROCESS	Specifies file processing

QUERY DRMSTATUS (Query DRM System Parameters)

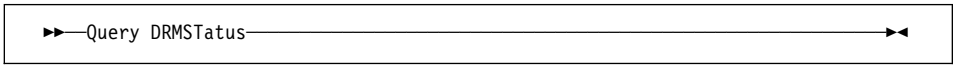
This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

Use the QUERY DRMSTATUS command to display information about the system parameters defined for the Disaster Recovery Manager (DRM) feature, such as those defined by the SET commands.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

No parameters are available. Please note, the QUERY DRMSTATUS command does not allow format=detailed.

Examples

Task

Display information about the DRM system parameters.

Command: `query drmstatus`

Output:

```
            Recovery Plan Prefix:
        Plan Instructions Prefix:
      Replacement Volume Postfix: @
           Primary Storage Pools: PRIM1 PRIM2
             Copy Storage Pools: COPY*
     Not Mountable Location name: Local
                   Courier Name: Fedex
                Vault Site Name: Ironmnt
DB Backup Series expiration days: 30 Day(s)
                   Check Label?: No
       Process FILE Device Type?: No
                Command file name:
```

where:

Recovery Plan Prefix
User specified prefix portion of the file name for the generated recovery plan file.

Plan Instructions Prefix
User specified prefix portion of the file names for the ADSM server recovery instructions files.

Replacement Volume Postfix
Specifies the character added to the end of the replacement volume names in the recovery plan file.

Primary Storage Pools
Specifies the primary storage pools that are eligible for processing by the PREPARE command. If this field is blank, all primary storage pools defined to the ADSM server are eligible for processing.

Copy Storage Pools
Specifies the copy storage pools that are eligible for processing by the MOVE DRMEDIA, PREPARE, and QUERY DRMEDIA commands. If this field is blank, all copy storage pools defined to the ADSM server are eligible for processing.

Not Mountable Location Name
Specifies the name of the location where the media to be shipped offsite are stored.

Courier Name
Specifies the name of the courier used to carry the media to the vault.

Vault Site Name
Specifies the name of the vault where the media is stored.

DB Backup Series Expiration Days
Specifies the minimum number of days that must elapse since a database series has been created before it is eligible to be expired by the MOVE DRMEDIA command.

Check Label?
Specifies whether media labels will be read for volumes checked out by the MOVE DRMEDIA command. Possible values are:

Yes
Specifies that ADSM should read sequential media labels of volumes checked out by the MOVE DRMEDIA command.

No
Specifies that ADSM should not read sequential media labels of volumes checked out by the MOVE DRMEDIA command.

Process FILE Device Type?
Specifies whether MOVE DRMEDIA or QUERY DRMEDIA commands will process volumes associated with a device class with a FILE device type. Possible values are:

Yes
Specifies that MOVE DRMEDIA and QUERY DRMEDIA commands will process database backup and copy storage pool volumes that are associated with a device class with a FILE device type.

No
Specifies that MOVE DRMEDIA and QUERY DRMEDIA commands will not process database backup and copy storage pool volumes that are associated with a device class with a FILE device type.

Command File Name
Specifies the full path file name that contains the executable commands generated by MOVE DRMEDIA or QUERY DRMEDIA command.

Related Commands

Table 113 (Page 1 of 2). Commands Related to QUERY DRMSTATUS

Command	Description
SET DRMCHECKLABEL	Specifies whether ADSM should read volume labels during MOVE DRMEDIA command processing.
SET DRMCOPYSTGPOOL	Specifies that copy storage pools are managed by DRM.
SET DRMCOURIERNAME	Specifies the name of the courier for the disaster recovery media.
SET DRMDBBACKUPEXPIREDAYS	Specifies criteria for database backup series expiration.
SET DRMFILEPROCESS	Specifies whether the MOVE DRMEDIA command processes files associated with a device type of file.
SET DRMINSTRPREFIX	Specifies the prefix portion of the path name for the recovery plan instructions.
SET DRMPLANVPOSTFIX	Specifies the replacement volume names in the recovery plan file.
SET DRMPLANPREFIX	Specifies the prefix portion of the path name for the recovery plan.
SET DRMPLANVPOSTFIX	Specifies the replacement volume names in the recovery plan file.
SET DRMPLANPREFIX	Specifies the prefix portion of the path name for the recovery plan.
SET DRMPRIMSTGPOOL	Specifies that primary storage pools are managed by DRM.
SET DRMVAULTNAME	Specifies the name of the vault where DRM media is stored.
SET DRMCMDFILENAME	Specify a file name for containing the executable commands

Table 113 (Page 2 of 2). Commands Related to QUERY DRMSTATUS

Command	Description
SET DRMNOTMOUNTABLENAME	Specify the Not Mountable location name

QUERY EVENT (Query Scheduled and Completed Events)

Use the QUERY EVENT command to display scheduled and completed events. The QUERY EVENT command takes two forms, depending on whether the query applies to scheduled client operations or scheduled administrative commands. The syntax and parameters for each form are defined separately.

Querying Events for Client Schedules

Use the QUERY EVENT command to display scheduled and completed events for selected clients. You can specify a time range to limit output to events whose scheduled start times fall within the range.

Each scheduled client operation is called an event. The server tracks each scheduled event and records the results of each function in the database. An event record is created whenever processing of a scheduled command is started or missed.

You can request one of two different types of queries: *general* reporting or *exception* reporting. To request a general report of scheduled events, specify this command with EXCEPTIONSONLY=NO (the default). For each schedule that matches the specified policy domain and schedule name, the expected startup windows are determined within the specified time range. ADSM provides output data that indicates scheduled start times, along with any actual execution information which can be obtained from existing output records.

To request an exception report, specify EXCEPTIONSONLY=YES. ADSM provides information about scheduled operations that have *not* executed successfully, either because they have not executed as scheduled or because they have failed during execution. This mode differs from EXCEPTIONSONLY=NO, in that output is restricted as follows:

- The only events that are displayed are those that meet *one* of the following conditions:
  - The scheduled startup window has elapsed and the schedule has not begun execution.
  - The client has notified the server that the scheduled command has failed during execution and all allowed retry attempts have been exhausted.
  - The schedule began, but has not completed execution and the schedule period has elapsed since the scheduled start time.
- Information is only displayed for events that should have an output record. Thus, output records are not displayed if the records are missing but are eligible for deletion through *either* of the following:
  - Removal of output records whose retention period has elapsed. For more information on setting the event retention period, see “SET EVENTRETENTION (Specify the Retention Period for Event Records)” on page 578.

– Execution of a DELETE EVENT command.

No information is displayed for an event unless both of the following conditions are met:

- The last modification date for the schedule occurred before the end of the startup window for the event.
- The date on which the client was associated with the schedule occurred before the end of the startup window for the event.

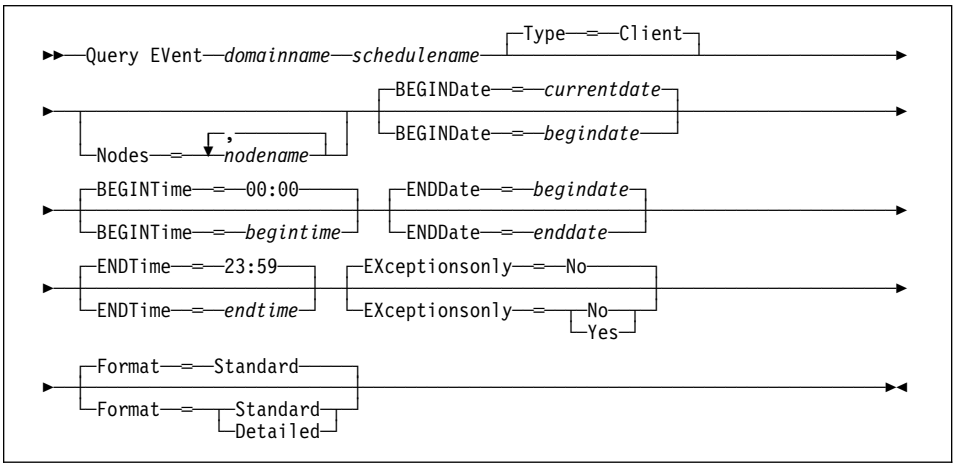
Processing of this command can require intensive computations, especially if multiple startup windows must be calculated. To minimize the processing time when querying events:

- Minimize the length of the time range for querying events.
- Restrict the policy domains, schedule names, and client node names to those for which information is required.

Privilege Class

Any administrator can issue this command.

Syntax for Querying Events for Client Schedules



Parameters for Querying Events for Client Schedules

domainname

Specifies the name of the policy domain to which the schedules belong. This parameter is required. You can use a pattern-matching expression to specify this name. All matching policy domains are queried.

schedulename

Specifies the name of the schedule for which events are displayed. This parameter is required. You can use a pattern-matching expression to specify this name. All matching schedule names are queried.

QUERY EVENT

Type=**Client**
Specifies that this command should query events for client schedules. This parameter is optional. The default value is CLIENT. Administrative command schedule events are queried by specifying TYPE=ADMINISTRATIVE.

Nodes=*nodename*
Specifies the name of the client node that belongs to the specified policy domain for which events are displayed. You can specify more than one client name by separating each name with a comma, with no intervening spaces. You can use a pattern-matching expression to specify a name. All matching clients are queried. If you do not specify a client name, events for all clients matching the DOMAINNAME and SCHEDULENAME parameters are displayed.

BEGINDate=*date*
Specifies the beginning date of the time range for the events to be displayed. All events that were scheduled to start during this time are displayed. This parameter is optional. The default value is the current date.

Possible values are:

MM/DD/YYYY
Specifies the date for the beginning of the time range in MM/DD/YYYY format (for example, 01/31/1995).

TODAY
Specifies that the beginning of the time range is the current date.

TODAY−*numdays* **or** −*numdays*
Specifies that the beginning of the time range is a specific number of days before the current date. The maximum value for the number of days is 9999.

For example, to query events scheduled to start during the past 7 days, you can specify one of the following parameter combinations:

```
BEGINDATE=TODAY−7  ENDDATE=TODAY
                or
BEGINDATE=−7  ENDDATE=TODAY
```

TODAY+*numdays* **or** +*numdays*
Specifies that the beginning of the time range is a specific number of days after the current date. The maximum value for the number of days is 9999.

For example, to query events scheduled to start two days from now, you can specify one of the following parameters:

```
BEGINDATE=TODAY+2
             or
BEGINDATE=+2
```

BEGINTime=*time*
Specifies the beginning time of the range for events to be displayed, in HH:MM format. All events scheduled to start during this time are displayed. This parameter is optional. The default value is 00:00.

Possible values are:

HH:MM:SS
Specifies the beginning of the time range on the specified begin date using HH:MM:SS format (for example, 12:33:28).

NOW
Specifies that the beginning of the time range is the current time on the specified begin date.

NOW+*numhours:numminutes* **or** +*numhours:numminutes*
Specifies that the beginning of the time range is the current time plus a specific number of hours (and, optionally, minutes) on the specified begin date.

For example, if you issue this command at 9:00 and you want to query events scheduled to start 3 hours from now, you can specify one of the following parameters:

```
BEGINTIME=NOW+03:00
                or
BEGINTIME=+03:00
```

ADSM displays events at 12:00 on the specified begin date.

NOW–*numhours:numminutes* **or** –*numhours:numminutes*
Specifies that the beginning of the time range is the current time minus a specific number of hours (and, optionally, minutes) on the specified begin date.

For example, if you issue this command at 9:00 and you want to query events scheduled to start during the last 4 hours, you can specify one of the following parameters:

```
BEGINTIME=NOW–04:00   ENDTIME=NOW
                or
BEGINTIME=–04:00    ENDTIME=NOW
```

ADSM displays events at 5:00 on the specified begin date.

ENDDate=*date*
Specifies the ending date of the time range for events to be displayed. All events that were scheduled to start during this time are displayed. This parameter is optional. The default value is the value used for the BEGINDATE.

Possible values are:

MM/DD/YYYY
Specifies the date for the end of the time range in MM/DD/YYYY format (for example, 01/31/1995).

TODAY
Specifies that the end of the time range is the current date.

QUERY EVENT

TODAY−*numdays* **or** −*numdays*
Specifies that the end of the time range is a specific number of days before the current date. The maximum value for the number of days is 9999.

For example, to query events scheduled to start during a one-week period that ended yesterday, you can specify one of the following parameter combinations:

```
BEGINDATE=TODAY−8  ENDDATE=TODAY−1
                or
BEGINDATE=−8  ENDDATE=−1
```

TODAY+*numdays* **or** +*numdays*
Specifies that the end of the time range is a specific number of days after the current date. The maximum value for the number of days is 9999.

For example, to query events scheduled to start during the next week, you can specify one of the following parameter combinations:

```
BEGINDATE=TODAY  ENDDATE=TODAY+7
                or
BEGINDATE=TODAY  ENDDATE=+7
```

ENDTime=*time*
Specifies the ending time of the range for events to be displayed, in HH:MM format. All events scheduled to start during this time are displayed. This parameter is optional. The default value is 23:59.

Possible values are:

HH:MM:SS
Specifies the ending of the time range at a specific time on the specified end date using HH:MM:SS format (for example, 12:33:28).

NOW
Specifies the ending of the time range is the current time on the specified end date.

NOW+*numhours:numminutes* **or** +*numhours:numminutes*
Specifies that the ending of the time range is the current time plus a specific number of hours (and, optionally, minutes) on the specified end date.

For example, if you issue this command at 9:00 and you want to query events scheduled to start 3 hours from now, you can specify one of the following parameters:

```
BEGINTIME=NOW     ENDTIME=NOW+03:00
                or
BEGINTIME=NOW     ENDTIME=+03:00
```

NOW–*numhours:numminutes* **or** –*numhours:numminutes*
Specifies that the ending of the time range is the current time minus a specific number of hours (and, optionally, minutes) on the specified end date.

For example, if you issue this command at 9:00 and you want to query events scheduled to start during the last 4 hours, you can specify one of the following parameters:

```
BEGINTIME=NOW–04:00  ENDTIME=NOW
                or
BEGINTIME=–04:00     ENDTIME=NOW
```

ADSM displays events that were scheduled to start at 5:00 on the specified end date.

EXceptionsonly=*exceptionvalue*
Specifies the type of query information you want on scheduled or completed events. This parameter is optional. The default value is NO. Possible values are:

No
Specifies that information on past and projected events is displayed.

Yes
Specifies that only those events which failed or did not execute as scheduled will be displayed.

Format=*formatvalue*
Specifies how the information is displayed. This parameter is optional. The default value is STANDARD. Possible values are:

Standard
Specifies that partial information for events is displayed.

Detailed
Specifies that complete information for events is displayed.

Querying Events for Administrative Command Schedules

Use the QUERY EVENT command to display scheduled and completed events for selected administrative command schedules.

Each scheduled administrative command is called an event. The server tracks each scheduled event and records the results of each function in the database. An output record is created whenever processing of a scheduled command is started or missed.

You can request one of two different types of queries: *general* reporting or *exception* reporting. To request a general report of scheduled events, specify this command with EXCEPTIONSONLY=NO (the default). For each schedule that matches the specified schedule name, the expected startup windows are determined within the specified time

range. ADSM provides output data that indicates scheduled start times, along with any actual execution information which can be obtained from existing output records.

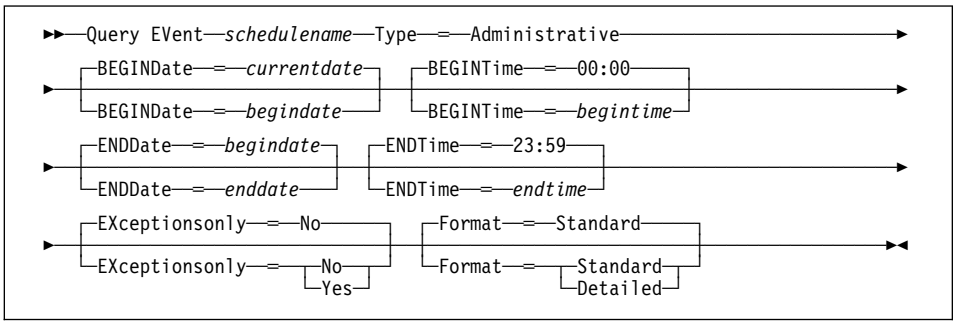
Processing of this command can require intensive computations, especially if multiple startup windows must be calculated. To minimize the processing time when querying events:

- Minimize the length of the time range for querying events.
- Restrict the schedule names to those for which information is required.

Privilege Class

Any administrator can issue this command.

Syntax for Querying Events for Administrative Command Schedules



Parameters for Querying Events for Administrative Command Schedules

schedulename

Specifies the name of the schedule for which events are displayed. This parameter is required. You can use a pattern-matching expression to specify this name. All matching schedule names are queried.

Type=Administrative

Specifies that you want to query events for administrative command schedules. This parameter is required for querying administrative command schedules.

BEGINDate=*date*

Specifies the beginning date of the time range for the events to be displayed. All events that were scheduled to start during this time are displayed. This parameter is optional. The default value is the current date.

Possible values are:

MM/DD/YYYY

Specifies the date for the beginning of the time range in MM/DD/YYYY format (for example, 01/31/1995).

TODAY

Specifies that the beginning of the time range is the current date.

TODAY−*numdays* **or** −*numdays*
Specifies that the beginning of the time range is a specific number of days before the current date. The maximum value for the number of days is 9999.

For example, to query events scheduled to start during the past 7 days, you can specify one of the following parameter combinations:

```
BEGINDATE=TODAY−7  ENDDATE=TODAY
                or
BEGINDATE=−7  ENDDATE=TODAY
```

TODAY+*numdays* **or** +*numdays*
Specifies that the beginning of the time range is a specific number of days after the current date. The maximum value for the number of days is 9999.

For example, to query events scheduled to start two days from now, you can specify one of the following parameters:

```
BEGINDATE=TODAY+2
             or
BEGINDATE=+2
```

BEGINTime=*time*
Specifies the beginning time of the range for events to be displayed, in HH:MM format. All events scheduled to start during this time are displayed. This parameter is optional. The default value is 00:00.

Possible values are:

HH:MM:SS
Specifies the time for the beginning of the time range on the specified begin date using HH:MM:SS format (for example, 12:33:28).

NOW
Specifies that the beginning of the time range is the current time on the specified begin date.

NOW+*numhours:numminutes* **or** +*numhours:numminutes*
Specifies that the beginning of the time range is the current time plus a specific number of hours (and, optionally, minutes) on the specified begin date.

For example, if you issue this command at 9:00 and you want to query events scheduled to start 3 hours from now, you can specify one of the following parameters:

```
BEGINTIME=NOW+03:00
             or
BEGINTIME=+03:00
```

ADSM displays events at 12:00 on the specified begin date.

QUERY EVENT

NOW–*numhours:numminutes* **or** –*numhours:numminutes*
Specifies that the beginning of the time range is the current time minus a specific number of hours (and, optionally, minutes) on the specified begin date.

For example, if you issue this command at 9:00 and you want to query events scheduled to start during the last 4 hours, you can specify one of the following parameters:

```
BEGINTIME=NOW–04:00   ENDTIME=NOW
                or
BEGINTIME=–04:00    ENDTIME=NOW
```

ADSM displays events at 5:00 on the specified begin date.

ENDDate=*date*
Specifies the ending date of the time range for events to be displayed. All events that were scheduled to start during this time are displayed. This parameter is optional. The default value is the value used for the BEGINDATE parameter.

Possible values are:

MM/DD/YYYY
Specifies the date for the end of the time range in MM/DD/YYYY format (for example, 01/31/1995).

TODAY
Specifies that the end of the time range is the current date.

TODAY–*numdays* **or** –*numdays*
Specifies that the end of the time range is a specific number of days before the current date. The maximum value for the number of days is 9999.

For example, to query events scheduled to start during a one-week period that ended yesterday, you can specify one of the following parameter combinations:

```
BEGINDATE=TODAY–8  ENDDATE=TODAY–1
                or
BEGINDATE=–8  ENDDATE=–1
```

TODAY+*numdays* **or** +*numdays*
Specifies that the end of the time range is a specific number of days after the current date. The maximum value for the number of days is 9999.

For example, to query events scheduled to start during the next week, you can specify one of the following parameter combinations:

```
BEGINDATE=TODAY  ENDDATE=TODAY+7
                or
BEGINDATE=TODAY  ENDDATE=+7
```

ENDTime=*time*
Specifies the ending time of the range for events to be displayed, in HH:MM format. All events scheduled to start during this time are displayed. This parameter is optional. The default value is 23:59.

Possible values are:

HH:MM:SS
Specifies the time for the ending of the time range on the specified end date using HH:MM:SS format (for example, 12:33:28).

NOW
Specifies that the ending of the time range is the current time on the specified end date.

NOW+*numhours:numminutes* **or** +*numhours:numminutes*
Specifies that the ending of the time range is the current time plus a specific number of hours (and, optionally, minutes) on the specified end date.

For example, if you issue this command at 9:00 and you want to query events scheduled to start 3 hours from now, you can specify one of the following parameters:

```
BEGINTIME=NOW     ENDTIME=NOW+03:00
                or
BEGINTIME=NOW     ENDTIME=+03:00
```

NOW–*numhours:numminutes* **or** –*numhours:numminutes*
Specifies that the ending of the time range is the current time minus a specific number of hours (and, optionally, minutes) on the specified end date.

For example, if you issue this command at 9:00 and you want to query events scheduled to start during the last 4 hours, you can specify one of the following parameters:

```
BEGINTIME=NOW–04:00  ENDTIME=NOW
                or
BEGINTIME=–04:00     ENDTIME=NOW
```

ADSM displays events that were scheduled to start at 5:00 on the specified end date.

EXceptionsonly=*exceptionvalue*
Specifies the type of query information you want on scheduled or completed events. This parameter is optional. The default value is NO. Possible values are:

No
Specifies that information on past and projected events is displayed.

Yes
Specifies that only those events which failed or did not execute as scheduled will be displayed.

Format=*formatvalue*
Specifies how the information is displayed. This parameter is optional. The default value is STANDARD. Possible values are:

Standard
Specifies that partial information for events is displayed.

Detailed
Specifies that complete information for events is displayed.

Examples

Task 1

Display partial information for all events scheduled for an administrative schedule named DOSADMIN. Limit the query to events that occurred on March 30, 1995 (03/30/1995).

Command:
```
query eVent * type=administrative begindate=03/30/1995
enddate=03/30/1995
```

Output:

```
Scheduled Start      Actual Start          Schedule Name   Status
-------------------- --------------------  -------------   ---------
03/30/1995 00:00:00  03/30/1995 00:00:01   DOSADMIN        Completed
03/30/1995 04:00:00  03/30/1995 04:00:01   DOSADMIN        Completed
03/30/1995 08:00:00  03/30/1995 08:00:01   DOSADMIN        Completed
03/30/1995 12:00:00                        DOSADMIN        Future
03/30/1995 16:00:00                        DOSADMIN        Future
03/30/1995 20:00:00                        DOSADMIN        Future
```

See Task 2 for parameter definitions.

Task 2

Display partial information for all events scheduled for DOMAIN1 that did not execute successfully. Limit the search to the client named JOE. Limit the events displayed to those scheduled to occur from November 11, 1995 (09/11/1995) to November 12, 1995 (09/12/1995).

Command:
```
query event domain1 * nodes=joe begindate=09/11/1995
enddate=09/12/1995 exceptionsonly=Yes
```

Output:

```
Scheduled Start      Actual Start         Schedule  Node  Status
                                          Name      Name
-------------------- -------------------- --------  ----  ---------
09/11/1995 01:00:00  09/11/1995 01:13:55  BACK1      JOE  Completed
09/12/1995 01:00:00                       DAILYBKP   JOE  Missed
```

where:

Scheduled Start
Specifies the scheduled start date and time for the event. The scheduled start time displayed by this command does not include any randomization that can occur through the use of the SET RANDOMIZE command.

Actual Start
Specifies the actual date and time at which the client began execution of the scheduled operation. No information is displayed if the schedule has not started executing.

Schedule Name
Specifies the name of the schedule that initiated the event.

Node Name
Specifies the client scheduled to perform the operation.

Status
Specifies the completion status of the event. Possible values are:

Completed
Specifies that the scheduled event has been completed.

Missed
Specifies that the scheduled startup window for this event has passed and the schedule has not begun.

Failed
Specifies that the client reports a failure in executing the scheduled operation and successive retries have not succeeded.

Started
Specifies that the event has begun execution.

Restarted
Specifies that the client has retried execution of the scheduled operation.

Severed
Specifies that communications with the client is severed before the event can complete.

Future
Specifies that the beginning of the startup window for the event is in the future.

Pending
Specifies that the QUERY EVENT command was issued during the startup window for the event, but execution of the scheduled operation has not yet begun.

Uncertain
Specifies that the state of the event cannot be determined. The server returns a record with Uncertain status if the QUERY EVENT command does not find an event record. An event record will not be found if the record was deleted or if the server was unavailable during the scheduled startup window (the schedule was never started). Records with Uncertain status are generated during the search; they do not reside in the database. If you do not want these records to be displayed, either specify EXCEPTIONSONLY=YES or delete the schedule if it is no longer needed.

Task 3

Display complete information on all events that are scheduled for execution by client JOE in DOMAIN1 any time from November 11, 1995 (09/11/95) through November 12, 1995 (09/12/95).

Command:
```
query event domain1 * nodes=joe begindate=09/11/1995
enddate=09/12/1995 format=detailed
```

Output:

```
Policy Domain Name: DOMAIN1
     Schedule Name: DAILY_BACKUP
         Node Name: JOE
   Scheduled Start: 09/11/1995 01:00:00
      Actual Start:
         Completed:
            Status: Missed
            Result: 0

Policy Domain Name: DOMAIN1
     Schedule Name: DAILY_BACKUP
         Node Name: JOE
   Scheduled Start: 09/11/1995 01:00:00
      Actual Start: 09/11/1995 01:13:55
         Completed: 09/11/1995 01:18:27
            Status: Completed
            Result: 0
```

where:

Policy Domain Name
Specifies the name of the policy domain to which the schedule is assigned.

Schedule Name
Specifies the name of the schedule that has initiated this event.

Node Name
Specifies the client scheduled to perform the operation.

Scheduled Start
Specifies the scheduled starting date and time for the event. The scheduled start time displayed does not include any randomization that can occur through the use of the SET RANDOMIZE command.

Actual Start
Specifies the actual date and time at which the client began execution of the scheduled operation. No information is displayed if the schedule has not started executing.

Completed
Specifies the date and time the scheduled event is completed.

Status
Specifies whether the event has been completed. Possible values are:

Completed
Specifies that the scheduled event has been completed.

Missed
Specifies that the scheduled startup window for this event has passed and the schedule has not begun.

Failed
Specifies that the client reports a failure in executing the scheduled operation and successive retries have not succeeded.

Started
Specifies that the event has begun execution.

Restarted
Specifies that the client has retried execution of the scheduled operation.

Severed
Specifies that communications with the client is severed before the event can complete.

Future
Specifies that the beginning of the startup window for the event is in the future.

Pending
Specifies that the QUERY EVENT command was issued during the startup window for the event, but execution of the scheduled operation has not yet begun.

Uncertain
Specifies that the state of the event cannot be determined. The server returns a record with Uncertain status if the QUERY EVENT command does not find an event record. An event record will not be found if the record was deleted or if the server was unavailable during the scheduled startup window (the schedule was never started). Records with Uncertain status are generated during the search; they do not reside in the database. If you do not want these records to be displayed, either specify EXCEPTIONSONLY=YES or delete the schedule if it is no longer needed.

Result
Specifies the return code from the client that identifies whether the schedule has executed successfully. If the return code is something other than a zero, examine the option string you specified using the OPTIONS parameter or the object string you specified using the OBJECTS parameter in the DEFINE SCHEDULE command.

Related Commands

Table 114. Commands Related to QUERY EVENT

Command	Description
DELETE EVENT	Deletes event records prior to a specified date and time.
SET EVENTRETENTION	Specifies the number of days to retain event records.
SET RANDOMIZE	Specifies the randomization of start times within a window for schedules in client-polling mode.

QUERY FILESPACE (Query One or More File Spaces)

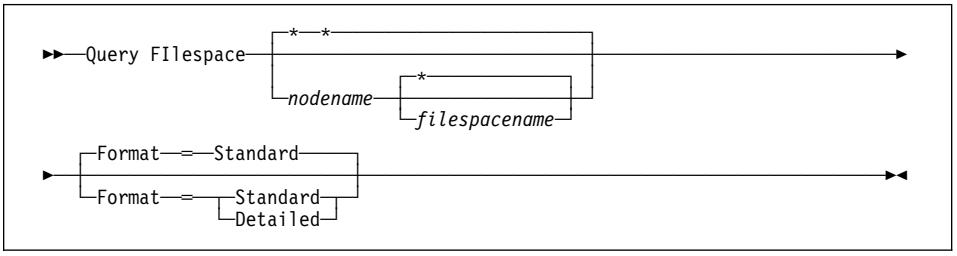
Use the QUERY FILESPACE command to display information about one or more file spaces that belong to a client node. The information displayed via the QUERY FILESPACE command reflects data as of the last incremental backup.

File space names are case sensitive. You can use the QUERY FILESPACE command to determine the correct capitalization for the file space to be queried.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

nodename

Specifies the name of the client node to which the file space belongs. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching client node names are included. If you do not specify a value for this parameter, all client nodes are queried.

You must specify a value for this parameter if you specify FILESPACENAME.

filespacename

Specifies the name of the file space to be queried. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching file spaces are displayed. If you do not specify a value for this parameter, all file spaces are queried.

Format=*formatvalue*

Specifies how the information is displayed. This parameter is optional. The default value is STANDARD. Possible values are:

Standard

Specifies that partial information is displayed for the specified file space.

Detailed

Specifies that complete information is displayed for the specified file space.

QUERY FILESPACE

Examples

Task 1

Query all file spaces associated with all client nodes.

Command: `query filespace`

Output:

```
Node Name    Filespace    Platform  Filespace  Capacity  %Util
             Name                   Type           (MB)
-----------  -----------  --------  ---------  --------  -----
JOEOS2       OS2          OS/2      HPFS           58.0   32.0
JOEOS2       D_DRIVE      OS/2      HPFS           57.0   30.8
```

where:

Node Name
Specifies the name of the client node.

Filespace Name
Specifies the name of the file space for the client node.

Platform
Specifies the platform for the client node.

Filespace Type
Specifies the type of file space. The type is set by the client.

Capacity (MB)
Specifies the amount of space assigned to this file space, in megabytes, on the client node. This value applies to the actual file systems and media on the client node's machine.

%Util
Specifies, as a percentage of the capacity of the file space, the amount of occupied space in the file space, on the client node. This value applies to the actual file systems and media on the client node's machine.

Task 2

Display detailed information on the OS2 file space that belongs to the client node JOEOS2.

Command: `query filespace joeos2 OS2 format=detailed`

Output:

```
                     Node Name: JOEOS2
                 Filespace Name: OS2
                       Platform: OS/2
                 Filespace Type: HPFS
                  Capacity (MB): 58.0
                          %Util: 99.7
     Last Backup Start Date/Time:
  Days Since Last Backup Started:
Last Backup Completion Date/Time:
Days Since Last Backup Completed:
```

where:

Node Name
Specifies the name of the client node.

Filespace Name
Specifies the name of the file space for the client node.

Platform
Specifies the platform for the client node.

Filespace Type
Specifies the type of file space. The type is set by the client.

Capacity (MB)
Specifies the amount of space assigned to this file space, in megabytes, on the client node.

%Util
Specifies, as a percentage of the capacity for the file space, the amount space that is occupied in the file space on the client node.

Last Backup Start Date/Time
Specifies the date and time that the last increment backup of the file space was initiated.

Days Since Last Backup Started
Specifies the number of days since the last increment backup of the file space was initiated.

Last Backup Completion Date/Time
Specifies the completion date and time of the last increment backup of the file space.

Days Since Last Backup Completed
Specifies the number of days since the last increment backup of the file space completed.

QUERY FILESPACE

Related Commands

Table 115. Commands Related to QUERY FILESPACE

Command	Description
DELETE FILESPACE	Deletes data associated with one or more client's filespaces.
REGISTER NODE	Defines a client to the server and sets options for that user.
REMOVE NODE	Removes a client from the list of registered nodes for a specific policy domain.
RENAME FILESPACE	Renames a client filespace on the server.
UPDATE NODE	Changes the attributes associated with a client node.

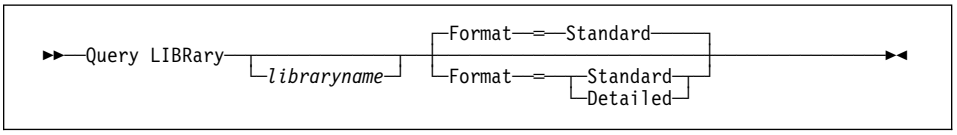
QUERY LIBRARY (Query a Library)

Use the QUERY LIBRARY command to display information about libraries.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

libraryname
Specifies the name of the library to be queried. You can use pattern-matching expressions to specify names. This parameter is optional.

Format=*formatvalue*
Specifies how the information is displayed. This parameter is optional. The default value is STANDARD. Possible values are:

Standard
Specifies that partial information is displayed for the library.

Detailed
Specifies that complete information is displayed for the library.

Examples

Task 1

Display information about the library named AUTO.

Command: `query library auto`

Output:

```
Library Library Device      Private  Scratch  External
Name    Type                Category Category Manager
------- ------- --------    -------- -------- --------
AUTO    SCSI    \\.\mt3.0.0.0
```

Task 2

Display information in full detail about the library named EZLIFE.

Command: `query library ezlife format=detailed`

QUERY LIBRARY

Output:

```
                Library Name: EZLIFE
                Library Type: SCSI
                      Device: \\.\mt3.0.0.0
             Private Category:
             Scratch Category:
             External Manager:
Last Update by (administrator): DOCTOR_MIKE
         Last Update Date/Time: 1996-12-05 15:24:53
```

where:

Library Name
Specifies the name of the library to which the drive is assigned.

Library Type
Specifies the type of library to which the drive is assigned.

Device
Specifies the name of the device that corresponds to the drive.

Private Category
Specifies the category number for private volumes that must be mounted by name.

Scratch Category
Specifies the category number to be used for scratch volumes in the library.

External Manager
Specifies the location of the external library manager where ADSM can send media access requests. This parameter is required.

Last Update by (administrator)
Specifies who performed the last update to the drive.

Last Update Date/Time
Specifies the date and time when the last update occurred.

Related Commands

Table 116 provides references to related commands.

Table 116. Commands Related to QUERY LIBRARY

Command	Description	Reference
AUDIT LIBRARY	Ensures that an automated library is in a consistent state.	Page 43
DEFINE LIBRARY	Defines an automated or manual library.	Page 142
DELETE LIBRARY	Deletes a library.	Page 222

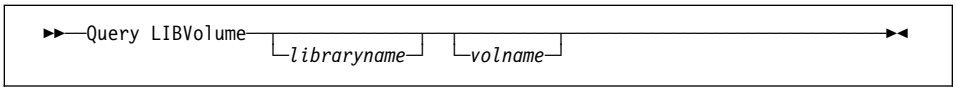
QUERY LIBVOLUME (Query a Library Volume)

Use the QUERY LIBVOLUME command to display information about one or more volumes that have been previously checked into an automated library for use by the ADSM server.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

libraryname
Specifies the name of the library where the storage volume is located. You can use a pattern-matching expression to specify this name. This parameter is optional.

volname
Specifies the volume name of the storage volume. You can use a pattern-matching expression to specify this name. This parameter is optional.

Examples

Task

Display information about all of the volumes that are checked into the library named AUTO.

Command: `query libvolume auto`

Output:

```
Library Name     Volume Name     Status          Last Use
------------     -----------     -------         --------
AUTO             WPD001          Private         Data
AUTO             WPD002          Private         Export
AUTO             WPDV00          Scratch
AUTO             WPD003          Private         DbBackup
```

Library Name
Specifies the name of the library where the storage volume is located.

Volume Name
Specifies the name of the storage volume.

Status
Specifies the status of the storage volume in the inventory that ADSM tracks for the library. If the status is Private, the volume is being used by ADSM. If the status is Scratch, the volume is available for use. When ADSM begins using a volume with scratch status, the status is changed to private.

Last Use
Specifies the type of data on the storage volume. This field only applies to storage volumes with the Private status.

Related Commands

Table 117 provides references to related commands.

Table 117. Commands Related to QUERY LIBVOLUME

Command	Description	Reference
AUDIT LIBRARY	Ensures that an automated library is in a consistent state.	Page 43
CHECKIN LIBVOLUME	Checks a storage volume into an automated library.	Page 71
CHECKOUT LIBVOLUME	Checks a storage volume out of an automated library.	Page 76
DEFINE LIBRARY	Defines an automated or manual library.	Page 142
QUERY LIBRARY	Displays information about one or more libraries.	Page 419
UPDATE LIBVOLUME	Changes the status of a storage volume.	Page 645

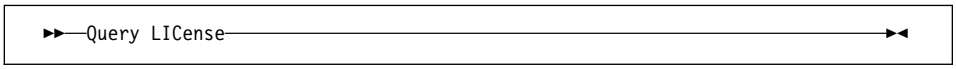
QUERY LICENSE (Display License Information)

Use the QUERY LICENSE command to display information about the results of the latest license audit and the server license terms. This command also displays information indicating whether or not the server is in compliance with the terms of the license.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

None.

Examples

Task

Display audit license, license terms, and compliance information.

Command: `query license`

Output:

```
                                Last License Audit: 06/20/1996 11:52:46
                             Registered Client Nodes: 34
                               Licensed Client Nodes: 123
                    Are network connections in use ?: No
                   Are network connections licensed?: Yes
                       Are UNIX clients registered ?: No
                         Are UNIX clients licensed ?: Yes
                     Are desktop clients registered ?: No
                       Are desktop clients licensed ?: Yes
   Are Open Systems Environment clients registered ?: No
     Are Open Systems Environment clients licensed ?: Yes
          Is space management in use on the server ?: No
        Is space management licensed on the server ?: Yes
 Is disaster recovery manager in use on the server ?: Yes
Is disaster recovery manager licensed on the server?: Yes
                  Device support module 1 required ?: Yes
                  Device support module 1 licensed ?: Yes
                  Device support module 2 required ?: No
                  Device support module 2 licensed ?: Yes
                  Device support module 3 required ?: No
                  Device support module 3 licensed ?: Yes
                  Device support module 4 required ?: No
                  Device support module 4 licensed ?: Yes
                           Server License Compliance: Valid
```

where:

Last License Audit On
Specifies the date and time when the last license audit took place. The displayed information is valid as of this date and time.

Registered Client Nodes
Specifies the total number of registered client nodes.

Licensed Client Nodes
Specifies the total number of client nodes that can be registered as defined in the license terms.

Are network connections in use?
Specifies whether the server is implementing Network connections.

Are network connections licensed?
Specifies whether the server is licensed to support Network connections.

Are UNIX clients registered?
Specifies whether any UNIX clients other than AIX clients are registered to the server.

Are UNIX clients licensed?
Specifies whether the server is licensed for UNIX clients other than AIX clients.

QUERY LICENSE

Are desktop clients registered?
Specifies whether desktop clients (such as DOS) are registered to the server.

Are desktop clients licensed?
Specifies whether the server is licensed to support desktop clients.

Are Open Systems Environment clients registered?
Specifies whether Open Systems Environment clients are registered with the server.

Are Open Systems Environment clients licensed?
Specifies whether the server is licensed to support Open Systems Environment clients.

Is space management in use on the server?
Specifies whether the server is implementing space management.

Is space management licensed on the server?
Specifies whether the server is licensed for space management.

Is disaster recovery manager in use on the server?
Specifies whether the server is implementing the ADSM Disaster Recovery Manager (DRM) feature.

Is disaster recovery manager licensed on the server?
Specifies whether the server is licensed for the DRM feature.

Device support module 1 required?
Specifies whether support for device support module 1 is required.

Device support module 1 licensed?
Specifies whether the server is licensed for device support module 1.

Device support module 2 required?
Specifies whether support for device support module 2 is required.

Device support module 2 licensed?
Specifies whether the server is licensed for device support module 2.

Device support module 3 required?
Specifies whether support for device support module 3 is required.

Device support module 3 licensed?
Specifies whether the server is licensed for device support module 3.

Device support module 4 required?
Specifies whether support for device support module 4 is required.

Device support module 4 licensed?
Specifies whether the server is licensed for device support module 4.

Server License Compliance
Specifies whether the ADSM server is in compliance (Valid) or out of compliance (FAILED) with the license terms.

Related Commands

Table 118. Commands Related to QUERY LICENSE

Command	Description
AUDIT LICENSES	Checks for compliance with defined licenses.
QUERY AUDITOCCUPANCY	Displays the server storage utilization for a client node.
QUERY STATUS	Displays the settings of server parameters, such as those selected by the SET commands.
REGISTER LICENSE	Registers a new license with the ADSM server.
SET LICENSEAUDITPERIOD	Specifies the number of days between automatic license audits.

QUERY LOG

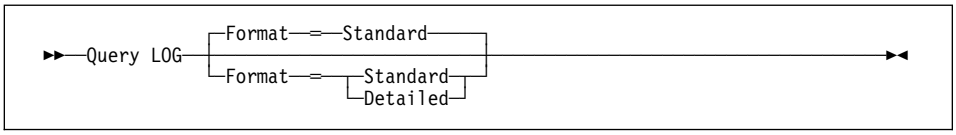
QUERY LOG (Display Information on the Recovery Log)

Use the QUERY LOG command to display allocation information about the recovery log, including utilization, expansion, and reduction abilities.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

Format=*formatvalue*

Specifies how the information is displayed. This parameter is optional. The default value is STANDARD. Possible values are:

Standard

Specifies that partial information is displayed for the recovery log.

Detailed

Specifies that complete information is displayed for the recovery log.

Examples

Task 1

Display information about the recovery log.

Command: `query log`

Output:

```
Available Assigned   Maximum   Maximum    Page Total  Used %Util  Max.
    Space Capacity Extension Reduction    Size Usable Pages       %Util
     (MB)     (MB)      (MB)      (MB) (bytes) Pages
--------- -------- --------- --------- ------- ----- ----- ----- -----
       16        8         8         4   4,096 1,536   187  12.2  12.8
```

where:

Available Space (MB)

Specifies the total amount of space available to the recovery log, in megabytes.

Assigned Capacity (MB)
Specifies the assigned storage capacity of the recovery log, in megabytes.

Maximum Extension (MB)
Specifies the maximum amount of storage space that you can extend the recovery log, in megabytes.

Maximum Reduction (MB)
Specifies the maximum amount of storage space that you can reduce the recovery log, in megabytes.

Page Size (bytes)
Specifies the page size, in bytes.

Total Usable Pages
Specifies the total number of pages available for transactions in the recovery log. A page is a unit of allocation within recovery log volumes.

Used Pages
Specifies the total number of pages currently being used by the recovery log.

%Util
Specifies the current utilization as a percentage of the assigned capacity value. This percentage can vary significantly.

Max. %Util
Specifies the maximum occupancy for the recovery log, as a percentage of the available space. This value specifies the highest capacity occupied by the recovery log since the last reset of this statistic. You can reset this value with the RESET LOGMAXUTILIZATION command.

Task 2

Display information about the recovery log in complete detail.

Command: `query log format=detailed`

QUERY LOG

Output:

```
          Available Space (MB): 16
        Assigned Capacity (MB): 8
        Maximum Extension (MB): 08
        Maximum Reduction (MB): 4
             Page Size (bytes): 4,096
            Total Usable Pages: 1,536
                    Used Pages: 187
                         %Util: 12.2
                    Max. %Util: 12.8
              Physical Volumes: 3
                 Log Pool Pages: 64
            Log Pool Pct. Util: 0.31
            Log Pool Pct. Wait: 0.00
  Cumulative Consumption (MB): 0.60
  Consumption Reset Date/Time: 05/31/1996 13:02:42
```

where:

Available Space (MB)
Specifies the amount of space available in the recovery log, in megabytes.

Assigned Capacity (MB)
Specifies the assigned storage capacity for the recovery log, in megabytes.

Maximum Extension (MB)
Specifies the maximum amount of storage space that you can extend the recovery log, in megabytes.

Maximum Reduction (MB)
Specifies the maximum amount of storage space that you can reduce the recovery log, in megabytes.

Page Size (bytes)
Specifies the page size, in bytes.

Total Usable Pages
Specifies the total number of pages available for transactions in the recovery log. A page is a unit of allocation within recovery log volumes.

Used Pages
Specifies the total number of pages currently in use by the recovery log.

%Util
Specifies the current utilization as a percentage value of the assigned capacity.

Max. %Util

Specifies the maximum occupancy for the recovery log, as a percentage of the available space. This value specifies the highest capacity occupied by the recovery log since the last reset of this statistic. You can reset this value with the RESET LOGMAXUTILIZATION command.

Physical Volumes

Specifies the total number of recovery log volumes defined to the recovery log, including volume copies.

Log Pool Pages

Specifies the number of pages in the recovery log buffer pool. This value is determined by the value for the LOGPOOLSIZE option. The default value for the LOGPOOLSIZE option is 128 kilobytes (32 pages).

Log Pool Pct. Util

Specifies, as a percentage of all recovery log buffer pool pages, the number of recovery log buffer pool pages that are used to write changes to the recovery log after a transaction is committed.

Log Pool Pct. Wait

Specifies, as a percentage of all recovery log buffer pool requests, the number of requests for a recovery log buffer pool page that is not available (because all buffer pool pages are waiting to write to the recovery log). If this number is greater than 0.0, you should increase the size of the buffer pool with the LOGPOOLSIZE option.

Cumulative Consumption

Specifies the amount of log space used by the server since the last reset of this statistic. You can reset this statistic with the RESET LOGCONSUMPTION command.

Consumption Reset Date/Time

Specifies the date and time of the last reset of the cumulative consumption statistic for the recovery log. You can reset this statistic with the RESET LOGCONSUMPTION command.

QUERY LOG

Related Commands

Table 119. Commands Related to QUERY LOG

Command	Description
DEFINE LOGCOPY	Creates a volume copy of a recovery log volume.
DEFINE LOGVOLUME	Defines a disk volume to the recovery log.
EXTEND DB	Extends usable database storage within the volumes previously allocated for its use.
EXTEND LOG	Extends usable log storage within the volumes previously allocated for its use.
REDUCE DB	Attempts to free up a database volume by reducing usable storage within the volumes defined.
REDUCE LOG	Attempts to free up a log volume by reducing usable storage within the volumes defined.
RESET LOGCONSUMPTION	Resets the statistic on recovery log space used.
RESET LOGMAXUTILIZATION	Resets the maximum utilization statistic for the recovery log.

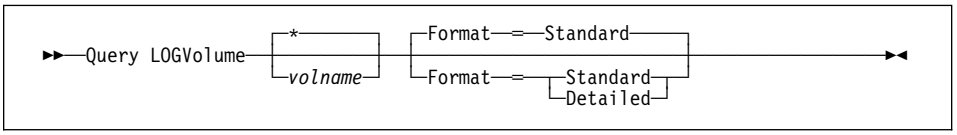
QUERY LOGVOLUME (Display Information on One or More Log Volumes)

Use the QUERY LOGVOLUME command to display information on one or more recovery log volumes, including available, allocated, and free space on the volume. This command displays information about the specified recovery log volume and any recovery log volume copies.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

volname

Specifies the name of the recovery log volume to be queried. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching recovery log volumes are displayed. If you do not specify a volume name, all volumes are displayed.

Format=*formatvalue*

Specifies how the information is displayed. This parameter is optional. The default value is STANDARD. Possible values are:

Standard

Specifies that partial information is displayed for the specified recovery log volume.

Detailed

Specifies that complete information is displayed for the specified recovery log volume.

Examples

Task 1

Display information about the recovery log volume named log1.dsm.

Command: `query logvolume log1.dsm`

QUERY LOGVOLUME

Output:

```
Volume Name       Copy    Volume Name       Copy   Volume Name  Copy
(Copy 1)          Status  (Copy 2)          Status (Copy 3)     Status
----------------  ------  ----------------  ------ ------------ ------
L:\WIN32APP\IBM-  Sync'd  L:\WIN32APP\IBM-  Sync'd              Undef-
 \ADSM\SERVER\L-           \ADSM\SERVER\L-                      ined
 OG1.DSM                   OG3.DSM
```

where:

Volume Name (Copy *n*)
Specifies the name of the database volume. The output displays status of the three volume copies (Copy 1, Copy 2, and Copy 3).

Copy Status
Specifies the status of the database volume. Possible values are:

Offline
The volume is varied offline.

Stale
The volume is not synchronized with the other volumes in the recovery log and cannot be used for storage.

Sync'd
The volume is synchronized with the other volumes in the recovery log and can be used for storage.

Undefined
No volume has been defined.

Task 2

Display detailed information about the recovery log volume named LOG1.DSM.

Command: `query logvolume log1.dsm format=detailed`

Output:

```
Volume Name (Copy 1): L:\WIN32APP\IBM\ADSM\SERVER\LOG1.DSM
         Copy Status: Sync'd
Volume Name (Copy 2): L:\WIN32APP\IBM\ADSM\SERVER\LOG3.DSM
         Copy Status: Sync'd
Volume Name (Copy 3):
         Copy Status: Undefined
Available Space (MB): 8
Allocated Space (MB): 8
     Free Space (MB): 0
```

where:

Volume Name (Copy *n*)
Specifies the name of the database volume. The output displays status of the three volume copies (Copy 1, Copy 2, and Copy 3).

Copy Status
Specifies the status of the database volume. Possible values are:

Offline
The volume is varied offline.

Stale
The volume is not synchronized with the other volumes in the recovery log and cannot be used for storage.

Sync'd
The volume is synchronized with the other volumes in the recovery log and can be used for storage.

Undefined
No volume has been defined.

Available Space (MB)
Specifies the total amount of space that is available, both allocated and free, for the recovery log, in megabytes.

Allocated Space
Specifies the amount of space allocated for the recovery log, in megabytes.

QUERY LOGVOLUME

Free Space
Specifies the amount of unassigned space in the recovery log that can be allocated for use, in megabytes.

Related Commands

Table 120. Commands Related to QUERY LOGVOLUME

Command	Description
DEFINE LOGCOPY	Creates a volume copy of a recovery log volume.
DEFINE LOGVOLUME	Defines a disk volume to the recovery log.
DELETE LOGVOLUME	Deletes a volume from the recovery log.
VARY	Specifies whether a disk volume is available to the server for use.

QUERY MACHINE (Query Machine Information)

This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

Use the QUERY MACHINE command to display information for one or more machines. This command can be used to display the following information:

- All machines defined to the ADSM database
- A specific machine
- Recovery instructions for a specific machine
- Machine characteristics for a specific machine
- All machines matching the specified selection criteria. The parameters machinename (using pattern-matching expressions), BUILDING, FLOOR, ROOM, PRIORITY, ADSMSERVER can be used to restrict the selection of machines. A machine must meet all the specified selection criteria before it is displayed.

When displaying multiple machines, the order for displaying the machine information is the following:

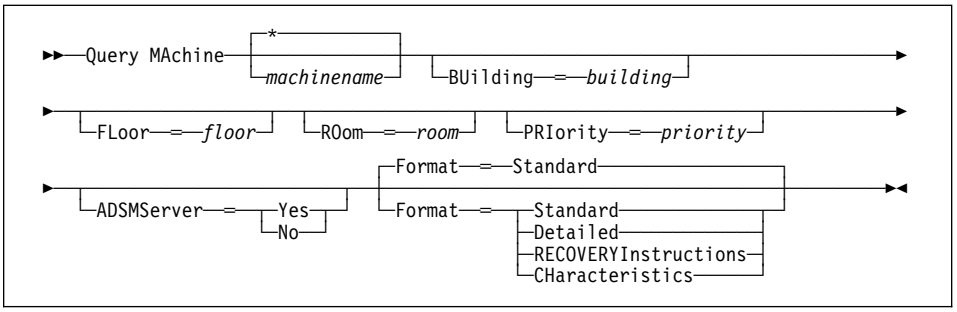
- Priority order.
- Within a given priority, machines are sorted based on location (that is, building, floor, room), and machine name.

The ADSM server database is used to store machine information for you. The QUERY MACHINE command is provided to retrieve the information should you need to reference it in the case of a disaster. The information provided by this command is NOT used by the server in any way to coordinate disaster recovery or to manage the server under normal operation. The information provided in this command is solely determined by you in planning for client machine disaster recovery.

Privilege Class

Any administrator can issue this command.

Syntax



QUERY MACHINE

Parameters

machinename
Specifies the name of the machine to be queried. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching machines are queried. If you do not specify this parameter, all machines are queried (note that the BUILDING, FLOOR, ROOM, PRIORITY, and ADSMSERVER parameters can be used to restrict the machine output).

BUilding=*building*
Specifies the building name or number associated with machines to be queried. This parameter is optional. If the building name or number contains any blank characters, it must be enclosed in quotation marks. The default is no building name or number.

FLoor=*floor*
Specifies the floor name or number associated with machines to be queried. This parameter is optional. If the floor name or number contains any blank characters, it must be enclosed in quotation marks. The default is no floor name or number.

ROom=*room*
Specifies the room name or number associated with machines to be queried. This parameter is optional. If the room name or number contains any blank characters, it must be enclosed in quotation marks. The default is no room name or number.

PRIority=*priority*
Specifies the priority associated with machines to be queried. This parameter is optional. The default is no priority.

ADSMServer=*adsmservervalue*
Specifies whether this machine contains an ADSM server. This parameter is optional. The default is to display machines with and without an ADSM server. Possible values are:

Yes
Specifies to query the machine definition containing the ADSM server.

No
Specifies to query the machine definitions that do not contain an ADSM server.

Format=*formatvalue*
Specifies how the information is displayed. This parameter is optional. The default value is STANDARD. Possible values are:

Standard
Specifies that partial information is displayed for the specified machine.

Detailed
Specifies that complete information is displayed for the specified machine.

RECOVERYInstructions
Specifies that machine recovery instructions are displayed for the specified machine. This option is only supported when querying a specific machine.

CHaracteristics
Specifies that machine characteristics are displayed for the specified machine. This option is only supported when querying a specific machine.

Examples

Task 1

Display information for a specific machine named MACH1.

Command: `query machine MACH1`

Output:

```
Machine  Machine  Building Floor Room  Node Name  Recovery
Name     Priority                                Media Name
-------  -------- -------- ----- -----  ---------  ----------
MACH1       1       21       2   2929  VIRGINIA   RECMED1
```

where:

Machine Name
Specifies the name of the machine.

Machine Priority
Specifies the recovery priority of the machine.

Building
Specifies the building in which the machine is located.

Floor
Specifies the floor on which the machine is located.

Room
Specifies the room in which the machine is located.

Node Name
Specifies ADSM client nodes which are associated with this machine.

Recovery Media Name
Specifies the recovery media which are associated with this machine.

QUERY MACHINE

Task 2

Display information for all priority 1 machines residing on the second floor of building 21.

Command: `query machine * building=21 floor=2 priority=1 Format=Detailed`

Output:

```
                Machine Name: MACH1
            Machine Priority: 1
                    Building: 21
                       Floor: 2
                        Room: 2929
                ADSM Server?: Yes
                 Description: ADSM server machine
                   Node Name: VIRGINIA
        Recovery Media Name: RECMED1
           Characteristics?: Yes
     Recovery Instructions?: Yes
```

where:

Machine Name
Specifies the name of the machine.

Machine Priority
Specifies the recovery priority of the machine.

Building
Specifies the building in which the machine is located.

Floor
Specifies the floor on which the machine is located.

Room
Specifies the room in which the machine is located.

ADSM Server?
Specifies whether the machine contains an ADSM server. Possible values are:

Yes
Specifies that this machine contains the ADSM server.

No
Specifies that this machine does not contain the ADSM server.

Description
Specifies any description information for the machine.

Node Name
Specifies ADSM client nodes which are associated with this machine.

Recovery Media Name
Specifies the recovery media which are associated with this machine.

Characteristics?
Specifies whether characteristics text for a machine is stored in the ADSM database. Possible values are:

Yes
Specifies that characteristics text for this machine is stored in the ADSM database.

No
Specifies that characteristics text for this machine is not stored in the ADSM database.

Recovery Instructions?
Specifies whether recovery instructions text for a machine is stored in the ADSM database. Possible values are:

Yes
Specifies that recovery instructions text for this machine is stored in the ADSM database.

No
Specifies that recovery instructions text for this machine is not stored in the ADSM database.

Related Commands

Table 121. Commands Related to QUERY MACHINE

Command	Description
DEFINE MACHINE	Defines a machine for DRM.
DEFINE MACHNODEASSOCIATION	Associates an ADSM node with a machine.
DEFINE RECMEDMACHASSOCIATION	Associates recovery media with a machine.
DELETE MACHINE	Deletes an existing machine.
INSERT MACHINE	Inserts machine characteristics or recovery instructions into the ADSM database.
UPDATE MACHINE	Changes the information of an existing machine.

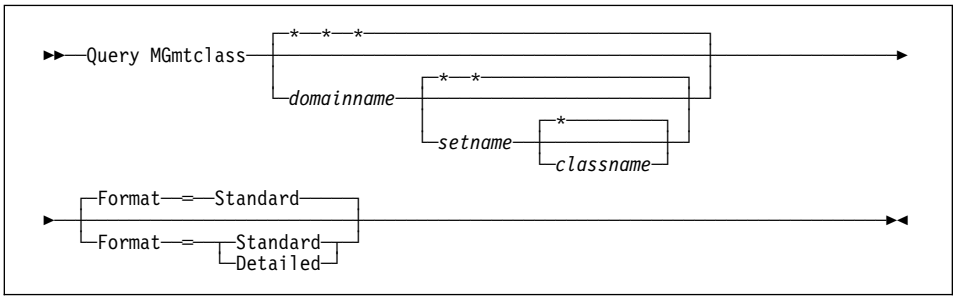
QUERY MGMTCLASS (Query a Management Class)

Use the QUERY MGMTCLASS command to display information on an existing management class. This command is useful for determining which management classes are available, including the default management class, for a policy domain. To identify the default management class, use the QUERY DOMAIN command.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

domainname

Specifies the name of the policy domain associated with the management class to be queried. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching policy domains are queried. If you do not specify a value for this parameter, all policy domains are queried. You must specify this parameter when querying an explicitly named management class.

setname

Specifies the name of the policy set associated with the management class to be queried. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching policy sets are queried. If you do not specify a value for this parameter, all policy sets are queried. You must specify this parameter when querying an explicitly named management class.

classname

Specifies the name of the management class associated with the policy set to be queried. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching management classes are queried. If you do not specify a value for this parameter, all management classes are queried. You must specify this parameter when querying an explicitly named management class.

Format=*formatvalue*

Specifies how the information is displayed. This parameter is optional. The default value is STANDARD. Possible values are:

Standard

Specifies that partial information is displayed for the specified management class.

Detailed

Specifies that complete information is displayed for the specified management class.

Examples

Task 1

Query all management classes for all policy domains. Create the output in standard format.

Command: `query mgmtclass`

Output:

```
Policy       Policy       Mgmt         Default     Description
Domain       Set Name     Class        Mgmt
Name                      Name         Class ?
---------    ---------    ---------    ---------   --------------------
EMPLOYEE-    ACTIVE       ACTIVEFI-    Yes
 _RECORDS                  LES
EMPLOYEE-    HOLIDAY      ACTIVEFI-    Yes
 _RECORDS                  LES
EMPLOYEE-    HOLIDAY      FILEHIST-    No
 _RECORDS                  ORY
EMPLOYEE-    VACATION     ACTIVEFI-    Yes
 _RECORDS                  LES
EMPLOYEE-    VACATION     FILEHIST-    No
 _RECORDS                  ORY
PROG1        SUMMER       MCLASS1      No          Technical Support Mgmt
                                                    Class
PROG2        SUMMER       MCLASS1      No          Technical Support Mgmt
                                                    Class
STANDARD     ACTIVE       STANDARD     Yes         Installed default
                                                    management class.
STANDARD     STANDARD     STANDARD     Yes         Installed default
                                                    management class.
```

where:

Policy Domain Name

Specifies the name of the policy domain.

QUERY MGMTCLASS

Policy Set Name
Specifies the name of the activated policy set for the policy domain.

Mgmt Class Name
Specifies the name of the management class.

Default Mgmt Class?
Specifies whether the management class is defined as the default management class for the policy set.

Description
Specifies a description of the management class.

Task 2

Query the ACTIVEFILES management class that is assigned to the VACATION policy set of the EMPLOYEE_RECORDS policy domain. Create the output in detailed format.

Command:
```
query mgmtclass employee_records vacation activefiles
format=detailed
```

Output:

```
            Policy Domain Name: EMPLOYEE_RECORDS
               Policy Set Name: VACATION
               Mgmt Class Name: ACTIVEFILES
          Default Mgmt Class ?: Yes
                   Description:
    Space Management Technique: None
       Auto-Migrate on Non-Use: 0
    Migration Requires Backup?: Yes
         Migration Destination: SPACEMGPOOL
Last Update by (administrator): ADMIN
         Last Update Date/Time: 05/31/1996 13:15:45
```

where:

Policy Domain Name
Specifies the name of the policy domain.

Policy Set Name
Specifies the name of the activated policy set for the policy domain.

Mgmt Class Name?
Specifies the name of the management class.

Default Mgmt Class
Specifies whether the management class is defined as the default management class for the policy set.

Description
Specifies a description of the management class.

Space Management Technique
Specifies the space management technique for the management class.

Auto-Migrate on Non-Use
Specifies the number of days that must elapse since the file was last accessed before it is eligible for automatic migration.

Migration Requires Backup?
Specifies whether a backup version of a file must exist before a file can be migrated.

Migration Destination
Specifies the name of an ADSM storage pool that is a destination for migrated files.

Last Update by (administrator)
Specifies the name of the administrator that defined or most recently updated the management class.

Last Update Date/Time
Specifies the date and time that the administrator defined or most recently updated the management class.

Related Commands

Table 122. Commands Related to QUERY MGMTCLASS

Command	Description
COPY MGMTCLASS	Creates a copy of an existing management class.
DEFINE MGMTCLASS	Defines a management class within the policy domain and policy set specified.
DELETE MGMTCLASS	Deletes a management class and its copy groups from a policy domain and policy set.
QUERY DOMAIN	Displays information about one or more policy domains.
UPDATE MGMTCLASS	Changes the attributes of a management class.

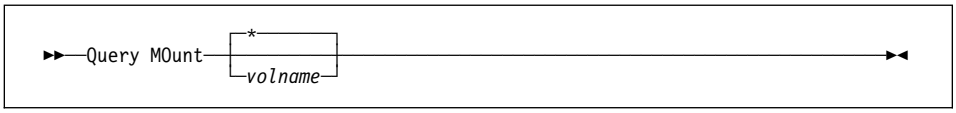
QUERY MOUNT (Display Information on Mounted Sequential Access Volumes)

Use the QUERY MOUNT command from the administrative client to request information about the status of one or all sequential access volumes that are mounted.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

volname

Specifies the name of the mounted sequential access volume that you want to query. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching mounted volumes are queried. If you do not specify a sequential access volume name, information on all mounted volumes is displayed.

Examples

Task

Display information on the mounted sequential media volume named WPD000.

Command: `query mount wpd000`

Output:

```
ANR8331I 8MMTAPE volume WPD000 is mounted R/W
in drive 8MM.1 (mt3.0.0.0), status: DISMOUNTING.
ANR8334I   1 volume(s) found.
```

Related Commands

Table 123 provides references to related commands.

Table 123. Commands Related to QUERY MOUNT

Command	Description	Reference
DISMOUNT VOLUME	Dismounts a sequential, removable volume by the volume name.	Page 251
REPLY	Allows a request to continue processing.	Page 527

QUERY NODE

QUERY NODE (Query One or More Client Nodes)

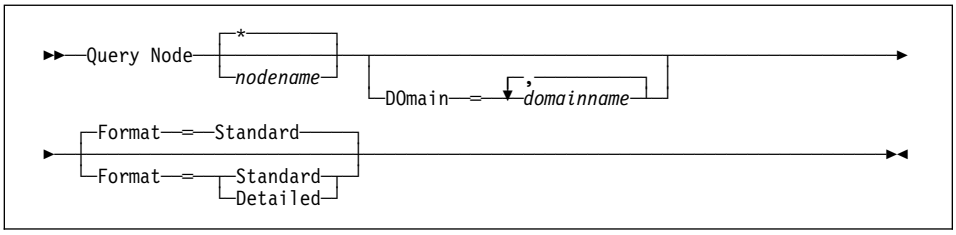
Use the QUERY NODE command to display information about one or more registered client nodes. This command provides client node information such as:

- The name of the client node
- The date the server was last accessed
- The date the password was last changed
- The client node's policy domain
- The communication method used by the client node

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

nodename

Specifies the name of the client node to be queried. You can use a pattern-matching expression to specify this name. All matching client nodes are queried. If you do not specify a value for this parameter, all client nodes are queried.

DOmain=*domainname*

Specifies a list of policy domains that limit the client node query. Only nodes that are assigned to one of the specified policy domains are displayed. This parameter is optional. The items in the list are separated by commas, with no intervening spaces. You can use a pattern-matching expression to specify a domain. All clients assigned to a matching domain will be displayed. If you do not specify a value for this parameter, all policy domains are included in the query.

Format=*formatvalue*

Specifies how the information is displayed. This parameter is optional. The default value is STANDARD. Possible values are:

Standard

Specifies that partial information is displayed for the specified client nodes.

Detailed

Specifies that complete information is displayed for the specified client nodes.

Examples

Task 1

Display information on all registered client nodes.

Command: `query node`

Output:

```
Node Name   Platform  Policy       Days      Days  Locked?
                      Domain      Since     Since
                      Name         Last  Password
                                 Access       Set
----------  --------  ---------  ------  --------  -------
CLIENT1     (?)       STANDARD        6         6    No
GEORGE      OS/2      STANDARD        1         1    No
JANET       (?)       STANDARD        1         1    No
JOEOS2      OS/2      STANDARD       <1        <1    No
TOMC        (?)       STANDARD        1         1    No
```

where:

Node Name
Specifies the name of the client node.

Platform
Specifies the platform of the client node. A question mark (?) is displayed until the client node first accesses the server and reports its platform type.

Note: After a node first accesses the server and reports its platform type, the platform type will be constant, even if the node platform subsequently changes.

Policy Domain Name
Specifies the name of the policy domain to which the client node is assigned.

Days Since Last Access
Specifies the number of days that have elapsed since the last time the client node accessed the server.

Days Since Password Set
Specifies the number of days that have elapsed since the client node's password was set.

Locked?
Specifies whether the client node is locked out of ADSM.

QUERY NODE

Task 2

Display complete information on the client node named JOEOS2.

Command: `query node joeos2 format=detailed`

Output:

```
                    Node Name: JOEOS2
                     Platform: OS/2
            Policy Domain Name: STANDARD
          Last Access Date/Time: 05/19/1995 09:59:52
        Days Since Last Access: 2
        Password Set Date/Time: 05/18/1995 11:04:45
       Days Since Password Set: 3
                     Locked?: No
                     Contact:
                   Compression: No
       Archive Delete Allowed?: Yes
        Backup Delete Allowed?: No
        Registration Date/Time: 05/18/1995 11:04:45
     Registering Administrator: OPEN_REGISTRATION
Last Communication Method Used: Tcp/Ip
   Bytes Received Last Session: 226
       Bytes Sent Last Session: 556
Duration of Last Session (sec): 3.32
   Pct. Idle Wait Last Session: 88.48
  Pct. Comm. Wait Last Session: 6.63
  Pct. Media Wait Last Session: 0.00
```

where:

Node Name
Specifies the name of the client node.

Platform
Specifies the platform of the client node. A question mark (?) is displayed until the client node first accesses the server and reports its platform type.

Policy Domain Name
Specifies the name of the policy domain to which the client node is assigned.

Last Access Date/Time
Specifies the last date and time that the client node accessed the server.

Days Since Last Access
Specifies the number of days that have elapsed since the last time the client node accessed the server.

Password Set Date/Time
Specifies the date and time that the client node's password was set.

Days Since Password Set
Specifies the number of days that have elapsed since the client node's password was set.

Locked?
Specifies whether the client node is locked out of ADSM.

Contact
Specifies any contact information for the client node.

Compression
Specifies whether compression is enabled.

Archive Delete Allowed?
Specifies whether the client node can delete his or her own archive files.

Backup Delete Allowed?
Specifies whether the client node can delete his or her own backup files.

Registration Date/Time
Specifies the date and time that the client node was registered.

Registering Administrator
Specifies the name of the administrator that registered the client node.

Last Communication Method Used
Specifies the communication method that was last used by the client node.

Bytes Received Last Session
Specifies the number of bytes received by the server during the last client node session.

Bytes Sent Last Session
Specifies the number of bytes sent to the client node.

Duration of Last Session (sec)
Specifies how long the most recent client node session lasted.

Pct. Idle Wait Last Session
Specifies, as a percentage of the total session time, the amount of time that the client was not performing any functions.

Pct. Comm. Wait Last Session
Specifies, as a percentage of the total session time, the amount of time that the client waited for a communication response from the client.

Pct. Media Wait Last Session
Specifies, as a percentage of the total session time, the amount of time that the client waited for a removable volume to be mounted.

QUERY NODE

Related Commands

Table 124. Commands Related to QUERY NODE

Command	Description
LOCK NODE	Prevents a client from accessing the server.
REGISTER NODE	Defines a client to the server and sets options for that user.
REMOVE NODE	Removes a client from the list of registered nodes for a specific policy domain.
RENAME NODE	Changes the name for an existing user that belongs to a specific policy domain.
UNLOCK NODE	Enables a locked user in a specific policy domain to access the server.
UPDATE NODE	Changes the attributes associated with a client node.

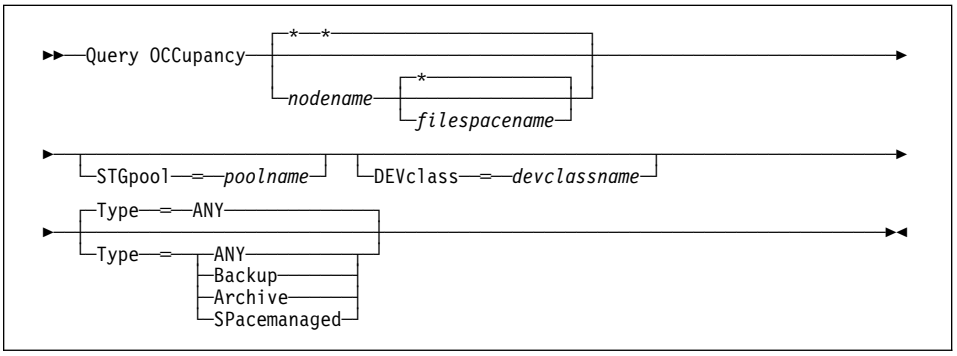
QUERY OCCUPANCY (Display File Space Information by Storage Pool)

Use the QUERY OCCUPANCY command to display information on where a client's file spaces are stored and how much space they occupy. This command can be used to display information about file spaces that are stored in primary or copy storage pools.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

nodename

Specifies the name of the node that owns the file spaces that you want to locate. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching names are included in the query. If you do not specify a value for this parameter, all nodes are queried.

filespacename

Specifies the name of the file space that you want to locate. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching names are included in the query. If you do not specify a value for this parameter, all file spaces are queried. If you explicitly specify a file space name, you must also specify a node name.

STGpool=*poolname*

Specifies the name of the storage pool in which files from the specified file space are stored. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching storage pools are included in the query. If you do not specify a value for this parameter, all storage pools are queried.

DEVclass=*devclassname*

Specifies the name of the device class to which the file spaces are assigned. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching device classes are included in the query. If you do not specify a value for this parameter, all storage pools are queried.

QUERY OCCUPANCY

Type=*filetype*
Specifies the types of files to query in the file spaces. This parameter is optional. The default value is ANY. Possible values are:

ANY
Specifies that all types of files are queried: backup versions of files, archived copies of files, and files migrated from one or more client nodes.

Backup
Specifies that backup files are queried.

Archive
Specifies that archive files are queried.

SPacemanaged
Specifies that space management files (files migrated from one or more client nodes) are queried.

Examples

Task 1

Display information on where all file spaces assigned to the node named DAISY are stored.

Command: `query occupancy daisy`

Output:

```
Node Name   Type  Filespace    Storage      Number of    Space
                  Name         Pool Name    Files       Occupied
                                                         (MB)
---------  ----  -----------   ----------   --------    -------
DAISY      Bkup  DRIVED       COPYFILE       38          0.45
DAISY      Bkup  DRIVED       YESBACK        38          0.45
DAISY      Bkup  DRIVE_F_N:   COPYFILE        7          0.16
DAISY      Bkup  DRIVE_F_N:   YESBACK         7          0.16
DAISY      Bkup  DRIVE_G_S:   YESBACK        16          0.03
DAISY      Arch  (archive)    YESARCH        14          0.02
DAISY      Arch  DRIVE_F_N:   YESARCH         6          0.01
DAISY      Arch  OS2          YESARCH        65          0.58
DAISY      Arch  DRIVE_G_S:   YESARCH        14          0.02
```

See Task 2 for parameter definitions.

Task 2

Display information on where the file spaces that belong to the node WAYNE, and that have a backup file type, are stored.

Command: `query occupancy wayne type=backup`

Output:

```
Node Name  Type  Filespace    Storage      Number of     Space
                    Name      Pool Name       Files     Occupied
                                                          (MB)

--------   ----  -----------  -----------  ---------  ----------
WAYNE      Bkup    DWG1       BACKUPPOOL1     2,330     53.19
WAYNE      Bkup    OS2C       BACKUPPOOL1     1,554     32.00
WAYNE      Bkup    OS2D       BACKUPPOOL1     1,716     35.30
```

where:

Node Name
Specifies the name of the node that owns the specified file space.

Type
Specifies the type of data. The possible values are:

Arch
Specifies that the data has been archived

Bkup
Specifies that the data has been backed up

Spmg
Specifies that the data has been space managed

Filespace Name
Specifies the name of the file space that belongs to the node. A name of *archive* indicates that the data was archived before collocation by filespace was added to ADSM.

Storage Pool Name
Specifies the name of the storage pool where the file space currently resides.

Number of Files
Specifies the number of files that belong to the file space and are stored in this storage pool.

Space Occupied (MB)
Specifies the amount of space occupied by the file space.

QUERY OCCUPANCY

Related Commands

Table 125. Commands Related to QUERY OCCUPANCY

Command	Description
DELETE FILESPACE	Deletes data associated with one or more client's filespaces.
QUERY FILESPACE	Displays information about data in one or more filespaces that belong to a client.
QUERY NODE	Displays partial or complete information about one or more clients.

QUERY OPTION (Query One or More Server Options)

Use the QUERY OPTION command to display information about one or more general server options.

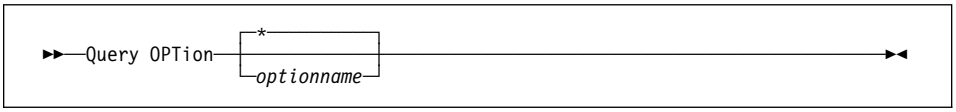
The options file is the only place in which the server options can be changed. To change the options, you must restart the server.

For more information about server options, see Appendix E, “Tailoring Server Options” on page 753.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

optionname

Specifies the name of an option in the server options file for which you want information. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching server options are displayed. If you do not specify this parameter, information on all options is displayed.

Examples

Task 1

Display general information about all defined server options.

Command: `query option`

QUERY OPTION

Output:

```
Server Option      Option Setting    Server Option    Option Setting
--------------     ---------------   --------------   --------------
CommTimeOut        60                IdleTimeOut        45
BufPoolSize        2048              LogPoolSize        1024
DateFormat         1 (mm/dd/yyyy)    TimeFormat         1 (hh:mm:ss)
NumberFormat       1 (1,000.00)      MessageFormat      1
Language           AMENG             MaxSessions        25
ExpInterval        1                 ExpQuiet           No
MirrorRead DB      Normal            MirrorRead LOG     Normal
MirrorWrite DB     Sequential        MirrorWrite LOG    Parallel
VolumeHistory      C:\volume.his     Devconfig          C:\devconf.his
TxnGroupMax        256               MoveBatchSize      256
MoveSizeThresh     500               StatusMsgCnt       10
TcpPort            1960              TCPWindowsize      2097152
IPXSocket          9999              NetBiosName        NETBLM12
NetbiosBufferSize  32768             NetbiosSessions    255
IpxBufferSize      32768             NamedPipeName      \\.\PIPE\ADSMPIPE
LanAdapter         2                 CommMethod         TCPIP
CommMethod         NETBIOS           CommMethod         NAMEDPIPE
CommMethod         IPXSPX            Message Interval   5
MaxMemory          536870912
```

where:

Server Option
Specifies the name of the server option.

Option Setting
Specifies the current value defined to the server option.

Task 2

View the option settings for all options that begin with L.

Command: `query option l*`

Output:

```
Server Option         Option Setting
-----------------     --------------------
LogPoolSize           256
Language              AMENG
LuName                DSMSERV1
LanAdapter            2
```

where:

Server Option
Specifies the name of the server option.

Option Setting
Specifies the current value defined to the server option.

Related Commands

None.

QUERY POLICYSET (Query a Policy Set)

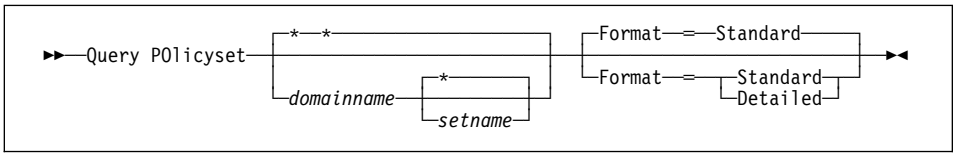
Use the QUERY POLICYSET command to display information about an existing policy set.

To get a list of the policy sets for a policy domain, use the QUERY DOMAIN command.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

domainname
Specifies the name of the policy domain associated with the policy set to be queried. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching policy domains are queried. If you do not specify a value for this parameter, all policy domains are queried. You must specify this parameter when querying an explicitly named policy set.

setname
Specifies the name of the policy set associated with the copy group to be queried. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching policy sets are queried. If you do not specify either ACTIVE or the policy set name, all policy sets are queried. You must specify this parameter when querying an explicitly named policy set.

Format=*formatvalue*
Specifies how the information is displayed. This parameter is optional. The default value is STANDARD. Possible values are:

Standard
Specifies that partial information is displayed for the policy set.

Detailed
Specifies that complete information is displayed for the policy set.

Examples

Task 1

Query all policy sets for all policy domains. Create the output in standard format.

Command: `query policyset`

Output:

```
Policy        Policy        Default       Description
Domain        Set Name      Mgmt
Name                        Class
                            Name
---------     ---------     ---------     ------------------------
EMPLOYEE-     ACTIVE        ACTIVEFI-
 _RECORDS                    LES
EMPLOYEE-     HOLIDAY       ACTIVEFI-
 _RECORDS                    LES
EMPLOYEE-     VACATION      ACTIVEFI-
 _RECORDS                    LES
PROG1         SUMMER                      Programming Group
                                           Policies
PROG2         SUMMER                      Programming Group
                                           Policies
STANDARD      ACTIVE        STANDARD      Installed default policy
                                           set.
STANDARD      STANDARD      STANDARD      Installed default policy
                                           set.
```

where:

Policy Domain Name
Specifies the name of the policy domain.

Policy Set Name
Specifies the name of the policy set.

Default Mgmt Class Name
Specifies the assigned default management class for the policy set.

Description
Specifies a description of the policy domain.

QUERY POLICYSET

Task 2

Query the VACATION policy set that is defined to the EMPLOYEE_RECORDS policy domain. Create the output in detailed format.

Command: `query policyset employee_records vacation format=detailed`

Output:

```
            Policy Domain Name: EMPLOYEE_RECORDS
               Policy Set Name: VACATION
       Default Mgmt Class Name: ACTIVEFILES
                   Description:
Last Update by (administrator): ADMIN
         Last Update Date/Time: 05/31/1996 13:15:50
```

where:

Policy Domain Name
Specifies the name of the policy domain.

Policy Set Name
Specifies the name of the activated policy set for the policy domain.

Default Mgmt Class Name
Specifies the assigned default management class for the policy set.

Description
Specifies a description of the policy domain.

Last Update by (administrator)
Specifies the name of the administrator that defined or most recently updated the policy domain.

Last Update Date/Time
Specifies when the administrator defined or most recently updated the storage pool.

Related Commands

Table 126. Commands Related to QUERY POLICYSET

Command	Description
ACTIVATE POLICYSET	Validates and activates a policy set within a policy domain.
COPY POLICYSET	Creates a copy of an existing policy set.
DEFINE POLICYSET	Defines a policy set within the specified policy domain.
DELETE POLICYSET	Deletes a policy set, including its management classes and copy groups, from a policy domain.
QUERY DOMAIN	Displays information about one or more policy domains.
UPDATE POLICYSET	Changes the description of a policy set.
VALIDATE POLICYSET	Verifies and reports on conditions the administrator must consider before activating the policy set.

QUERY PROCESS (Query One or More Server Processes)

Use the QUERY PROCESS command to display information about one or more active background processes. The following commands can generate background processes:

AUDIT LIBRARY	EXPORT NODE
AUDIT LICENSES	EXPORT POLICY
AUDIT VOLUME	EXPORT SERVER
BACKUP DB	EXTEND LOG
BACKUP STGPOOL	IMPORT ADMIN
CHECKIN LIBVOLUME	IMPORT NODE
CHECKOUT LIBVOLUME	IMPORT POLICY
DEFINE DBCOPY	IMPORT SERVER
DEFINE LOGCOPY	MOVE DATA
DELETE DBVOLUME	REDUCE DB
DELETE FILESPACE	REDUCE LOG
DELETE LOGVOLUME	RESTORE STGPOOL
DELETE VOLUME	RESTORE VOLUME
EXPIRE INVENTORY	VARY
EXPORT ADMIN	

The following internal server operations generate background server processes:

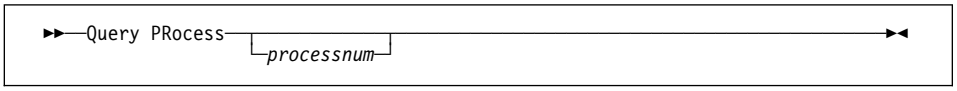
- Inventory expiration
- Migration
- Reclamation

You can cancel background processes, by process number, using the CANCEL PROCESS command.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

processnum

Specifies the number of the background process to be queried. This parameter is optional. If you do not specify a process number, information on all background processes is displayed.

Examples

Task

Display information about background process 202 that was initiated with the EXPORT SERVER command.

Command: `query process 202`

Output:

```
 Process Process Description      Status
  Number
-------- ----------------------- -------------------------
     202 EXPORT SERVER            ANR0648I Have copied the
                                  following: 8 Domains 2
                                  Policy Sets 10 Management
                                  Classes 4 Copy Groups 1
                                  Administrators 746 Bytes
                                  (0 errors have been
                                  detected)
```

where:

Process Number
Specifies the number assigned to the background process.

Process Description
Specifies a description of the background process.

Status
Specifies the completion status of the background process.

Related Commands

Table 127. Command Related to QUERY PROCESS

Command	Description
CANCEL PROCESS	Cancels a background server process.

QUERY RECOVERYMEDIA (Query Recovery Media)

This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

Use the QUERY RECOVERYMEDIA command to display the media (for example, boot media) needed for recovering a machine. This command can be used to display:

- All recovery media defined to the ADSM database
- Specific recovery media
- All recovery media matching the specified selection criteria. The parameters *recoverymedianame* (using pattern-matching expressions), TYPE, LOCATION can be used to restrict the selection of recovery media. A recovery media must meet all the specified selection criteria before it is displayed.

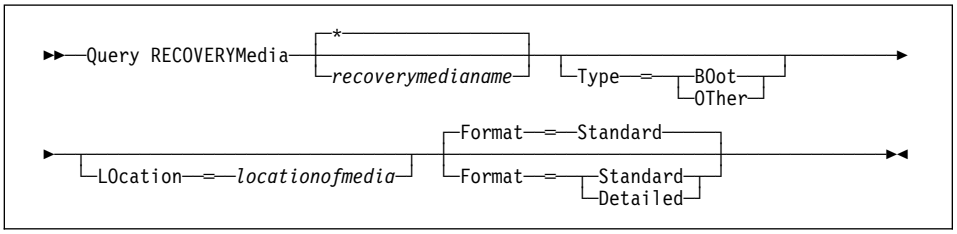
When displaying multiple recovery media, the display is in alphabetical order according to the recovery media name.

The ADSM server database is used to store recovery media information for you. The QUERY RECOVERYMEDIA command is provided to retrieve the information should you need to reference it in the case of a disaster. The information provided by this command is NOT used by the server in any way to coordinate disaster recovery or to manage the server under normal operation. The information provided in this command is solely determined by you in planning for client machine disaster recovery.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

recoverymedianame
Specifies the name of the recovery media to be queried. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching recovery media are queried. If you do not specify this parameter, all recovery media are queried.

Type=*typevalue*
Specifies the type of media to be queried. This parameter is optional. The default is no type. Possible values are:

BOot
Specifies that recovery media of type boot are queried.

OTher
Specifies that recovery media of type other are queried.

LOcation=*locationofmedia*
Specifies the location of the recovery media to be queried. For example, "Building=021 Floor=02 Room=2846 Cabinet=1A0". This parameter is optional. The maximum length of the location is 255 characters. The location description must be enclosed in quotation marks if it contains any blank characters. The default is no location.

Format=*formatvalue*
Specifies how the information is displayed. This parameter is optional. The default value is STANDARD. Possible values are:

Standard
Specifies that partial information is displayed for the specified recovery media.

Detailed
Specifies that complete information is displayed for the specified recovery media.

Examples

Task 1

Display information for the recovery media named RECMED1.

Command: `query recoverymedia RECMED1`

Output:

```
Recovery Media Name   Volume Names      Location          Machine Name
-------------------   ----------------  ----------------  ------------
RECMED1               vol1 vol2 vol3    IRONMOUNTAIN      MACH1
                       vol4
```

where:

Recovery Media Name
Specifies the name of the recovery media.

Volume Names
Specifies the set of volumes that contain the recoverable data needed at recovery time for machines associated with this recovery media.

Location
Specifies where the recovery media is stored.

QUERY RECOVERYMEDIA

Machine Name
Specifies the machines which are associated with this recovery media.

Task 2

Display detailed information for the recovery media named RECMED1.

Command: `query recoverymedia RECMED1 format=detailed`

Output:

```
Recovery Media Name: RECMED1
               Type: Boot
       Volume Names: vol1 vol2 vol3 vol4
           Location: IRONMOUNTAIN
        Description:
            Product:
Product Information:
       Machine Name: MACH1
```

where:

Recovery Media Name
Specifies the name of the recovery media.

Type
Specifies whether the recovery media is boot media or another type of media. Possible values are:

Boot
Specifies that the recovery media is boot media.

Other
Specifies that the recovery media is not boot media.

Volume Names
Specifies the set of volumes that contain the recoverable data needed at recovery time for machines associated with this recovery media.

Location
Specifies where the recovery media is stored.

Description
Specifies any description information for the recovery media.

Product
Specifies the product used to create the boot media.

Product Information
Specifies information about the product which created the boot media. This information may be needed for restoring the machine.

Machine Name
Specifies the machines which are associated with this recovery media.

Related Commands

Table 128. Commands Related to QUERY RECOVERYMEDIA

Command	Description
DEFINE RECMEDMACHASSOCIATION	Associates recovery media with a machine.
DEFINE RECOVERYMEDIA	Defines the media required to recover a machine.
DELETE RECOVERYMEDIA	Deletes existing recovery media.
UPDATE RECOVERYMEDIA	Changes the attributes of existing recovery media.

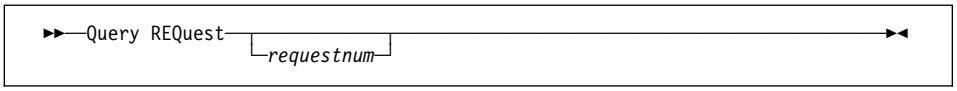
QUERY REQUEST (Query One or More Pending Mount Requests)

Use the QUERY REQUEST command to display information about one or more pending mount requests.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

requestnum

Specifies the number of the pending mount request. This parameter is optional. If you do not specify a value for this parameter, all pending mount requests are displayed.

Examples

Task 1

Display information on all pending mount requests.

Command: `query request`

Output:

```
ANR8352I Requests outstanding:
ANR8326I 001: Mount 8MM volume EXP001 R/W
in drive 8MM.1 (mt0.0.0.0) of library
MANLIB within 60 minute(s).
```

Related Commands

Table 129 provides references to related commands.

Table 129. Related Commands for QUERY REQUEST

Command	Description	Reference
CANCEL REQUEST	Cancels one or more pending volume mount requests.	Page 67
REPLY	Allows a request to continue processing.	Page 527

QUERY SCHEDULE (Query One or More Schedules)

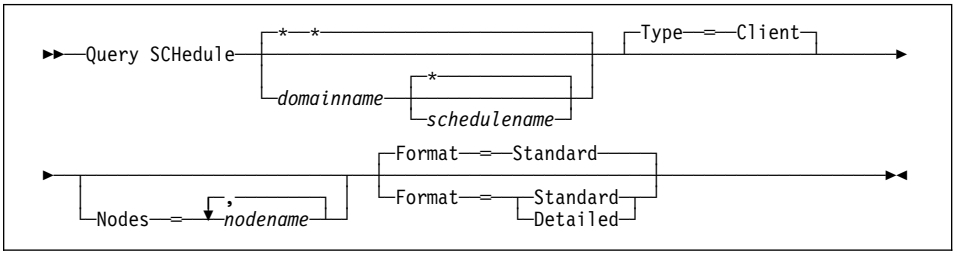
Use the QUERY SCHEDULE command to display information pertaining to one or more schedules.

The QUERY SCHEDULE command takes two forms, depending on whether the schedule applies to client operations or administrative commands. The syntax and parameters for each form are defined separately.

Privilege Class

Any administrator can issue this command.

Syntax for Querying Client Schedules



Parameters for Querying Client Schedules

domainname

Specifies the name of the policy domain to which the schedule belongs. You can use a pattern-matching expression to specify this name. All matching policy domains are queried. The default queries all existing policy domains. If you specify a domain name, you do not have to specify a schedule name.

schedulename

Specifies the name of the schedule that belongs to the specified policy domain. You can use a pattern-matching expression to specify this name. All matching schedules are queried. The default value queries all existing schedules for a given domain. If you specify a schedule name, you must also specify a policy domain name.

Type=Client

Specifies that this command should query client schedules. This parameter is optional. The default value is CLIENT. Administrative command schedules are queried by specifying TYPE=ADMINISTRATIVE.

Nodes=*nodename*

Specifies that you want to restrict the schedules that are queried by defining one or more client nodes that are associated with the schedules to be displayed. This parameter is optional. You can use a pattern-matching expression to specify a name. All matching clients are queried. If you do not specify a client name, all schedules matching the DOMAINNAME and SCHEDULENAME

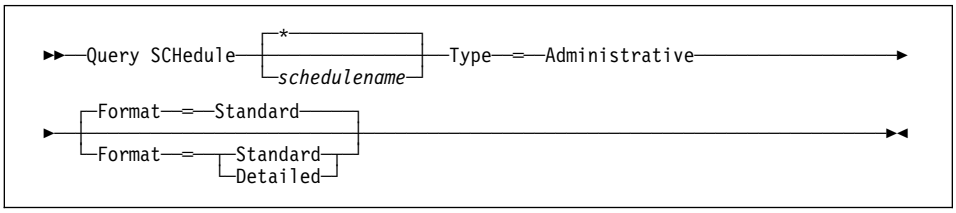
parameters are displayed. You can specify more than one client node name by separating each name with a comma, with no intervening spaces.

Format=*formatvalue*
Specifies how the information is displayed. This parameter is optional. The default value is STANDARD. Possible values are:

Standard
Specifies that partial information is displayed for the specified schedules.

Detailed
Specifies that complete information is displayed for the specified schedules.

Syntax for Querying Administrative Command Schedules



Parameters for Querying Administrative Command Schedules

schedulename
Specifies the name of the schedules to be queried. You can use a pattern-matching expression to specify this name. All matching schedules are queried. The default queries all existing schedules.

Type=**Administrative**
Specifies that the schedules to be queried are administrative schedules. This parameter is required.

Format=*formatvalue*
Specifies how the information is displayed. This parameter is optional. The default value is STANDARD. Possible values are:

Standard
Specifies that partial information is displayed for the specified schedules.

Detailed
Specifies that complete information is displayed for the specified schedules.

Examples

Task 1

Display all schedules that belong to the EMPLOYEE_RECORDS policy domain.

Command: `query schedule employee_records`

Output:

```
Domain        Schedule Name Action Start Date/Time Duration Period Day
------------  ------------  ----- ----------------- ------- ------ ---
EMPLOYEE_RE-  WEEKLY_BACKUP Inc Bk 07/04/1994 23:00   4 H    1 W   Sat
CORDS
```

where:

Domain
Specifies the name of the policy domain to which the specified schedule belongs.

*** (Asterisk)**
Specifies whether the corresponding schedule has expired. If there is an asterisk in this column, the corresponding schedule has expired.

Schedule Name
Specifies the name of the schedule.

Action
Specifies the action that occurs when this schedule executes.

Start Date/Time
Specifies the initial starting date and time for this schedule.

Duration
Specifies the length of the startup window.

Period
Specifies the time between startup windows (assuming DAYOFWEEK=ANY).

Day
Specifies the day of the week on which the startup windows begin.

Task 2

Display, in detail, the administrative command schedule (BACKUP_BACKUPPOOL) defined to backup the primary storage pool BACKUPPOOL to the copy storage pool COPYSTG.

Command:
```
query schedule backup_backuppool type=administrative
format=detailed
```

QUERY SCHEDULE

Output:

```
                 Schedule Name: BACKUP_BACKUPPOOL
                   Description:
                       Command: backup stgpool backuppool copystg
                      Priority: 5
               Start Date/Time: 05/31/1996 20:00:00
                      Duration: 1 Hour(s)
                        Period: 2 Day(s)
                   Day of Week: Any
                    Expiration:
                       Active?: Yes
Last Update by (administrator): ADMIN
         Last Update Date/Time: 05/31/1996 14:03:30
```

where:

Schedule Name
Specifies the name of the schedule.

Description
Specifies the description of the schedule.

Command
Specifies the command that is scheduled.

Priority
Specifies the priority value for this schedule.

Start Date/Time
Specifies the initial starting date and time for this schedule.

Duration
Specifies the length of the startup window.

Period
Specifies the time between startup windows (assuming DAYOFWEEK=ANY).

Day of Week
Specifies the day of the week on which the startup windows begin.

Expiration
Specifies the date and time on which this schedule will no longer be used. If this column is blank, the schedule does not expire.

Active?
Specifies whether the schedule has been processed according to the time and date set for this schedule.

Last Update by (administrator)
Specifies the name of the administrator that most recently modified the schedule.

Last Update Date/Time
Specifies the last date and time the schedule was modified.

Related Commands

Table 130. Command Related to QUERY SCHEDULE

Command	Description
COPY SCHEDULE	Creates a copy of an existing schedule.
DEFINE SCHEDULE	Defines a schedule for a client operation or an administrative command.
UPDATE SCHEDULE	Changes the attributes of a schedule.

QUERY SESSION

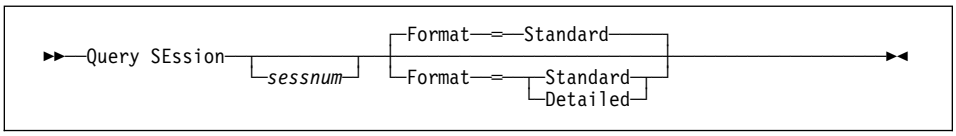
QUERY SESSION (Query One or More Client Sessions)

Use the QUERY SESSION command to display information on one or more administrative and client node sessions.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

sessnum

Specifies the number of the administrative or client node session to be queried. This parameter is optional. If you do not specify a value for this parameter, all sessions are displayed.

Format=*formatvalue*

Specifies how the information is displayed. This parameter is optional. The default value is STANDARD. Possible values are:

Standard

Specifies that partial information is displayed for the session.

Detailed

Specifies that complete information is displayed for the session.

Examples

Task 1

Display information on all administrative and client node sessions that are communicating with the server.

Command: `query session`

Output:

```
  Sess Comm.  Sess     Wait   Bytes   Bytes Sess  Platform Client
Number Method State    Time    Sent   Recvd Type           Name
------ ------ ------ ------ ------- ------- ----- -------- ------
    77 Tcp/Ip Run      0 S      134     159 Admin OS/2     ADMIN
```

where:

Sess Number
Specifies a unique session identification number assigned by the server.

Comm. Method
Specifies the method used by the client to communicate with the server.

Sess State
Specifies the current communications state of the server. Possible states are:

End	The session is ending (session resources are released).
IdleW	Waiting for client's next request (session is *idle*).
MediaW	The session is waiting for access to a sequential access volume.
RecvW	The server is waiting to receive an expected message from the client.
Run	The server is executing a client request (and not waiting to send data).
SendW	The server is waiting to send data to the client (waiting for data to be delivered to the client node that has already been sent).
Start	The session is starting (authentication is in progress).

Wait Time
Specifies the amount of time (seconds, minutes, or hours) the server has been in the current state shown.

Bytes Sent
Specifies the number of bytes of data sent to the client node since the session was initiated.

Bytes Recvd
Specifies the number of bytes of data received from the client node since the session was initiated.

Sess Type
Specifies the type of session in process: either ADMIN for an administrative session, or NODE for a client node session.

Platform
Specifies the type of operating system associated with the client.

Client Name
Specifies the name of the administrator or client node.

Task 2

Display information in full detail about all administrative and client node sessions that are communicating with the server.

QUERY SESSION

Command: `Query SEssion Format=Detailed`

Output:

```
        Sess Number: 77
       Comm. Method: Tcp/Ip
         Sess State: Run
          Wait Time: 0 S
         Bytes Sent: 409
        Bytes Recvd: 202
          Sess Type: Admin
           Platform: OS/2
        Client Name: ADMIN
Media Access Status:
          User Name:
```

where:

Sess Number
Specifies a unique session identification number assigned by the server.

Comm. Method
Specifies the method being used by the client to communicate with the server.

Sess State
Specifies the current communications state of the server. Possible states are:

End The session is ending (session resources are released).

IdleW Waiting for client's next request (session is *idle*).

MediaW The session is waiting for access to a sequential access volume.

RecvW Waiting to receive an expected message from the client.

Run The server is executing a client request (and not waiting to send data).

SendW The server is waiting to send data to the client (waiting for data to be delivered to the client node that has already been sent).

Start The session is starting (authentication is in progress).

Wait Time
Specifies the amount of time (seconds, minutes, or hours) the server has been in the current state shown.

Bytes Sent
Specifies the number of bytes of data sent to the client node since the session was initiated.

Bytes Recvd
Specifies the number of bytes of data received from the client node since the session was initiated.

Sess Type
Specifies the type of session in process: either ADMIN for an administrative session, or NODE for a client node session.

Platform
Specifies the type of operating system associated with the client.

Client Name
Specifies the name of the administrator or client node.

Media Access Status
Specifies the type of media wait state. This information is only provided when the session state equals *MediaW*.

Related Commands

Table 131. Command Related to QUERY SESSION

Command	Description
CANCEL SESSION	Cancels one or all active sessions with the server.

QUERY STATUS (Query System Parameters)

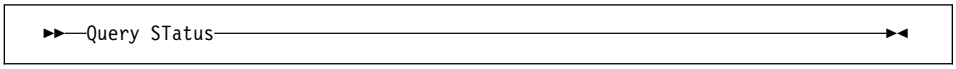
Use the QUERY STATUS command to display information about the general server parameters, such as those defined by the SET commands.

You can use the QUERY STATUS command to request information about client sessions, such as the availability of the server, password authentication, accounting settings, or the retention period for the information retained in the activity log. You can also use this command to display information about the central scheduler, such as the central scheduling mode of the server, or to display the maximum number of retries allowed after a failed attempt to execute a scheduled command.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

None.

Examples

Task

Display general information about server parameters.

Command: `query status`

Output:

```
                    Server Name: WELLS_DESIGN_DEPT
    Server Installation Date/Time: 05/31/1996 13:02:05
         Server Restart Date/Time: 05/31/1996 13:14:55
                   Authentication: On
       Password Expiration Period: 45 Day(s)
                     Registration: Open
                     Availability: Enabled
                       Accounting: On
    Activity Log Retention Period: 30 Day(s)
             License Audit Period: 14 Day(s)
               Last License Audit: 05/31/1996 13:02:55
        Server License Compliance: Valid
                Central Scheduler: Active
                 Maximum Sessions: 16
       Maximum Scheduled Sessions: 4
    Event Record Retention Period: 15 Day(s)
Schedule Randomization Percentage: 50
            Query Schedule Period: Client's Choice
          Maximum Command Retries: Client's Choice
                     Retry Period: 15 Minute(s)
                  Scheduling Modes: Any
                           Log Mode: RollForward
          Database Backup Trigger: Not Defined
```

where:

Server Name
Specifies the name of the server.

Server Installation Date/Time
Specifies the date and time the server was installed.

Server Restart Date/Time
Specifies the last date and time the server was started.

Authentication
Specifies whether password authentication is set on or off.

Password Expiration Period
Specifies the period, in days, after which the administrator or client node password expires.

Registration
Specifies whether client node registration is open or closed.

Availability
Specifies whether the server is enabled or disabled.

Accounting
Specifies whether an accounting record is generated at the end of each client node session.

QUERY STATUS

Activity Log Retention Period
Specifies the number of days information is retained in the activity log.

License Audit Period
Specifies the period, in days, after which the license manager automatically audits the ADSM license. Additional licensing information is available by using the QUERY LICENSE command.

Last License Audit
Specifies the date and time when the last license audit occurred. Additional licensing information is available by using the QUERY LICENSE command.

Server License Compliance
Specifies whether the server is in compliance (Valid) or out of compliance (FAILED) with the license terms.

Central Scheduler
Specifies whether central scheduling is running (active or aborted).

Maximum Sessions
Specifies the maximum number of client/server sessions.

Maximum Scheduled Sessions
Specifies the maximum number of client/server sessions available for processing scheduled work.

Event Record Retention Period
Specifies the number of days central scheduler event records are retained.

Schedule Randomization Percentage
Specifies how much of the startup window is used for executing scheduled events in client-polling mode.

Query Schedule Period
Specifies the frequency with which clients poll the server to obtain scheduled work, in client-polling mode. If the value in this field is *Client's Choice*, the polling frequency is determined by the client node.

Maximum Command Retries
Specifies the maximum number of times that a client scheduler retries after a failed attempt to execute a scheduled command. If the value in this field is *Client's Choice*, the client node determines the maximum number of retries.

Retry Period
Specifies the number of minutes between attempts by the client scheduler to retry after a failed attempt to contact the server or to execute a scheduled command. If the value in this field is *Client's Choice*, the client node determines the number of minutes between retries.

Scheduling Modes
Specifies the central scheduling modes supported by the server.

Log Mode
Specifies the mode for saving recovery log records. The mode is either roll-forward or normal.

Database Backup Trigger
Specifies that ADSM automatically runs a backup of the database if the database backup trigger is enabled.

Related Commands

Table 132 (Page 1 of 2). Commands Related to QUERY STATUS

Command	Description
DISABLE	Prevents new clients from accessing ADSM but permits existing sessions to continue.
ENABLE	Resumes server activity following the DISABLE command.
QUERY LICENSE	Displays information about licenses and audits.
SET ACCOUNTING	Specifies whether accounting records are created at the end of each client session.
SET ACTLOGRETENTION	Specifies the number of days to retain log records in the activity log.
SET AUTHENTICATION	Specifies whether clients are prompted for a password at the beginning of a session.
SET EVENTRETENTION	Specifies the number of days to retain event records.
SET LOGMODE	Sets the mode for saving records in the recovery log.
SET MAXCMDRETRIES	Specifies the maximum number of retries after a failed attempt to execute a scheduled command.
SET MAXSCHEDSESSIONS	Specifies the maximum number of client/server sessions available for processing scheduled work.
SET PASSEXP	Specifies the number of days after which a password is expired and must be changed.
SET QUERYSCHEDPERIOD	Specifies the frequency for clients to obtain scheduled work, in client-polling mode.
SET RANDOMIZE	Specifies the randomization of start times within a window for schedules in client-polling mode.
SET REGISTRATION	Specifies whether users can register themselves or must be registered by an administrator.
SET RETRYPERIOD	Specifies the time between retry attempts by the client scheduler.

QUERY STATUS

Table 132 (Page 2 of 2). Commands Related to QUERY STATUS

Command	Description
SET SCHEDMODES	Specifies the central scheduling mode for the server.
SET SERVERNAME	Specifies the name by which the server is identified.

QUERY STGPOOL (Query One or More Storage Pools)

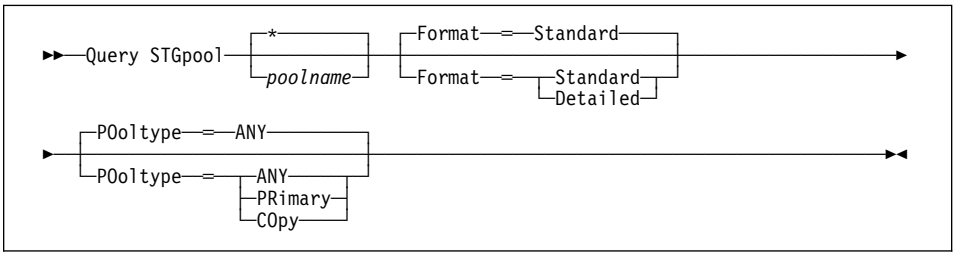
Use the QUERY STGPOOL command to display information about one or more storage pools.

You can also use this command to monitor migration processes for the storage pool.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

poolname
Specifies the name of the storage pool to be queried. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching storage pools are included. If you do not specify a value for this parameter, all storage pools are displayed.

Format=*formatvalue*
Specifies how the information is displayed. This parameter is optional. The default value is STANDARD. Possible values are:

Standard
Specifies that partial information is displayed for the storage pool.

Detailed
Specifies that complete information is displayed for the storage pool.

POoltype=*type*
Specifies the type of storage pool to be queried. This parameter is optional. The default value is ANY. Possible values are:

ANY
Specifies that primary and copy storage pools will be queried.

PRimary
Specifies that only primary storage pools will be queried.

COpy
Specifies that only copy storage pools will be queried.

QUERY STGPOOL

Usage Notes

1. For storage pools defined to DISK devices, if CACHE=YES, the value for %UTIL is consistently high, even after migration, as the device's capacity is maximized with cached copies of data. The value for %MIGR drops after migration, indicating that less data is available to be migrated.
2. For storage pools defined to DISK devices, the value for %UTIL can be higher than the value for %MIGR if you issue this command while a file creation transaction is in progress. The value for %UTIL is determined by the amount of space actually allocated (while the transaction is in progress) and the value for %MIGR only represents the space occupied by *committed* files. At the end of the transaction, these values become synchronized.

Examples

Task 1

Display information for the storage pool named POOL1.

Command: `query stgpool pool1`

Output:

```
Storage     Device       Estimated  %Util  %Migr  High   Low  Next
Pool Name   Class Name    Capacity                Mig%  Mig%  Storage
                              (MB)                       Pool
----------  ----------  ----------  -----  -----  ----  ----  --------
POOL1       DISK              58.5    0.8    0.7    90    70  POOL2
```

where:

Storage Pool Name
Specifies the name of the storage pool.

Device Class Name
Specifies the name of the device class assigned to the storage pool.

Estimated Capacity (MB)
Specifies the estimated capacity of the storage pool, in megabytes.

For DISK devices, this is the capacity of all volumes in the storage pool, including any volumes that are varied offline.

For sequential access devices, this is an estimate of the total space of all the sequential access volumes in the storage pool, including any volumes that are *unavailable* or *readonly* and all volumes defined with the MAXSCRATCH parameter.

%Util
Specifies, as a percentage, an estimate of the utilization of the storage pool.

For DISK devices, this is specified as a percentage of the value for the estimated

capacity, including cached data and data that resides on any volumes which are varied offline.

For sequential access devices, this is specified as a percentage of the number of active bytes on each sequential access volume and the estimated capacity of all volumes in the storage pool.

The %UTIL value includes cached data on a volume (when cache is enabled); the %MIGR value excludes cached data. Therefore, when cache is enabled and migration occurs, the %MIGR value decreases but the %UTIL value remains the same because the migrated data is remaining on the volume as cached data. In this instance, the %UTIL value decreases only when the cached data expires or when the space that cached files are using needs to be used for noncached files.

%Migr

Specifies an estimate of the percentage of data in the storage pool that can be migrated. This value is used by the high and low migration thresholds to determine when to start and stop migration.

For DISK devices, this value is specified as a percentage of the value for the estimated capacity, excluding cached data but including data on any volumes varied offline.

For sequential access devices, this value is specified as the percentage of the number of sequential access volumes in the storage pool that contain at least 1 byte of active data.

The %UTIL value includes cached data on a volume (when cache is enabled); the %MIGR value excludes cached data. Therefore, when cache is enabled and migration occurs, the %MIGR value decreases but the %UTIL value remains the same because the migrated data is remaining on the volume as cached data. In this instance, the %UTIL value decreases only when the cached data expires or when the space that cached files are using needs to be used for noncached files.

High Mig%

Specifies when ADSM can begin migration for the storage pool. Migration processes can begin when the percentage of data that can be migrated reaches this threshold.

Low Mig%

Specifies when ADSM can stop migration for the storage pool. Migration processes can stop when the percentage of data that can be migrated reaches this threshold.

Next Storage Pool

Specifies the destination storage pool for data that is migrated from this storage pool.

Task 2

Display information in full detail for the storage pool named 8MMPOOL.

Command:

```
query stgpool 8mmpool format=detailed
```

QUERY STGPOOL

Output:

```
               Storage Pool Name: 8MMPOOL
               Storage Pool Type: Primary
               Device Class Name: 8MMTAPE
         Estimated Capacity (MB): 0.0
                            %Util: 0.0
                            %Migr: 0.0
                        High Mig%: 90
                         Low Mig%: 70
             Migration Processes:
               Next Storage Pool: POOL1
          Maximum Size Threshold: 5 M
                          Access: Read/Write
                     Description: Copy Storage Pool
           Cache Migrated Files?:
                       Collocate?: Yes
            Reclamation Threshold: 60
 Maximum Scratch Volumes Allowed: 5
   Delay Period for Volume Reuse: 0 Day(s)
          Migration in Progress?: No
            Amount Migrated (MB): 0.00
Elapsed Migration Time (seconds): 0
         Reclamation in Progress?: No
 Volume Being Migrated/Reclaimed:
  Last Update by (administrator): ADMIN
           Last Update Date/Time: 05/22/1996 14:50:29
```

where:

Storage Pool Name
Specifies the name of the storage pool.

Storage Pool Type
Specifies the type of storage pool.

Device Class Name
Specifies the name of the device class assigned to the storage pool.

Estimated Capacity (MB)
Specifies the estimated capacity of the storage pool, in megabytes.

For DISK devices, this is the capacity of all volumes in the storage pool, including any volumes that are varied offline.

For sequential access devices, this is an estimate of the total space of all the sequential access volumes in the storage pool, including volumes that are *unavailable* or *readonly* and all volumes defined with the MAXSCRATCH parameter.

%Util
Specifies, as a percentage, an estimate of the utilization of the storage pool.

For DISK devices, this is specified as a percentage of the value for the estimated

capacity, including cached data and data that resides on any volumes which are varied offline.

For sequential access devices, this is specified as a percentage of the number of active bytes on each sequential access volume and the estimated capacity of all volumes in the storage pool.

The %UTIL value includes cached data on a volume (when cache is enabled); the %MIGR value excludes cached data. Therefore, when cache is enabled and migration occurs, the %MIGR value decreases but the %UTIL value remains the same because the migrated data is remaining on the volume as cached data. In this instance, the %UTIL value decreases only when the cached data expires or when the space that cached files are using needs to be used for noncached files.

%Migr

Specifies an estimate of the percentage of data in the storage pool that can be migrated. This value is used by the high and low migration thresholds to determine when to start and stop migration.

For DISK devices, this value is specified as a percentage of the value for the estimated capacity, excluding cached data, but including data on any volumes varied offline.

For sequential access devices, this value is specified as the percentage of the number of sequential access volumes in the storage pool that contain at least 1 byte of active data.

The %UTIL value includes cached data on a volume (when cache is enabled); the %MIGR value excludes cached data. Therefore, when cache is enabled and migration occurs, the %MIGR value decreases but the %UTIL value remains the same because the migrated data is remaining on the volume as cached data. In this instance, the %UTIL value decreases only when the cached data expires or when the space that cached files are using needs to be used for noncached files.

High Mig%

Specifies when ADSM can begin migration for the storage pool. Migration processes can begin when the percentage of data that can be migrated reaches this threshold.

Low Mig%

Specifies when ADSM can stop migration for the storage pool. Migration processes can stop when the percentage of data on the volume that can be migrated reaches this threshold.

Migration Process

For random access storage pools only, specifies the number of processes that are used for migrating files from a storage pool. Each migration process uses a drive so the number of migration processes should not exceed the number of drives that can be dedicated to migration processing.

Next Storage Pool

Specifies the destination storage pool for data that is migrated from this storage pool.

Maximum Size Threshold
Specifies the maximum file size for files in the storage pool.

Access
Specifies how the data in the storage pool can be accessed.

Description
Specifies a description of the storage pool.

Cache Migrated Files?
For DISK device classes only, specifies whether caching is enabled.

Collocate?
For sequential access device classes, specifies whether collocation is enabled.

Reclamation Threshold
Specifies when data from volumes in a storage pool is reclaimed. Each individual volume's percentage of reclaimable space is compared to this value to determine if reclamation is necessary.

Maximum Scratch Volumes Allowed
Specifies the maximum number of scratch volumes that can be requested by ADSM.

Delay Period for Volume Reuse
Specifies the number of days that must elapse after files have been deleted from a volume, before the volume can be returned to scratch or reused.

Migration in Progress?
Specifies whether at least one migration process is active for the storage pool.

Amount Migrated (MB)
Specifies the amount of data, in megabytes, that has been migrated, if migration is in progress. If migration is not in progress, this value indicates the amount of data migrated during the last migration. When multiple, parallel migration processes are used for the storage pool, this value indicates the total amount of data migrated by all processes.

Elapsed Migration Time (seconds)
Specifies the amount of time that has elapsed since migration began, if migration is active. If migration is not active, this value indicates the amount of time required to complete the last migration. When multiple, parallel migration processes are used for the storage pool, this value indicates the total time from the beginning of the first process until the completion of the last process.

Reclamation in Progress?
Specifies whether a reclamation process is active for the storage pool.

Volume Being Migrated/Reclaimed
For sequential access storage pools, specifies the name of a sequential access volume for which migration or reclamation processing is active. If no migration or reclamation processes are active on a volume, this field is blank. For random access storage pools, this field is always blank.

Last Update by (administrator)
Specifies the name of the administrator that has defined or most recently updated the storage pool.

Last Update Date/Time
Specifies when the administrator has defined or most recently updated the storage pool.

Related Commands

Table 133. Commands Related to QUERY STGPOOL

Command	Description
DEFINE STGPOOL	Defines a storage pool as a named collection of server storage media.
DELETE STGPOOL	Deletes a storage pool from server storage.
UPDATE STGPOOL	Changes the attributes of a storage pool.

QUERY VOLHISTORY (Display Sequential Volume History Information)

Use the QUERY VOLHISTORY command to display sequential volume history information that has been collected by the server.

Volume history information includes data such as date and time of use for the following types of volumes:

- Volumes not in storage pools
  - Volumes used to back up an ADSM database (full or incremental)
  - Volumes used to dump an ADSM database
  - Volumes used to export administrator, node, policy, or server data
- Volumes in storage pools
  - Storage pool sequential access volumes that have been added
  - Storage pool sequential access volumes that have been reused in storage pools through reclamation or MOVE DATA operations
  - Storage pool sequential access volumes that have been removed by using the DELETE VOLUME command or removed during reclamation of scratch volumes

Sequential access volumes are volumes that are accessed sequentially by the ADSM server, such as removable tape or optical volumes.

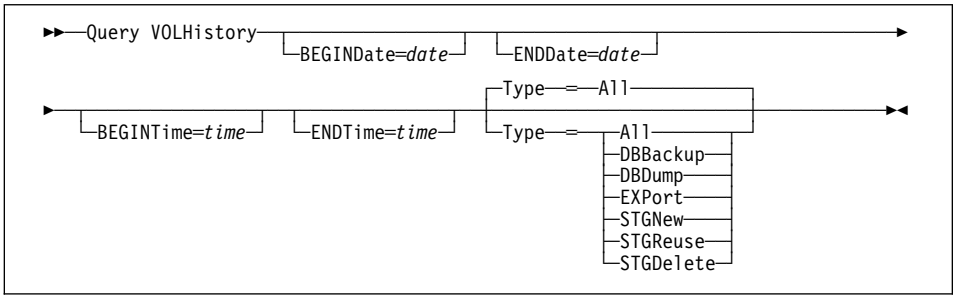
To save sequential volume history information collected by the server to one or more files, use the BACKUP VOLHISTORY command.

To delete sequential volume history information collected by the server, use the DELETE VOLHISTORY command.

Privilege Class

Any administrator can issue this command.

Syntax



BEGINDate=*date*
Specifies the beginning date for the history information to display. This parameter is optional. The default is the earliest date for which history information exists. Possible values are:

MM/DD/YYYY
Specifies that you want to display information beginning with records created on a specific date, using MM/DD/YYYY format (for example, 01/31/1995).

TODAY
Specifies that you want to display information beginning with records created on the current date.

TODAY–*numdays* **or** –*numdays*
Specifies that you want to display information beginning with records created on the current date minus a specific number of days. The maximum value for the number of days is 9999.

For example, to display information beginning with records created a week ago, you can specify TODAY–7 or simply –7.

ENDDate=*date*
Specifies the ending date for the history information to display. This parameter is optional. The default is the current date. Possible values are:

MM/DD/YYYY
Specifies that you want to display information ending with records created on a specific date, using MM/DD/YYYY format (for example 02/28/95).

TODAY
Specifies that you want to display information ending with records created on the current date.

TODAY–*numdays* **or** –*numdays*
Specifies that you want to display information ending with records created on or before the current date minus a specific number of days. The maximum value for the number of days is 9999.

For example, to display all volume history information created up to yesterday, you can specify TODAY–1 or simply –1.

BEGINTime=*time*
Specifies the beginning time for the history information to display. This parameter is optional. The default is midnight (00:00:00) on the date specified with the BEGINDATE parameter. Possible values are:

HH:MM:SS
Specifies that you want to display information beginning with records created at a specific time on the specified begin date using HH:MM:SS format (for example, 12:33:28).

QUERY VOLHISTORY

NOW
Specifies that you want to display information beginning with records created on the current time on the specified begin date.

NOW+*numhours:numminutes* **or** +*numhours:numminutes*
Specifies that you want to display information beginning with records created at the current time plus a specific number of hours (and, optionally, minutes) on the specified begin date.

For example, if you issue the QUERY VOLHISTORY command at 9:00 with BEGINTIME=NOW+3 or BEGINTIME=+3, ADSM displays records with a time of 12:00 or later on the specified begin date.

NOW–*numhours:numminutes* **or** –*numhours:numminutes*
Specifies that you want to display information beginning with records created at the current time minus a specific number of hours (and, optionally minutes) on the specified begin date.

For example, if you issue the QUERY VOLHISTORY command at 9:00 with BEGINTIME=NOW–3:30 or BEGINTIME=–3:30, ADSM displays records with a time of 5:30 or later on the specified begin date.

ENDTime=*time*
Specifies the ending time for the history information to display. This parameter is optional. The default is the current time.

HH:MM:SS
Specifies that you want to display information ending with records created at a specific time on the specified end date using HH:MM:SS format (for example, 18:59:59).

NOW
Specifies that you want to display information ending with records created at the current time on the specified end date.

NOW+*numhours:numminutes* **or** +*numhours:numminutes*
Specifies that you want to display information ending with records created a specific number of hours (and, optionally, minutes) after the current time on the specified end date.

For example, if you issue the QUERY VOLHISTORY command at 9:00 with ENDTIME=NOW+3 or ENDTIME=+3, ADSM displays records with a time of 12:00 or earlier on the specified end date.

The following are sample commands to perform that task:

```
query volhistory enddate=now-1 endtime=now+3
query volhistory endate=-1 endtime=+3
```

NOW–*numhours:numminutes* **or** –*numhours:numminutes*
Specifies that you want to display information ending with records created a specific number of hours (and, optionally, minutes) prior to the current time on the specified end date.

For example, if you issue the QUERY VOLHISTORY command at 9:00 with ENDTIME=NOW–3:30 or ENDTIME=–3:30, ADSM displays records with a time of 5:30 or earlier on the specified end date.

Type=*typevalue*
Specifies the type of records to display from the volume history file. This parameter is optional. The default is ALL. Possible values are:

All
Specifies that all history information is displayed.

DBBackup
Specifies to display only records that contain information about volumes used for backups (full or incremental).

DBDump
Specifies to display only records that contain information about volumes used for online database dumps (done before installation of Version 2 Release 1).

EXPort
Specifies to display only records that contain information about volumes used for exporting data.

STGNew
Specifies to display only records that contain information about new sequential access storage volumes.

STGReuse
Specifies to display only records that contain information about reused sequential storage pool volumes.

STGDelete
Specifies to display only records that contain information about deleted sequential storage pool volumes.

Examples

Task

Display volume history information stored in the ADSM database.

Command: `query volhistory`

QUERY VOLHISTORY

Output:

```
       Date/Time: 05/22/1996 14:50:31
     Volume Type: STGNEW
   Backup Series: 0
Backup Operation: 0
      Volume Seq: 0
    Device Class: 8MMTAPE
     Volume Name: TAPE01
 Volume Location:
```

where:

Date/Time
The date and time for the volume information.

Volume Type
The type of volume. Possible values are:

BACKUPFULL
The volume was used for a full backup of the database.

BACKUPINCR
The volume was used for an incremental backup of the database.

DBDUMP
The volume was used for an online dump of the database. (These volumes were used before the installation of ADSM Version 2 Release 1.)

EXPORT
The volume was used to record data for export.

STGDELETE
The volume was a sequential access storage pool volume that was deleted.

STGNEW
The volume was a sequential access storage pool volume that was added.

STGREUSE
The volume was a sequential access storage pool volume that was reused.

Backup Series
If the volume type is BACKUPFULL or BACKUPINCR, the identifying number of the backup series of which this volume is a part. Each backup series consists of a full backup and all incremental backups that apply to that full backup, up to the next full backup of the database.

Backup Operation
If the volume type is BACKUPFULL or BACKUPINCR, the operation number of this backup volume, within the backup series. The full backup within a backup

series is operation 0. The first incremental backup for that full backup is operation 1, the second incremental backup is operation 2, and so on.

Volume Seq
If the volume type is BACKUPFULL, BACKUPINCR, or EXPORT, the sequence number of the volume when it was used for backing up the database or for exporting data.

For BACKUPFULL and BACKUPINCR volumes, this is the sequence, or position, of the volume within the backup series. Volume sequence 1 identifies the first volume used for the first operation (a full backup), and so on. For example, if the full backup occupies three volumes, these volumes are identified as volume sequence 1, 2, and 3, respectively. The first volume of the next operation (the first incremental backup) is then volume sequence 4.

Device Class
The device class used for the volume.

Volume Name
The name of the volume.

Volume Location
The location of the volume. The information is available only for BACKUPFULL, BACKUPINCR, DBDUMP, and EXPORT volumes, and only if the UPDATE VOLHISTORY command was used to add the information.

Related Commands

Table 134 provides references to related commands.

Table 134. Commands Related to QUERY VOLHISTORY

Command	Description	Reference
BACKUP VOLHISTORY	Records sequential volume history information in external files.	Page 63
DELETE VOLHISTORY	Removes sequential volume history information from the volume history file.	Page 242
UPDATE VOLHISTORY	Adds or changes location information for a volume in the volume history file.	Page 690

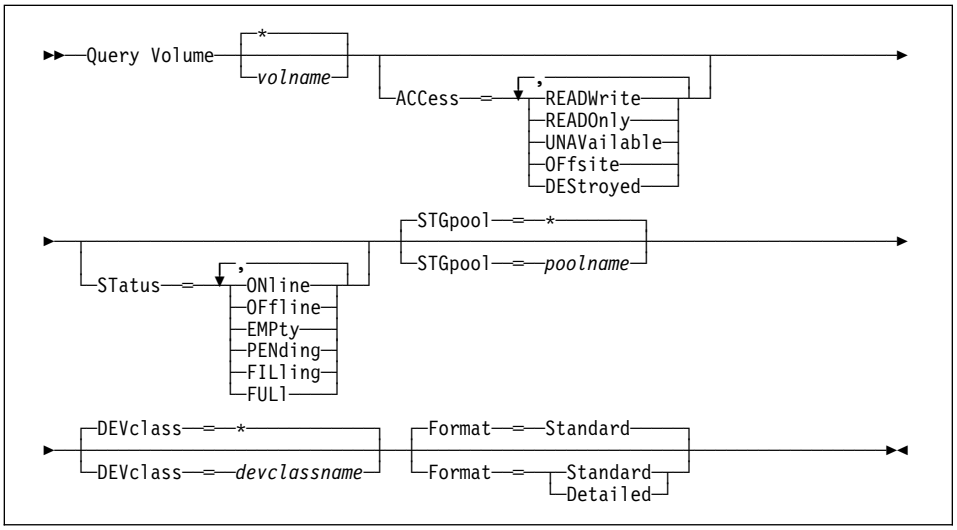
QUERY VOLUME (Query One or More Storage Pool Volumes)

Use the QUERY VOLUME command to display information about one or more storage pool volumes. This command displays information about scratch volumes defined to ADSM.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

volname

Specifies the name of the volume to be displayed. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching volumes are included in the query. If you do not specify a storage pool volume name, all storage pool volumes are included in the query.

ACCess=*accessmode*

Specifies that output should be restricted by volume access mode. This parameter is optional. You can specify more than one access mode in a list by delimiting each mode with a comma and no intervening spaces. If you do not specify a value for this parameter, output is not restricted by access mode. Possible values are:

READWrite

Specifies that volumes with an access mode of READWRITE are displayed.

READOnly
Specifies that volumes with an access mode of READONLY are displayed.

UNAVailable
Specifies that volumes with an access mode of UNAVAILABLE are displayed.

OFFsite
Specifies that volumes with an access mode of OFFSITE are displayed.

DEStroyed
Specifies that volumes with an access mode of DESTROYED are displayed.

STatus=*status*
Specifies that output should be restricted by volume status. This parameter is optional. You can specify more than one status in a list by delimiting each status with a comma and no intervening spaces. If you do not specify a value for this parameter, output is not restricted by volume status. Possible values are:

ONline
Specifies that volumes with a status of ONLINE are displayed.

OFfline
Specifies that volumes with a status of OFFLINE are displayed.

EMPty
Specifies that volumes with a status of EMPTY are displayed.

PENding
Specifies that volumes with a status of PENDING are displayed. These are volumes from which all files have been deleted, but the time specified by the REUSEDELAY parameter from the DEFINE STGPOOL command has not elapsed.

FILling
Specifies that volumes with a status of FILLING are displayed.

FULl
Specifies that volumes with a status of FULL are displayed.

STGPool=*poolname*
Specifies the name of the storage pool to be included in the query. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching storage pools are included in the query. If you do not specify a storage pool name, all storage pools are included in the query.

DEVclass=*devclassname*
Specifies the name of the device class to be included in the query. This parameter is optional. You can use a pattern-matching expression to specify this name. All matching device classes are included in the query. If you do not specify a device class name, all devices are included in the query.

QUERY VOLUME

Format=*formatvalue*
Specifies how the information is displayed. This parameter is optional. The default value is STANDARD. Possible values are:

Standard
Specifies that partial information is displayed for the storage pool volume.

Detailed
Specifies that complete information is displayed for the storage pool volume.

Examples

Task 1

Display information on all storage pool volumes prefixed with the name ATF.

Command: `query volume atf*`

Output:

```
Volume Name        Storage     Device     Estimated %Util  Volume
                   Pool Name   Class Name  Capacity        Status
                                             (MB)
---------------    -----------  ---------  --------  -----  -------
ATF001             8MMPOOL      8MMTAPE    4944.0   18.2  Filling
ATF002             8MMPOOL      8MMTAPE    4944.0   18.2  Filling
```

where:

Volume Name
Specifies the name of the storage pool volume.

Storage Pool Name
Specifies the name of the storage pool to which the volume is defined.

Device Class Name
Specifies the name of the device class assigned to the storage pool.

Estimated Capacity (MB)
Specifies the estimated capacity of the volume, in megabytes.

For DISK devices, this value is the capacity of the volume.

For sequential access devices, this value is an estimate of the total space of the volume.

%Util
Specifies an estimate of the utilization of the volume.

For DISK devices, this value is specified as a percentage of the value for the estimated capacity, including cached data.

For sequential access devices, this value is specified as a percentage of the number of active bytes on the volume and the estimated capacity of the volume.

Volume Status
Specifies whether the storage pool volume is available to ADSM.

Task 2

Display information in full detail about the storage pool volume name WPDV00.

Command: `query volume wpdv00 format=detailed`

Output:

```
                  Volume Name: WPDV00
              Storage Pool Name: TAPEPOOL
              Device Class Name: TAPE
       Estimated Capacity (MB): 4944.0
                         %Util: 18.2
                  Volume Status: On-line
                         Access: Read/Write
        Pct. Reclaimable Space: 3.2
                Scratch Volume?: Yes
                In Error State?: No
      Number of Writable Sides: 1
       Number of Times Mounted: 11
             Write Pass Number: 1
     Approx. Date Last Written: 04/14/1996 16:17:26
        Approx. Date Last Read: 04/01/1996 13:26:18
           Date Became Pending:
        Number of Write Errors: 0
         Number of Read Errors: 0
               Volume Location:
Last Update by (administrator): COLLIN
         Last Update Date/Time: 05/01/1996 14:07:27
```

where:

Volume Name
Specifies the name of the storage pool volume.

Storage Pool Name
Specifies the name of the storage pool to which the volume is defined.

Device Class Name
Specifies the name of the device class assigned to the storage pool.

Estimated Capacity (MB)
Specifies the estimated capacity of the volume, in megabytes.

For DISK devices, this value is the capacity of the volume.

For sequential access devices, this value is an estimate of the total space of the volume.

QUERY VOLUME

%Util
Specifies an estimate of the utilization of the volume.

For DISK devices, this value is specified as a percentage of the value for the estimated capacity, including cached data.

For sequential access devices, this value is specified as a percentage of the number of active bytes on the volume and the estimated capacity of the volume.

Volume Status
Specifies whether the volume is available to ADSM.

Access
Specifies whether the volume is available to ADSM.

Pct. Reclaimable Space
Specifies the amount of space on this volume that can be reclaimed. This value is compared to the value for the RECLAIM parameter (in DEFINE STGPOOL) to determine if reclamation is necessary.

Scratch Volume?
Specifies whether this volume was originally a scratch volume that ADSM acquired for its use. If the volume was a scratch volume, ADSM returns the volume to scratch when the volume becomes empty.

In Error State?
Specifies whether the volume is in an error state. Volumes in an error state cannot be written to.

Number of Writable Sides
This information is reserved for ADSM.

Number of Times Mounted
Specifies the number of times the volume has been mounted.

Write Pass Number
Specifies the number of times the volume has been written to from the beginning to the end of the sequential access medium.

Approx. Date Last Written
Specifies the approximate date on which the volume was last written.

Approx. Date Last Read
Specifies the approximate date on which the volume was last read.

Date Became Pending
Specifies the date that the volume's status changed to pending.

Number of Write Errors
Specifies the number of writing errors that have occurred on the volume.

Number of Read Errors
Specifies the number of reading errors that have occurred on the volume.

Volume Location
Specifies the location of the volume.

Last Update by (administrator)
Specifies the name of the administrator that has defined or most recently updated the volume.

Last Update Date/Time
Specifies when the volume was defined or most recently updated.

Related Commands

Table 135 provides references to related commands.

Table 135. Commands Related to QUERY VOLUME

Command	Description	Reference
DEFINE VOLUME	Assigns a volume to be used for storage within a specified storage pool.	Page 196
DELETE VOLUME	Deletes a volume from a storage pool.	Page 246
UPDATE VOLUME	Updates the attributes of one or more storage pool volumes.	Page 692
VARY	Specifies whether a disk volume is available to the server for use.	Page 701

QUIT (End the Interactive Mode of the Administrative Client)

Use the QUIT command to end an administrative client session in interactive mode.

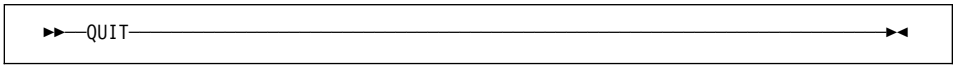
You cannot use the QUIT command from the SERVER_CONSOLE administrative ID, or the console, or the batch, or the mount modes of the administrative client.

For more information on the administrative client, see “Using the Administrative Client Session” on page 13.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

None.

Examples

Task

End an administrative client session in the interactive mode.

Command: `QUIT`

Output:

```
ANS5103I Highest return code was 0.
```

where *n* is the highest return code encountered during the administrative session.

Related Commands

None.

REDUCE DB (Decrease the Assigned Capacity of the Database)

Use the REDUCE DB command to decrease the amount of space that can be used by the database. To reduce the capacity of the database, you must reduce the database in 4MB increments. If you do not specify the reduction in 4MB increments, ADSM rounds the number to the next 4MB partition. For example, if you reduce the database by 1MB, ADSM reduces the capacity of the database by 4MB.

Attention: The size of an allocated database, recovery log, or storage pool volume cannot be changed once it has been defined to the ADSM server. ADSM uses the initial size allocation of the volume at the time it is defined to the server to calculate data placement for later retrieval.

The REDUCE DB command can be initiated while users are accessing the server. Use the QUERY DB command to determine how much you can reduce the assigned capacity of the database.

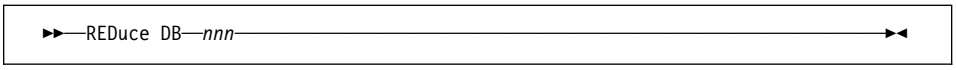
This command can be used to free up a database volume for deletion. You can use the QUERY DBVOLUME command (FORMAT=DETAILED) to display the current utilization for your database volumes.

This command can generate a background process that can be canceled with the CANCEL PROCESS command. If a REDUCE DB background process is canceled, the database's assigned capacity may be partially reduced. To display information on background processes, use the QUERY PROCESS command.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Parameters

nnn

Specifies the number of megabytes to be removed from the assigned capacity of the database. This parameter is required. This value should be in increments of 4MB.

REDUCE DB

Examples

Task

Reduce the size of the database by 52MB.

Command: `reduce db 52`

Output:

```
ANR2250I Database assigned capacity has been reduced.
```

Related Commands

Table 136 provides references to related commands.

Table 136. Commands Related to REDUCE DB

Command	Description	Reference
CANCEL PROCESS	Cancels a background server process.	Page 65
DEFINE DBCOPY	Creates a volume copy of a database volume.	Page 107
DEFINE DBVOLUME	Assigns a volume to be used for database storage.	Page 109
EXTEND DB	Extends usable database storage within the volumes previously allocated for its use.	Page 274
QUERY DB	Displays allocation information about the database.	Page 365
QUERY DBVOLUME	Displays information about one or more database volumes.	Page 372
QUERY PROCESS	Displays information about one or all background server processes.	Page 464

REDUCE LOG (Decrease the Assigned Capacity of the Recovery Log)

Use the REDUCE LOG command to decrease the amount of space that can be used by the recovery log. To decrease the capacity of the recovery log, you must reduce the recovery log in 4MB increments. If you do not specify the reduction in 4MB increments, ADSM rounds the number to the next 4MB partition. For example, if you reduce the recovery log by 1MB, ADSM reduces the capacity of the recovery log by 4MB.

The REDUCE LOG command can be initiated while users are accessing the server. Use the QUERY LOG command to determine how much you can reduce the assigned capacity of the recovery log.

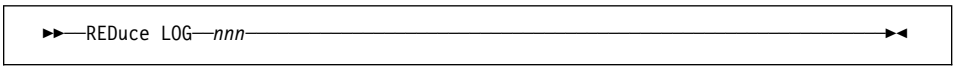
The REDUCE LOG command can be used to free up a recovery log volume for deletion. You can use the QUERY LOGVOLUME command (FORMAT=DETAILED) to display the current utilization for your recovery log volumes.

This command can generate a background process that can be canceled with the CANCEL PROCESS command. If a REDUCE LOG background process is canceled, the recovery log's assigned capacity may be partially reduced. To display information on background processes, use the QUERY PROCESS command.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Parameters

nnn

Specifies the number of megabytes to be removed from the assigned capacity of the recovery log. This parameter is required. The value is in increments of 4MB.

Examples

Task

Reduce the size of the recovery log by 16MB.

Command: `reduce log 16`

Output:

```
ANR2270I Recovery log assigned capacity has been reduced.
```

REDUCE LOG

Related Commands

Table 137. Commands Related to REDUCE LOG

Command	Description
CANCEL PROCESS	Cancels a background server process.
DEFINE DBBACKUPTRIGGER	Defines a trigger for automatic ADSM database backups.
DEFINE LOGCOPY	Creates a volume copy of a recovery log volume.
DEFINE LOGVOLUME	Defines a disk volume to the recovery log.
EXTEND LOG	Extends usable log storage within the volumes previously allocated for its use.
QUERY DBBACKUPTRIGGER	Displays information about the database backup trigger.
QUERY LOG	Displays allocation information about the recovery log.
QUERY LOGVOLUME	Displays information about one or more log volumes.
QUERY PROCESS	Displays information about one or all background server processes.
SET LOGMODE	Sets the mode for saving records in the recovery log.

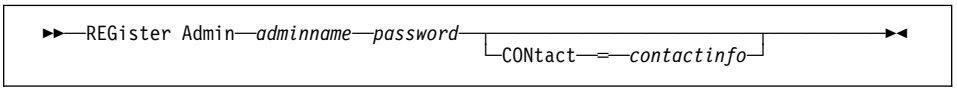
REGISTER ADMIN (Register an Administrator)

Use the REGISTER ADMIN command to add an administrator to the server. Once an administrator has been registered, the administrator can issue a limited set of commands, including all query commands. To provide additional administrator privileges, use the GRANT AUTHORITY command.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

adminname
Specifies the name of the administrator to be registered. This parameter is required. The maximum length of the name is 64 characters.

password
Specifies the password of the administrator to be registered. This parameter is required. Use the SET PASSEXP command to specify how long an administrator or client node password is valid. The maximum length of the password is 64 characters.

CONtact=*contactinfo*
Specifies information identifying the administrator being registered. This parameter is optional. The maximum length of this string is 255 characters. The contact information must be enclosed in quotation marks if it contains any blanks.

Examples

Task

Define an administrator, LARRY, with the password PASSONE. You can identify LARRY as second-shift personnel by specifying this information with the CONTACT parameter.

Command:

```
register admin larry passone contact='second shift'
```

Output:

```
ANR2068I Administrator LARRY registered.
```

REGISTER ADMIN

Related Commands

Table 138. Commands Related to REGISTER ADMIN

Command	Description
GRANT AUTHORITY	Assigns one or more privilege classes to an administrator.
LOCK ADMIN	Prevents an administrator from accessing ADSM.
QUERY ADMIN	Displays information about one or more ADSM administrators.
REMOVE ADMIN	Removes an administrator from the list of registered administrators.
RENAME ADMIN	Changes an ADSM administrator's name.
SET PASSEXP	Specifies the number of days after which a password is expired and must be changed.
UNLOCK ADMIN	Enables a locked administrator to access ADSM.
UPDATE ADMIN	Changes the password or contact information associated with any administrator.

REGISTER LICENSE (Register a New License)

Use the REGISTER LICENSE command to register a new license with the ADSM server. Licenses are stored on the product CD-ROM in files called enrollment certificate files. These certificates are files that contain licensing information for the server product.

When registered, the licenses are then stored in a file named NODELOCK in the registry, or in the current directory that the server was started from.

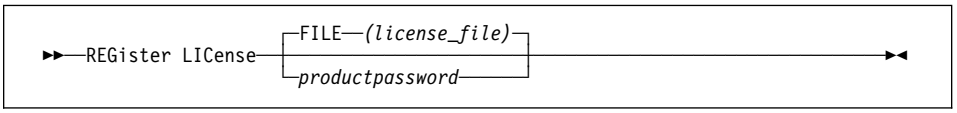
You can register new licenses to add:

- Additonal clients
- Support for clients other than Windows NT
- Additional device support
- Support for disaster recovery manager

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

FILE(*license_file***)**

Specifies the name of the enrollment certificate file containing the license to be registered. The specification can contain a filename wildcard (*). For example, to register all files, enter:

```
register license FILE(*.LIC)
```

Note: The names of the files are not case-sensitive.

To register additional clients, specify the names of the following enrollment certificate files:

1CLIENT.LIC	1 backup-archive client
5CLIENT.LIC	5 backup-archive clients
10CLIENT.LIC	10 backup-archive clients
50CLIENT.LIC	50 backup-archive clients

To register clients other than Windows NT, specify the names of the following enrollment certificate files:

REGISTER LICENSE

NETWORK.LIC License for Network connections. You must have this license if you will be using any communication method other than Named Pipes.

DESKTOP.LIC Desktop clients (OS/2, Windows, Apple, Novell NetWare, and DOS)

UNIX.LIC Any UNIX clients

OEMVS.LIC The OpenEdition MVS client

SPACEMAN.LIC HSM clients

To register disaster recovery manager, specify the name of the following enrollment certificate file:

DRM.LIC Specifies that the server is licensed to support disaster recovery manager (DRM). If the server is not licensed for DRM, DRM operations will fail.

To register device support modules, specify the names of the following enrollment certificate files:

DEVMOD1.LIC Device Support Module 1

DEVMOD2.LIC Device Support Module 2

DEVMOD3.LIC Device Support Module 3

DEVMOD4.LIC Device Support Module 4

DEVM1T02.LIC Upgrade from Device Support Module 1 to 2

DEVM2T03.LIC Upgrade from Device Support Module 2 to 3

DEVM3T04.LIC Upgrade from Device Support Module 3 to 4

productpassword
Specifies the product password from the enrollment certificate for the selected feature to be registered.

Examples

Task

Register the DESKTOP clients.

Command: `register license file(DESKTOP.LIC)`

Output:

```
ANR2835I REGister LICense 5s3qydpnwx7njdxnafksqas4 DESKTOP
```

Related Commands

Table 139. Commands Related to REGISTER LICENSE

Command	Description
AUDIT LICENSES	Checks for compliance with defined licenses.
QUERY LICENSE	Displays information about licenses and audits.
QUERY STATUS	Displays the settings of server parameters, such as those selected by the SET commands.
SET LICENSEAUDITPERIOD	Specifies the number of days between automatic license audits.

REGISTER NODE (Register a Client Node)

Use the REGISTER NODE command to register a client node to the server.

If your site has a closed registration system, then client nodes must be registered by an administrator with the REGISTER NODE command. You can use the REGISTER NODE command whether or not closed registration is in effect.

If your site is using open registration, client nodes can register themselves to the default policy domain named STANDARD, using only the default values for the attributes defined with the REGISTER NODE command.

Note: In a macro, the server may stall if some commands (for example, REGISTER NODE and DEFINE ASSOCIATION) are not committed as soon as you issue them. You could follow each command in a macro with a COMMIT command. However, a simpler solution is to include the -ITEMCOMMIT option with the DSMADMC command.

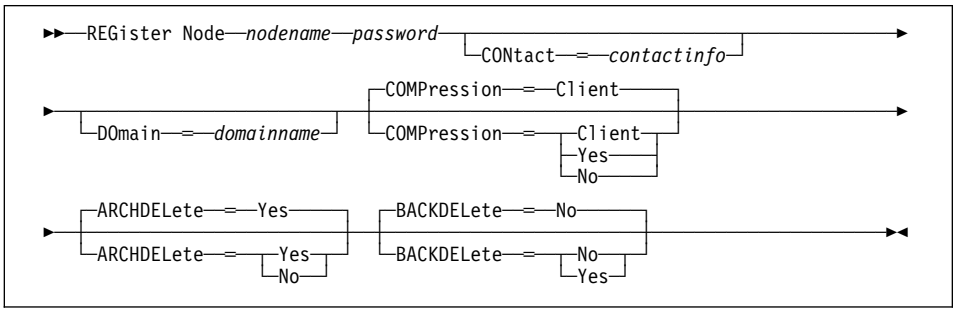
If a client requires a different policy domain than STANDARD, you must register the client node with this command.

The ARCHDELETE and BACKDELETE parameters determine whether the client node user can delete backup versions or archive copies from data storage. These parameters do not affect an administrator's ability to delete file spaces.

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the policy domain to which the client node is assigned.

Syntax



Parameters

nodename

Specifies the name of the client node to be registered. This parameter is required. The maximum length of the name is 64 characters.

password
Specifies the client node's password. This parameter is required. The maximum length of the name is 64 characters. Use the SET PASSEXP command to specify how long an administrator or client node password is valid.

CONtact=*contactinfo*
Specifies a text string of information identifying the node. This parameter is optional. The maximum length of the text string is 255 characters. The contact information must be enclosed in quotation marks if it contains any blanks.

DOmain=*domainname*
Specifies the name of the policy domain to which the node is assigned. This parameter is optional. If you do not specify a policy domain name, the node is assigned to the default policy domain (STANDARD).

COMPression=*compressionvalue*
Specifies whether the client node compresses its files before sending them to the server for backup and archive. This parameter is optional. The default value is CLIENT. Possible values are:

Client
Specifies that the client determines whether to compress files.

Yes
Specifies that the client node compresses its files before sending them to the server for backup and archive.

No Specifies that the client node does not compress its files before sending them to the server for backup and archive.

ARCHDELete=*archdeletevalue*
Specifies whether the client node can delete its own archived files from the server. This parameter is optional. The default value is YES. Possible values are:

Yes
Specifies that the client node can delete its own archive files from the server.

No Specifies that the client node cannot delete its own archive files from the server.

BACKDELete=*backdeletevalue*
Specifies whether the client node can delete its own backup files from the server. This parameter is optional. The default value is NO. Possible values are:

No Specifies that the client node cannot delete its own backup files from the server.

Yes
Specifies that the client node can delete its own backup files from the server.

REGISTER NODE

Examples

Task

Register the client node JANET with the password SECRETCODE and assign this node to the EMPLOYEE_RECORDS policy domain. This node can delete its own backup and archive files from the server. All files are compressed by the client node before they are sent to the server.

Command:

```
register node janet secretcode archdelete=yes backdelete=yes
compression=yes
```

Output:

```
ANR2060I Node JANET registered in policy domain EMPLOYEE_RECORDS.
```

Related Commands

Table 140. Commands Related to REGISTER NODE

Command	Description
DELETE FILESPACE	Deletes data associated with one or more client's filespaces.
LOCK NODE	Prevents a client from accessing the server.
REMOVE NODE	Removes a client from the list of registered nodes for a specific policy domain.
RENAME NODE	Changes the name for an existing user that belongs to a specific policy domain.
QUERY NODE	Displays partial or complete information about one or more clients.
SET PASSEXP	Specifies the number of days after which a password is expired and must be changed.
SET REGISTRATION	Specifies whether users can register themselves or must be registered by an administrator.
UNLOCK NODE	Enables a locked user in a specific policy domain to access the server.
UPDATE NODE	Changes the attributes associated with a client node.

REMOVE ADMIN (Delete an Administrator)

Use the REMOVE ADMIN command to remove an administrator from the system.

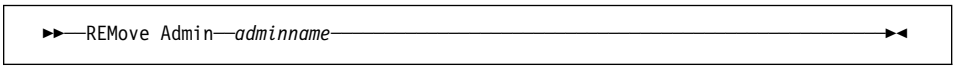
You cannot remove the last system administrator from the system.

You cannot remove the SERVER_CONSOLE administrative ID.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

adminname
Specifies the name of the administrator to be removed. This parameter is required.

Examples

Task

Remove the administrator LARRY.

Command: `remove admin larry`

Output:

```
Do you wish to proceed? (Y/N)
```

Type Y and press ENTER key. The following is displayed:

```
ANR2069I Administrator LARRY removed.
```

REMOVE ADMIN

Related Commands

Table 141. Commands Related to REMOVE ADMIN

Command	Description
LOCK ADMIN	Prevents an administrator from accessing ADSM.
QUERY ADMIN	Displays information about one or more ADSM administrators.
REGISTER ADMIN	Defines a new administrator without granting administrative authority.
RENAME ADMIN	Changes an ADSM administrator's name.

REMOVE NODE (Delete a Client Node)

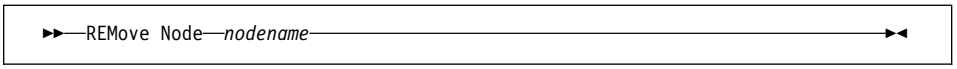
Use the REMOVE NODE command to remove a client node from the server.

Before you can remove a client node, you must delete all backup and archive file spaces that belong to that client node. To remove a client node, you should first use the QUERY SESSION command to determine if the node is in session. If necessary, use the CANCEL SESSION command to cancel the node's session. Use the LOCK NODE command to ensure that the client node does not start a new session and begin backup and archive operations while you are deleting the client node's file spaces. Use the QUERY FILESPACE command to determine the file spaces for the client node. Then use DELETE FILESPACE command to delete all file spaces for the client node. After all file spaces that belong to the client node are deleted, you can remove the client node from ADSM.

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the policy domain to which the client node is assigned.

Syntax



Parameters

nodename
Specifies the name of the client node to be removed. This parameter is required.

Examples

Task

Remove the client node JANET.

Command: `remove node janet`

Output:

```
Do you wish to proceed? (Y/N)
```

Type Y and press the ENTER key. A message similar to the following is displayed:

```
ANR2061I Node JANET removed from policy domain STANDARD.
```

REMOVE NODE

Related Commands

Table 142. Commands Related to REMOVE NODE

Command	Description
DELETE FILESPACE	Deletes data associated with one or more client's filespaces.
LOCK NODE	Prevents a client from accessing the server.
QUERY NODE	Displays partial or complete information about one or more clients.
QUERY SESSION	Displays information about all active administrator and client sessions with ADSM.
REGISTER NODE	Defines a client to the server and sets options for that user.
RENAME NODE	Changes the name for an existing user that belongs to a specific policy domain.

RENAME ADMIN (Rename an Administrator)

Use the RENAME ADMIN command to change the name of an existing administrator. Existing information for this administrator such as password, contact information, and privilege classes is not altered.

If you are assigning an existing administrative user ID to another person, it is recommended that you use the UPDATE ADMIN command to change the password.

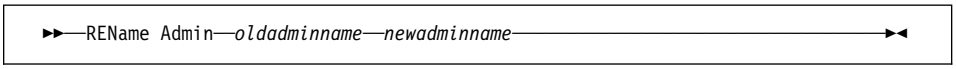
This command is useful for assigning an existing administrative user ID to another person who is not already an administrator. This command can also be used when an employee changes his or her name and wants to be identified by a new user ID.

You cannot rename the SERVER_CONSOLE administrative ID.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

oldadminname
Specifies the name of the administrator to be renamed. This parameter is required.

newadminname
Specifies the new administrator name. This parameter is required. The maximum length of the name is 64 characters.

Examples

Task

Rename the ADSM administrator CLAUDIA to BILL.

Command: `rename admin claudia bill`

Output:

```
ANR2070I Administrator CLAUDIA renamed to BILL.
```

RENAME ADMIN

Related Commands

Table 143. Commands Related to RENAME ADMIN

Command	Description
QUERY ADMIN	Displays information about one or more ADSM administrators.
UPDATE ADMIN	Changes the password or contact information associated with any administrator.

RENAME FILESPACE (Rename a Client Filespace on the Server)

Use the RENAME FILESPACE command to rename an existing client filespace on the server to a new filespace name.

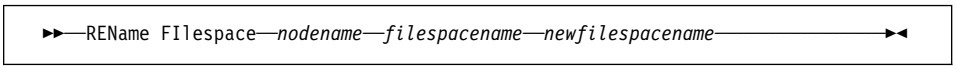
This command is also useful after you have imported filespaces into the server, prior to putting the filespaces onto client nodes. Occasionally, the name of an imported filespace is the same as a filespace name that already exists on a client node. The server will not overlay an existing filespace that has the same name as an imported filespace. Instead, the imported filespace is given a newly system-generated filespace name. However, this new name may match a filespace name that already exists on the client node. (The client node may have filespaces that have not yet been backed up and are unknown to the server.)

You can use the RENAME FILESPACE command to resolve this type of naming conflict or to rename the imported filespaces to the naming convention used for the client node.

Privilege Class

Any administrator with unrestricted policy authority or with restricted policy authority over the client's policy domain can issue this command.

Syntax



Parameters

nodename
Specifies the name of the client node to which the filespace to be renamed belongs.

filespacename
Specifies the name of the existing filespace defined for the client that is to be renamed.

A client filespace name is case sensitive; it must be specified using the same upper and lower case characters with which it is currently defined to the server.

newfilespacename
Specifies the new name to be given to the client's filespace.

A client filespace name is case sensitive; it must be specified using the same upper and lower case characters with which it is to be defined to the server.

Usage Notes

1. Use the QUERY FILESPACE command to display the names of the filespaces defined for each client in the server database. You can use this command to make sure that you are renaming a filespace that is defined for the client in the server database.

2. After importing filespaces for a client node, this command can be used to rename the imported filespaces to more appropriate names for the client, or to avoid any naming conflicts with existing client naming conventions.

Examples

Task

An AIX client node named LARRY has backed up filespace /r033 to the ADSM server. The filespace is exported to tape, then reimported to the server at a later time. When this filespace is imported, a system-generated name, /r031, is created for the imported filespace because /r033 already exists for client node LARRY.

Client node LARRY, however, already has a filespace named /r031 that has never been backed up and is unknown to the server. Unless the imported filespace is renamed, it will overlay filespace /r031 because the filespace name generated by the IMPORT function happened to be the same as a filespace on client node LARRY that was unknown to the server.

The confusion that this IMPORT operation introduces for client node LARRY is resolved by renaming imported filespace /r031 by using the following command:

Command: `rename filespace larry /r031 /imported-r033`

Output:

```
ANR0822I RENAME FILESPACE: Filespace r031 successfully
renamed imported-r033 for node LARRY
```

The new name, /imported-r033, clearly identifies that the new filespace is an imported image of filespace /r033.

Related Commands

Table 144. Commands Related to RENAME FILESPACE

Command	Description
DELETE FILESPACE	Deletes data associated with one or more client's filespaces.
EXPORT NODE	Copies client node information to external media.
QUERY FILESPACE	Displays information about data in one or more filespaces that belong to a client.
QUERY OCCUPANCY	Displays file space information by storage pool.

RENAME NODE (Rename a Client Node)

Use the RENAME NODE command to rename a client node.

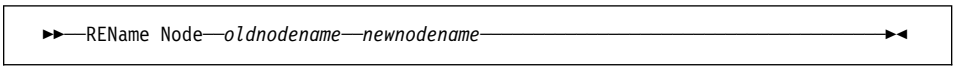
If you are assigning an existing client node ID to another person, it is recommended that you use the UPDATE NODE command to change the password.

This command is useful for assigning an existing client node user ID to another person. This command can also be used when an employee changes his or her name and wants to be identified by a new user ID.

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the policy domain to which the client node is assigned.

Syntax



Parameters

oldnodename
Specifies the name of the client node to be renamed. This parameter is required.

newnodename
Specifies the new name of the client node. This parameter is required. The maximum length of the name is 64 characters.

Examples

Task

Rename the client node JOE to JOYCE.

Command: `rename node joe joyce`

Output:

```
ANR2062I Node JOE renamed to JOYCE.
```

RENAME NODE

Related Commands

Table 145. Commands Related to RENAME NODE

Command	Description
QUERY NODE	Displays partial or complete information about one or more clients.
UPDATE NODE	Changes the attributes associated with a client node.

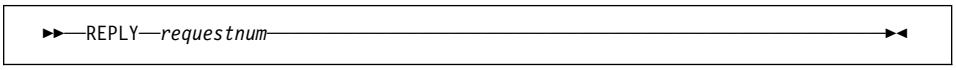
REPLY (Allow a Request to Continue Processing)

Use the REPLY command to signal completion of an operation and for the server to invoke the next operation. To initiate such activity, the server issues a request message that contains an identification number. Use the REPLY command and the identification number to inform the server that you have completed the requested operation. Not all requests require a reply; this command is only required if the request message specifically indicates that a REPLY is needed.

Privilege Class

To issue this command, you must have system privilege or operator privilege.

Syntax



Parameters

requestnum
Specifies the identification number of the request that has been completed. This parameter is required.

Examples

Task

Respond to a reply request using 3 as the request number.

Command: `reply 3`

Output:

```
ANR8499I Command accepted.
```

Related Commands

Table 146. Commands Related to REPLY

Command	Description
CANCEL REQUEST	Cancels one or more pending volume mount requests.
QUERY REQUEST	Displays information about all pending mount requests.

RESET BUFPOOL (Reset the Buffer Pool Statistics for the Database)

Use the RESET BUFPOOL command to reset the buffer pool statistics for the database. ADSM does not issue a response when you enter this command.

The buffer pool statistics consist of:

- The cumulative number of database requests since the last RESET BUFPOOL command (or since the server was last started)
- The percentage of database requests for database pages that are already in the database buffer pool (as cached copies)
- The percentage of database requests that had to wait for a page in the database buffer pool to become available.

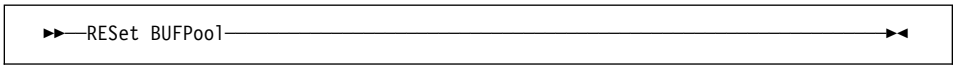
You can adjust the size of the database buffer pool by updating the BUFPOOLSIZE server option.

You can use the QUERY DB command (FORMAT=DETAILED) to display the current values for the buffer pool statistics.

Privilege Class

To issue this command, you must have system privilege or analyst privilege.

Syntax



Parameters

None.

Examples

Task

Reset the buffer pool statistics.

Command: `reset bufpool`

Output:

```
(no response)
```

Related Commands

Table 147. Commands Related to RESET BUFPOOL

Command	Description
QUERY DB	Displays allocation information about the database.
RESET DBMAXUTILIZATION	Resets the maximum utilization statistic for the database.
RESET LOGMAXUTILIZATION	Resets the maximum utilization statistic for the recovery log.

RESET DBMAXUTILIZATION (Reset the Utilization Statistic for the Database)

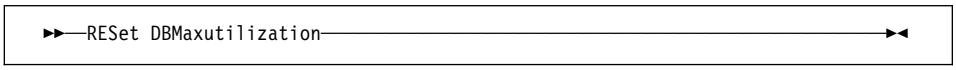
Use the RESET DBMAXUTILIZATION command to reset the maximum utilization statistic for the database. ADSM does not issue a response when you enter this command.

This command resets the value of the maximum utilization statistic for the database to the current utilization. You can display the current value of the maximum utilization statistic for the database with the QUERY DB command.

Privilege Class

To issue this command, you must have system privilege or analyst privilege.

Syntax



Parameters

None.

Examples

Task

Reset the maximum utilization statistic for the database.

Command: `reset dbmaxutilization`

Output:

```
(no response)
```

Related Commands

Table 148. Commands Related to RESET DBMAXUTILIZATION

Command	Description
QUERY DB	Displays allocation information about the database.
RESET BUFPOOL	Resets the buffer pool statistics for the database.

RESET LOGCONSUMPTION (Reset the Cumulative Log Consumption Statistic)

Use the RESET LOGCONSUMPTION command to reset the statistic on the amount of recovery log space used since the last reset.

You can use this command to determine the space needed for the recovery log. For example, over a period of a week, do the following:

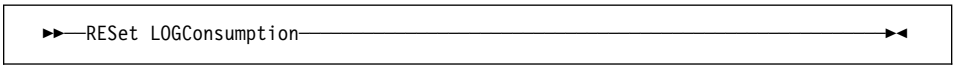
1. Reset the statistic after a scheduled database backup.
2. Just before the next scheduled database backup, issue the QUERY LOG command to query the log.

Use the data to set your recovery log size. See *ADSM Administrator's Guide* for more detailed information.

Privilege Class

To issue this command, you must have analyst privilege.

Syntax



Parameters

None.

Examples

Task

Reset the statistic for recovery log consumption.

Command: `reset logconsumption`

Output:

```
(No response)
```

Related Commands

Table 149. Commands Related to RESET LOGCONSUMPTION

Command	Description
QUERY LOG	Displays allocation information about the recovery log.
SET LOGMODE	Sets the mode for saving records in the recovery log.

RESET LOGMAXUTILIZATION (Reset the Utilization Statistic for the Log)

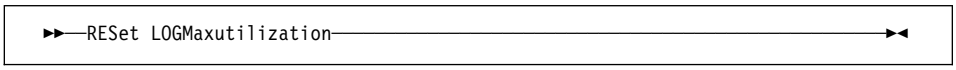
Use the RESET LOGMAXUTILIZATION command to reset the maximum utilization statistic for the recovery log. ADSM does not issue a response when you enter this command.

This command resets the value for the maximum utilization statistic of the recovery log to 0. You can display the current value of the maximum utilization statistic for the recovery log with the QUERY LOG command.

Privilege Class

To issue this command, you must have system privilege or analyst privilege.

Syntax



Parameters

None.

Examples

Task

Reset the maximum utilization statistic for the recovery log.

Command: `reset logmaxutilization`

Output:

```
(no response)
```

Related Commands

Table 150. Command Related to RESET LOGMAXUTILIZATION

Command	Description
QUERY LOG	Displays allocation information about the recovery log.

RESTORE STGPOOL (Restore Storage Pool Data from a Copy Pool)

Use the RESTORE STGPOOL command to restore files from one or more copy storage pools to a primary storage pool. The files must have been copied to the copy storage pools by using the BACKUP STGPOOL command.

When you use this command, ADSM restores all files that belong to the specified primary storage pool and that meet one of the following criteria:

- The primary copy of the file has been identified as having data-integrity errors during a previous operation.
- The primary copy of the file resides on a volume that has an access mode of DESTROYED.

After the files are restored, the old references to these files in the primary storage pool are deleted from the database. ADSM now locates these files on the volumes to which they were restored, rather than on the volumes on which they were previously stored. If a destroyed volume becomes empty because all files have been restored to other locations, the destroyed volume is automatically deleted from the database.

Note: Cached copies of files are never restored. Any cached files that have data-integrity errors or that reside on a *destroyed* volume are removed from the database during restore processing.

The restoration may be incomplete for one or more of the following reasons:

- Files were either never backed up or the backup copies are marked as damaged. Use the QUERY CONTENT command to get more information on the remaining files on the volume.
- A copy storage pool was specified on the RESTORE command, but files were backed up to a different copy storage pool. Use the PREVIEW parameter when you issue the RESTORE command again to determine if this is the problem.
- Volumes in the copy storage pool needed to perform the restore operation are offsite or unavailable. Check the activity log for messages that occurred during restore processing.
- Backup file copies in copy storage pools were moved or deleted by other ADSM processes during restore processing. To prevent this problem, do not issue the following commands for copy storage pool volumes while restore processing is in progress:
  - MOVE DATA
  - DELETE VOLUME (DISCARDDATA=YES)
  - AUDIT VOLUME (FIX=YES)

  Also, you can prevent reclamation processing for your copy storage pools by setting the RECLAIM parameter to 100 with the UPDATE STGPOOL command.

This command can be used to identify volumes that contain damaged, primary files. During restore processing, a message is issued for every volume in the restored

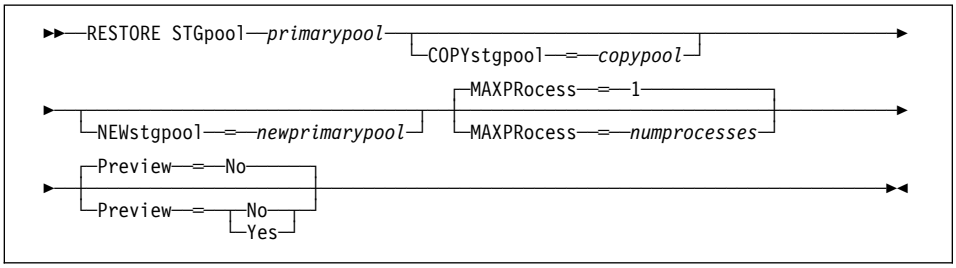
storage pool that contains damaged, non-cached files. Use the QUERY CONTENT command to identify damaged, primary files on a specific volume.

This command generates a background process that can be canceled with the CANCEL PROCESS command. If a RESTORE STGPOOL background process is canceled, some files may have already been restored prior to the cancellation. To display information on background processes, use the QUERY PROCESS command.

Privilege Class

To issue this command, you must have system privilege, unrestricted storage privilege, or restricted storage privilege for the primary storage pool for which files are to be restored. If you are a restricted storage administrator and you want to restore files to a new primary storage pool, you must also have authority for the new storage pool.

Syntax



Parameters

primarypool

Specifies the name of the primary storage pool that is being restored. This parameter is required.

COPYstgpool=*copypool*

Specifies the name of the copy storage pool from which the files are to be restored. This parameter is optional. If this parameter is not specified, files are restored from any copy pool in which copies can be located.

NEWstgpool=*newprimarypool*

Specifies the name of the new storage pool to which to restore the files. This parameter is optional. If this parameter is not specified, files are restored to the original primary storage pool (the pool being restored).

MAXPRocess=*numprocesses*

Specifies the maximum number of parallel processes that are used for restoring files. By using multiple, parallel processes, you may be able to improve throughput for the restore operation. This parameter is optional. You can specify a value from 1–999, inclusive. The default value is 1.

When determining the number of processes to use, consider the number of mount points and drives that can be dedicated to this operation. To access a volume in a sequential access device class, ADSM uses a mount point (a logical

drive), and, if the sequential device class is not FILE, a physical drive. The number of mount points and drives available depends on other ADSM and system activity, and on the mount limits of the device classes for the storage pools that are involved in the restore operation. The maximum number of mount points for a device class is specified with the mount limit parameter, which is the number of logical drives that ADSM can use at one time to access volumes in that device class.

Each process needs a mount point for copy storage pool volumes, and, if the device class is not FILE, each process also needs a drive. If the storage pool to which you are restoring files is a sequential storage pool, each process needs an additional mount point for primary storage pool volumes, and, if the device class is not FILE, an additional drive.

For example, suppose you specify MAXPROCESS=3 to restore files to a primary sequential storage pool from a copy storage pool, both assigned to the same 8MM device class. Each of the three processes requires two mount points and two drives. For all three processes to run, the 8MM device class must have a mount limit of no less than 6, and there must be at least 6 mount points and 6 drives currently available.

If you specify PREVIEW=YES, only one process is used, regardless of the value specified for the MAXPROCESS parameter. No mount points or drives are required when you specify PREVIEW=YES.

Preview=*value*

Specifies whether you only want to preview the restore operation without actually performing it. This parameter is optional. The default value is NO. Possible values are:

No

Specifies that you want to perform the restore operation.

Yes

Specifies that you only want to preview the restore operation, without actually restoring the data. This option can be used to identify offsite volumes that would be required to restore a storage pool. This option displays:

- A list of volumes in the specified primary storage pool that contain damaged, primary files.
- The number of files and the number of bytes that will be restored, assuming that the access mode of the required copy storage pool volumes is READWRITE or READONLY when the restore operation is performed.
- A list of copy storage pool volumes containing files that will be restored. These volumes must be mounted if you actually perform the restore operation.
- A list of any volumes containing files that cannot be restored.

RESTORE STGPOOL

Note: If you preview a restore operation to obtain a list of offsite copy pool volumes that must be mounted, it is recommended that you change the access mode of the identified copy pool volumes to UNAVAILABLE. This prevents reclamation and MOVE DATA processing for these volumes until they have been transported to the onsite location for use in restore processing.

Examples

Task

Restore files from any copy storage pool to the primary storage pool, PRIMARY_POOL.

Command: `restore stgpool primary_pool`

Output:

```
ANR1230I Restore of primary storage pool PRIMARY_POOL started
as process 18.
ANR2110I RESTORE STGPOOL started as process 18.
ANR1254I Removable volume L:\WIN32APP\IBM\ADSM\SERVER\MAINVOL
is required
for data storage restore.
ANR8324I FILE volume L:\WIN32APP\IBM\ADSM\SERVER\MAINVOL
is expected to be mounted (R/W).
adsm>
ANR8340I FILE volume L:\WIN32APP\IBM\ADSM\SERVER\DATA1.DSM mounted.
ANR8340I FILE volume L:\WIN32APP\IBM\ADSM\SERVER\MAINVOL mounted.
ANR1234I Restore process 18 ended for storage pool PRIMARY_POOL.
ANR1238I Restore of primary storage pool PRIMARY_POOL has ended.
Files Restored: 42, Bytes Restored: 7452550, Unreadable Files: 0,
Unreadable Bytes: 0.
ANR2208I Volume L:\WIN32APP\IBM\ADSM\SERVER\MAINVOL deleted from
storage pool PRIMARY_POOL.
```

Related Commands

Table 151 provides references to related commands.

Table 151 (Page 1 of 2). Commands Related to RESTORE STGPOOL

Command	Description	Reference
BACKUP STGPOOL	Backs up a primary storage pool to a copy storage pool.	Page 59
CANCEL PROCESS	Cancels a background server process.	Page 65
QUERY CONTENT	Displays information about one or more files currently residing in a storage pool volume.	Page 354

Table 151 (Page 2 of 2). Commands Related to RESTORE STGPOOL

Command	Description	Reference
QUERY PROCESS	Displays information about one or all background server processes.	Page 464
RESTORE VOLUME	Restores files stored on specified volumes in a primary storage pool from copy storage pools.	Page 538
UPDATE STGPOOL	Changes the attributes of a storage pool.	Page 677

RESTORE VOLUME (Restore Primary Volume Data from a Copy Pool)

Use the RESTORE VOLUME command to restore all files that are currently stored on one or more volumes in the same primary storage pool, and that were previously backed up to copy storage pools by using the BACKUP STGPOOL command. The files are restored from one or more copy storage pools. You can use this command to restore files on volumes known to be damaged, for example, a broken 8mm tape.

If more than one volume is specified to be restored, this command attempts to minimize volume mounts for the copy storage pool. Therefore, to restore more than one volume in the same primary storage pool, issue this command once and specify a list of volumes to be restored.

Note: Cached copies of files are never restored. Any cached files that reside on a volume that is being restored are removed from the database during restore processing.

Before you can use this command to restore a random-access volume, you must use the VARY command to vary the volume offline.

After files are restored, the old references to these files in the primary storage pool are deleted from the database. ADSM will now locate these files on the volumes to which they were restored, rather than on the volume on which they were previously stored.

This command changes the access mode of the specified volumes to DESTROYED. When the restoration is complete (all files on the volume are restored to other locations), the destroyed volume is empty and is then automatically deleted from the database.

The restoration may be incomplete for one or more of the following reasons:

- Files were either never backed up or the backup copies are marked as damaged. Use the QUERY CONTENT command to get more information on the remaining files on the volume.
- A copy storage pool was specified on the RESTORE command, but files were backed up to a different copy storage pool. Use the PREVIEW parameter when you issue the RESTORE command again to determine if this is the problem.
- Volumes in the copy storage pool needed to perform the restore operation are offsite or unavailable. Check the activity log for messages that occurred during restore processing.
- Backup file copies in copy storage pools were moved or deleted by other ADSM processes during restore processing. To prevent this problem, do not issue the following commands for copy storage pool volumes while restore processing is in progress:
  - MOVE DATA
  - DELETE VOLUME (DISCARDDATA=YES)
  - AUDIT VOLUME (FIX=YES)

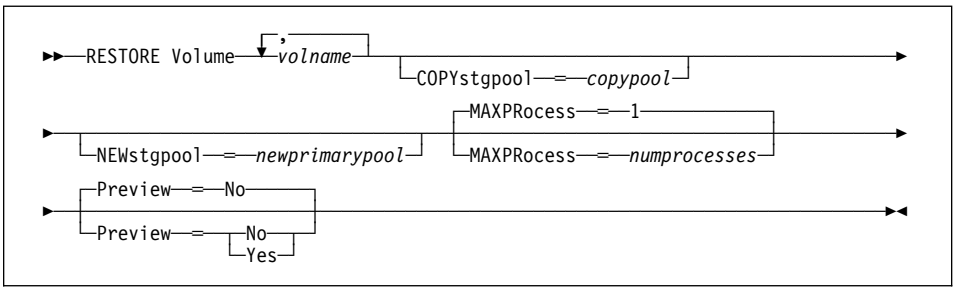
Also, you can prevent reclamation processing for your copy storage pools by setting the RECLAIM parameter to 100 with the UPDATE STGPOOL command.

This command generates a background process that can be canceled with the CANCEL PROCESS command. If a RESTORE VOLUME background process is canceled, some files may have already been restored prior to the cancellation. To display information on background processes, use the QUERY PROCESS command.

Privilege Class

To issue this command you must have system privilege, unrestricted storage privilege, or restricted storage privilege for the primary storage pool to which the specified volumes belong. If you are a restricted storage administrator and you want to restore files to a new primary storage pool, you must also have authority for the new storage pool.

Syntax



Parameters

volname

Specifies the name of the volume in a primary storage pool for which to restore files. This parameter is required. You can specify a list of volumes, if all volumes in the list belong to the same primary storage pool. The items in the list are separated by commas, with no intervening spaces.

COPYstgpool=*copypool*

Specifies the name of the copy storage pool from which the files are to be restored. This parameter is optional. If this parameter is not specified, files are restored from any copy pool in which copies can be located.

NEWstgpool=*newprimarypool*

Specifies the name of the new storage pool to which to restore the files. This parameter is optional. If this parameter is not specified, files are restored to the primary storage pool to which the volume or volumes being restored belong.

MAXPRocess=*numprocesses*

Specifies the maximum number of parallel processes that are used for restoring files. By using multiple, parallel processes, you may be able to improve throughput for the restore operation. This parameter is optional. You can specify a value from 1–999, inclusive. The default value is 1.

When determining the number of processes to use, consider the number of mount points and drives that can be dedicated to this operation. To access a volume in a sequential access device class, ADSM uses a mount point (a logical drive), and, if the sequential device class is not FILE, a physical drive. The number of mount points and drives available depends on other ADSM and system activity, and on the mount limits of the device classes for the storage pools that are involved in the restore operation. The maximum number of mount points for a device class is specified with the mount limit parameter, which is the number of logical drives that ADSM can use at one time to access volumes in that device class.

Each process needs a mount point for copy storage pool volumes, and, if the device class is not FILE, each process also needs a drive. If the storage pool to which you are restoring files is a sequential storage pool, each process needs an additional mount point for primary storage pool volumes, and, if the device class is not FILE, an additional drive.

For example, suppose you specify MAXPROCESS=3 to restore files to a primary sequential storage pool from a copy storage pool, both assigned to the same 8MM device class. Each of the three processes requires two mount points and two drives. For all three processes to run, the 8MM device class must have a mount limit of no less than 6, and there must be at least 6 mount points and 6 drives currently available.

If you specify PREVIEW=YES, only one process is used, regardless of the value specified for the MAXPROCESS parameter. No mount points or drives are required when you specify PREVIEW=YES.

Preview=*value*

Specifies whether you want to preview the restore operation without actually restoring data. This parameter is optional. The default value is NO. Possible values are:

No

Specifies that you want to perform the restore operation.

Yes

Specifies that you want to preview the restore operation without actually restoring the data. This option displays:

- The number of files and the number of bytes that will be restored, assuming that the access mode of the required copy storage pool volumes is READWRITE or READONLY when the restore operation is performed.
- A list of copy storage pool volumes containing files that will be restored. These are volumes that must be mounted if you actually perform the restore.
- A list of any volumes containing files that are not restorable.

This option can be used to identify offsite volumes that would be required to restore a storage pool.

Note: If you preview this restore operation to obtain a list of offsite copy pool volumes that must be mounted, it is recommended that you change the access mode of the identified copy pool volumes to UNAVAILABLE. This prevents reclamation and MOVE DATA processing for these volumes until they have been transported to the onsite location for use in restore processing.

Examples

Task

Restore files stored on volume PVOL2 in primary storage pool PRIMARY_POOL.

Command: `restore volume pvol2`

Output:

```
ANR2114I RESTORE VOLUME: Access mode for volume
L:\WIN32APP\IBM\ADSM\SERVER\PVOL2 updated to "destroyed".
ANR1232I Restore of volumes in primary storage pool PRIMARY_POOL
started as process 19.
ANR1254I Removable volume L:\WIN32APP\IBM\ADSM\SERVER\MAINVOL
is required for data storage restore.
ANR2110I RESTORE VOLUME started as process 19.
ANR8324I FILE volume L:\WIN32APP\IBM\ADSM\SERVER\MAINVOL is expected
to be mounted (R/W).
adsm>
ANR8340I FILE volume L:\WIN32APP\IBM\ADSM\SERVER\PVOL1 mounted.
ANR8340I FILE volume L:\WIN32APP\IBM\ADSM\SERVER\MAINVOL mounted.
ANR1235I Restore process 19 ended for volumes in storage pool
PRIMARY_POOL.
ANR1240I Restore of volumes in primary storage pool PRIMARY_POOL
has ended.
Files Restored: 42, Bytes Restored: 7452550, Unreadable Files: 0,
Unreadable Bytes: 0.
ANR2208I Volume L:\WIN32APP\IBM\ADSM\SERVER\PVOL2 deleted from
storage pool PRIMARY_POOL.
```

RESTORE VOLUME

Related Commands

Table 152 provides references to related commands.

Table 152. Commands Related to RESTORE VOLUME

Command	Description	Reference
BACKUP STGPOOL	Backs up a primary storage pool to a copy storage pool.	Page 59
CANCEL PROCESS	Cancels a background server process.	Page 65
QUERY PROCESS	Displays information about one or all background server processes.	Page 464
RESTORE STGPOOL	Restores files to a primary storage pool from copy storage pools.	Page 533

REVOKE AUTHORITY (Remove Administrator Authority)

Use the REVOKE AUTHORITY command to revoke one or more privilege classes from an administrator. You can also use this command to reduce the number of policy domains to which a restricted policy administrator has authority. This command can also be used to reduce the number of storage pools to which a restricted storage administrator has authority.

At least one administrator must have system privilege; therefore, if the administrator is the only one with system privilege, you cannot revoke his or her authority.

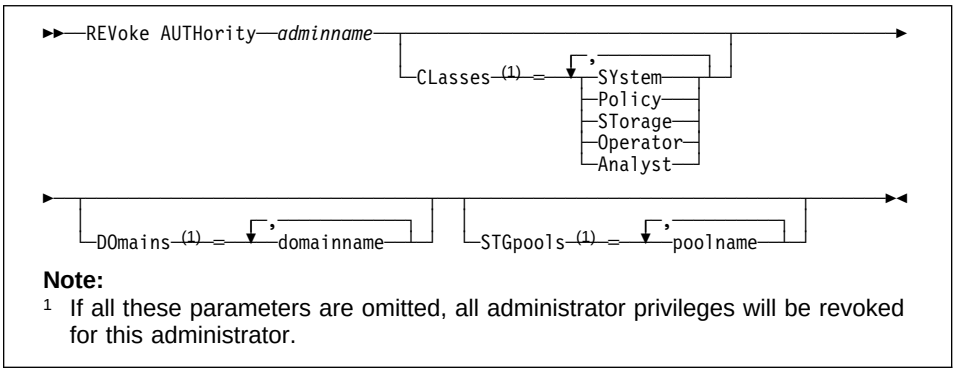
To change an unrestricted policy administrator to a restricted policy administrator, you must first use this command to revoke the unrestricted privilege. Then, use the GRANT AUTHORITY command to grant the administrator restricted policy privilege and to identify the policy domains to which the administrator has authority.

To change an unrestricted storage administrator to a restricted storage administrator, you must first use this command to revoke the unrestricted privilege. Then, use the GRANT AUTHORITY command to grant the administrator restricted storage privilege and to identify the storage pools to which the administrator has authority.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Note:

1 If all these parameters are omitted, all administrator privileges will be revoked for this administrator.

Parameters

adminname

Specifies the name of the administrator whose administrative privilege is to be revoked. This parameter is required.

CLasses=*classes*

Specifies one or more administrative privilege classes to be revoked. You can specify more than one class by delimiting each with a comma.

SYstem
Indicates that system authority is to be revoked for this administrator. If CLASSES=SYSTEM is specified, no other classes can be specified, and the DOMAINS and STGPOOLS parameters cannot be specified.

Policy
Indicates that policy privilege is to be revoked for this administrator. To revoke all policy privilege, specify CLASSES=POLICY and do not specify the DOMAINS parameter.

STorage
Indicates that storage privilege is to be revoked for this administrator. To revoke all storage privilege, specify CLASSES=STORAGE and do not specify the STGPOOLS parameter.

Operator
Indicates that operator privilege is to be revoked for this administrator.

Analyst
Indicates that analyst privilege is to be revoked for this administrator.

DOmains=*domainlist*
Specifies a list of policy domains that can no longer be managed by a restricted policy administrator. (The administrator had been authorized to manage these domains until the REVOKE command was issued.) This parameter is optional. The items in the list are separated by commas, with no intervening spaces. You can use a pattern-matching expression to specify a name. Authority for all matching domains will be revoked. If DOMAINS is specified, the parameter CLASSES=POLICY is optional.

STGpools=*poollist*
Specifies a list of storage pools that can no longer be managed by a restricted policy administrator. (The administrator had been authorized to manage these storage pools until the REVOKE command was issued.) This parameter is optional. The items in the list are separated by commas, with no intervening spaces. You can use a pattern-matching expression to specify a name. Authority for all matching storage pools will be revoked. If STGPOOLS is specified then the parameter CLASSES=STORAGE is optional.

Usage Notes

1. If you use the REVOKE AUTHORITY command without the CLASSES, DOMAINS, and STGPOOLS parameters, you will revoke all privileges for the specified administrator.
2. You can revoke unrestricted policy privilege from an administrator by specifying the CLASSES=POLICY parameter. You cannot use the DOMAINS parameter to revoke authority for selected domains from an unrestricted policy administrator.
3. You can revoke unrestricted storage privilege from an administrator by specifying the CLASSES=STORAGE parameter. You cannot use the STGPOOLS parameter to revoke authority for selected storage pools from an unrestricted storage administrator.

Examples

Task 1

Revoke part of administrator CLAUDIA's privileges. CLAUDIA has restricted policy privilege for the policy domains EMPLOYEE_RECORDS and PROG1. Restrict CLAUDIA's policy privilege to the EMPLOYEE_RECORDS policy domain.

Command:

```
revoke authority claudia classes=policy domains=employee_records
```

Output:

```
ANR2085I Restricted policy privilege revoked for
administrator CLAUDIA - policy domain PROG1.
ANR2085I Restricted policy privilege revoked for
administrator CLAUDIA - policy domain EMPLOYEE_RECORDS.
```

Task 2

Administrator LARRY currently has operator, analyst, and restricted policy privilege. Revoke all administrative privileges for administrator LARRY. To revoke all administrative privileges for an administrator, identify the administrator, but do not specify CLASSES, DOMAINS, or STGPOOLS. LARRY remains an administrator but he can only use those commands that can be issued by any administrator.

Command:

```
revoke authority larry
```

Output:

```
ANR2085I Restricted policy privilege revoked for
administrator LARRY - policy domain PROG1.
ANR2088I Analyst privilege revoked for administrator LARRY.
ANR2089I Operator privilege revoked for administrator LARRY.
```

Task 3

Revoke system privilege for administrator TOM. TOM remains an administrator but he can only use those commands that can be issued by any administrator. (You can, if needed, use the GRANT AUTHORITY command to give privileges to TOM.)

Command:

```
revoke authority tom classes=system
```

Output:

```
ANR2083I System privilege revoked for administrator TOM.
```

REVOKE AUTHORITY

Task 4

Administrator JANET currently has operator, analyst, and unrestricted storage privilege. Revoke her operator and analyst privileges. After the command is issued, the administrator JANET continues to have unrestricted storage privilege.

Command: `revoke authority janet classes=operator,analyst`

Output:

```
ANR2088I Analyst privilege revoked for administrator JANET.
ANR2089I Operator privilege revoked for administrator JANET.
```

Related Commands

Table 153. Commands Related to REVOKE AUTHORITY

Command	Description
GRANT AUTHORITY	Assigns one or more privilege classes to an administrator.
QUERY ADMIN	Displays information about one or more ADSM administrators.

ROLLBACK (Rollback Uncommitted Changes in a Macro)

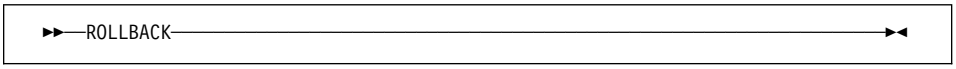
Use the ROLLBACK command within a macro to undo any processing changes made by commands that have been executed by the server but not yet committed to the database. After a change has been committed, it is permanent; it cannot be rolled back. This command is useful for testing macros.

Make sure that your administrative client session is not running with the ITEMCOMMIT option when using this command. For more information on controlling command processing in a macro, see "Controlling Command Processing in a Macro" on page 23.

Privilege Class

Any administrator can issue this command.

Syntax



Parameters

None.

Examples

Task

Run the REGN macro with the ROLLBACK command to verify that the macro works without committing any changes.

Macro Contents:

```
/* Macro to register policy
administrators & grant authority */
REGister Admin sara hobby
GRant AUTHority sara CLasses=Policy
REGister Admin ken plane
GRant AUTHority ken CLasses=Policy
ROLLBACK      /* prevents any changes from being committed */
```

Command: `macro regn`

ROLLBACK

Output:

```
ANS5101I Server command: 'REGister Admin sara hobby'
ANR2068I Administrator SARA registered.
ANS5101I Server command: 'GRant AUTHority sara
CLasses=policy'
ANR2077I Unrestricted policy privilege granted to
administrator SARA.
ANS5101I Server command: 'REGister Admin ken plane'
ANR2068I Administrator KEN registered.
ANS5101I Server command: 'GRant AUTHority ken CLasses=policy'
ANR2077I Unrestricted policy privilege granted to
administrator KEN.
ANS5101I Server command: 'ROLLBACK'
```

Related Commands

Table 154. Commands Related to ROLLBACK

Command	Description
COMMIT	Makes changes to the database permanent.
MACRO	Runs a specified macro file.

SET ACCOUNTING (Set Accounting Records On or Off)

Use the SET ACCOUNTING command to determine whether an accounting record is created every time a client node session ends.

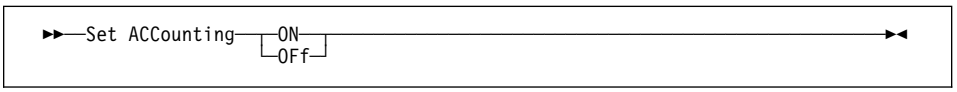
An accounting record tracks the amount of storage used by a client node session. Accounting records are stored in an accounting file named dsmaccnt.log which is located in the current directory when the server is started. This allows multiple servers on the same system to maintain separate accounting logs. The file is written out as text records that can be viewed directly or can easily be read into a spreadsheet, such as Lotus 123. Individual fields are delimited by commas (,) and records are terminated with the newline character. See the *ADSM Administrator's Guide* for more information on accounting.

Use the QUERY STATUS command to determine whether accounting records are generated. At installation, this value is set to off.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

ON

Specifies that the server creates an accounting record every time a client node session ends.

OFF

Specifies that the server does not create accounting records.

Examples

Task

Create an accounting record at the end of each client node session.

Command: `set accounting on`

Output:

```
ANR2091I Accounting parameter set to ON.
```

SET ACCOUNTING

Related Commands

Table 155 provides references to related commands.

Table 155. Commands Related to SET ACCOUNTING

Command	Description	Reference
QUERY STATUS	Displays the settings of server parameters, such as those selected by the SET commands.	Page 480

SET ACTLOGRETENTION (Set the Retention Period for the Activity Log)

Use the SET ACTLOGRETENTION command to specify the retention period, in days, for server activity log records.

This command allows you to define how long activity log information is retained in the database. Activity log information includes messages, such as:

- When client sessions start and end
- When migration starts and ends
- Diagnostic error messages
- Scheduled administrative command output

Because the activity log is stored in the database, the size of the activity log should be factored into the amount of space allocated for the database. The activity log size is dependent upon the length of time the activity log information is retained. When the length of time is increased, the amount of accumulated data also increases, so that additional database storage is required. When sufficient space is not available for activity log records, ADSM suspends recording, and sends messages about this condition to the server console. If you increase the size of the database, ADSM starts activity log recording again.

After a message has passed the specified retention period, the server automatically deletes it.

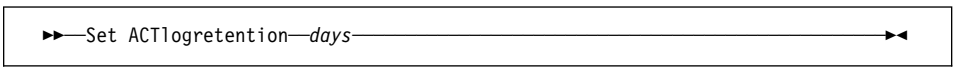
Use the QUERY ACTLOG command to search for messages in the activity log.

Use the QUERY STATUS command to display the current retention period for the activity log. At installation, this value is set to 1 day.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

days

Specifies an integer that defines the number of days to retain messages in the activity log. This parameter is required. You can specify an integer in the range of 0 to 9999, inclusive. A value of 0 disables activity log retention. A value of 1 specifies to only retain the activity log records for the current day.

SET ACTLOGRETENTION

Examples

Task

Set the server to retain activity log records for 30 days.

Command: `set actlogretention 30`

Output:

```
ANR2090I Activity log retention period set to 30 days.
```

Related Commands

Table 156. Command Related to SET ACTLOGRETENTION

Command	Description
QUERY ACTLOG	Searches for and displays messages from the server activity log.

SET AUTHENTICATION (Set Password Authentication)

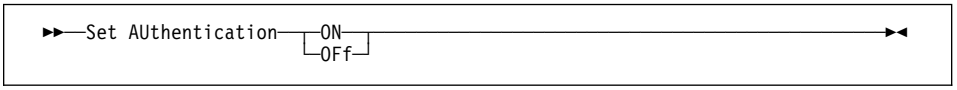
Use the SET AUTHENTICATION command to specify whether administrators and client nodes must use a password to access the server.

Use the QUERY STATUS command to display the current authentication setting. At installation, this value is set to on.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

ON

Specifies that administrators and client nodes need a password to access the server.

OFf

Specifies that administrators and client nodes do not need a password to access the server.

Examples

Task

Set authentication to ON to require administrators and client nodes to enter a password when accessing the server.

Command: `set authentication on`

Output:

```
ANR2095I Authentication parameter set to ON.
```

Related Commands

Table 157. Command Related to SET AUTHENTICATION

Command	Description
QUERY STATUS	Displays the settings of server parameters, such as those selected by the SET commands.

SET DRMCHECKLABEL (Specify Label Checking)

This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

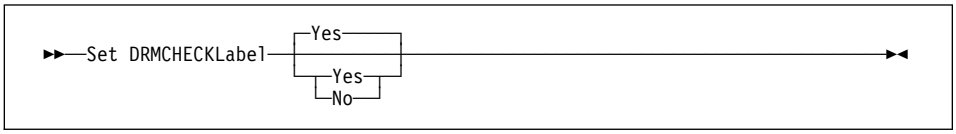
Use the SET DRMCHECKLABEL command to specify whether ADSM should read sequential media labels of volumes checked out by the MOVE DRMEDIA command. At installation, the value of the DRMCHECKLABEL is set to Yes. After installation, this command can be used to modify the value.

You can use the QUERY DRMSTATUS to determine whether media labels will be read for volumes checked out by the MOVE DRMEDIA command.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

Yes
Specifies that ADSM should read sequential media labels of volumes checked out by the MOVE DRMEDIA command.

No
Specifies that ADSM should not read sequential media labels of volumes checked out by the MOVE DRMEDIA command.

Examples

Task

Specify that ADSM does not perform label checking for volumes checked out by the MOVE DRMEDIA command.

Command: `set drmchecklabel no`

Output:

```
ANR6700I SET DRMCHECKLABEL command completed successfully.
```

Related Commands

Table 158. Commands Related to SET DRMCHECKLABEL

Command	Description
MOVE DRMEDIA	Moves DRM media onsite and offsite.
QUERY DRMSTATUS	Displays DRM system parameters.

SET DRMCMDFILENAME (Specify a File Name for containing the executable commands)

This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

Use the SET DRMCMDFILENAME command to specify a file name that will contain the commands specified with CMD parameter on MOVE DRMEDIA or on QUERY DRMEDIA FORMAT=CMD command. This file name is used when the MOVE DRMEDIA CMD and QUERY DRMEDIA FORMAT=CMD command is issued without specifying CMDFILENAME parameter.

Use the SET DRMCMDFILENAME to specify the default file name to be used by the MOVE DRMEDIA or QUERY DRMEDIA command.

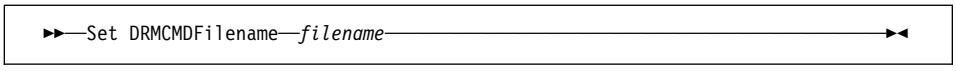
If a file name has not been set with the SET DRMCMDFILENAME, the MOVE DRMEDIA or QUERY DRMEDIA command will generate the command file name by appending the string 'exec.cmd' to the directory representing this "instance" of the ADSM server which is typically the directory that the ADSM server was originally installed from.

You can use the QUERY DRMSTATUS command to display the current file name for containing the executable commands. At installation, this default command file name is not set.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

filename

Specifies a full path file name for containing the executable commands built by MOVE DRMEDIA or QUERY DRMEDIA command. This parameter is required. The maximum length of the file name is 259 characters.

This file name is used when the MOVE DRMEDIA CMD or QUERY DRMEDIA FORMAT=CMD command is issued without the CMDFILENAME parameter. MOVE DRMEDIA or QUERY DRMEDIA automatically allocates this file name. If the file name exists and contains any data, MOVE DRMEDIA or QUERY DRMEDIA command will attempt to use it and the existing data will be over written.

Examples

Task

Specify to store the generated executable commands in a file c:\drm\orm\exec.cmd

Command:

```
set drmcmdfilename c:\drm\orm\exec.cmd
```

Output:

```
ANR6700I SET DRMCMDFILENAME command completed successfully.
```

Related Commands

Table 159. Commands Related to SET DRMCMDFILENAME

Command	Description
MOVE DRMEDIA	Move DRM media offsite and back onsite
QUERY DRMEDIA	Query DRM media
QUERY DRMSTATUS	Displays DRM system parameters.

SET DRMCOPYSTGPOOL (Specify the Copy Storage Pools to be Managed by DRM)

This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

Use the SET DRMCOPYSTGPOOL command to specify a list of copy storage pool names.

The PREPARE command processes this list of copy storage pools when the COPYSTGPOOL parameter is not specified with the PREPARE command. The list should contain the copy storage pools that are used when backing up the primary storage pools that are specified by either the SET DRMPRIMSTGPOOL command or the PRIMSTGPOOL parameter of the PREPARE command. For additional information, see the PREPARE and the SET DRMPRIMSTGPOOL commands.

The MOVE DRMEDIA or QUERY DRMEDIA command processes the volumes in the MOUNTABLE state that are associated with this list of copy storage pool names when the COPYSTGPOOL parameter is not specified with the MOVE DRMEDIA or QUERY DRMEDIA command.

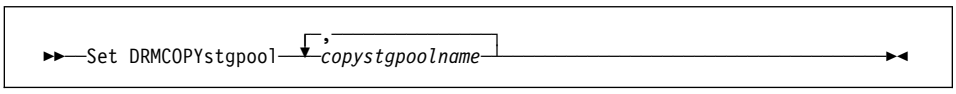
At installation, all copy storage pools defined to the server are eligible for DRM processing. Also, if a copy storage pool list has not been specified by the SET DRMCOPYSTGPOOL command or the null ("") string was specified with the SET DRMCOPYSTGPOOL command to remove previously defined copy storage pool names, all copy storage pools defined to the ADSM server are eligible for DRM processing.

You can issue the QUERY DRMSTATUS command to display the current settings.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

copystgpoolname

Specifies a list of copy storage pool names. This parameter is required. Separate each storage pool name with a comma and no intervening spaces. You can use a pattern-matching expression for each storage pool name.

Note that the copy storage pool names specified are a complete replacement of the previous setting.

Examples

Task

Set the copy storage pool to be managed by DRM to copystgpool1.

Command: `set drmcopystgpool copystgpool1`

Output:

```
ANR6700I SET DRMCOPYSTGPOOL command completed successfully.
```

Related Commands

Table 160. Commands Related to SET DRMCOPYSTGPOOL

Command	Description
MOVE DRMEDIA	Moves DRM media onsite and offsite.
PREPARE	Creates a recovery plan file
QUERY DRMEDIA	Displays information about disaster recovery volumes.
QUERY DRMSTATUS	Displays DRM system parameters.
SET DRMPRIMSTGPOOL	Specifies that primary storage pools are managed by DRM.

SET DRMCOURIERNAME (Specify the Courier Name)

This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

Use the SET DRMCOURIERNAME command to specify the courier name. At installation, the name of the courier is set to COURIER. After installation, this command can be used to modify the name of the courier.

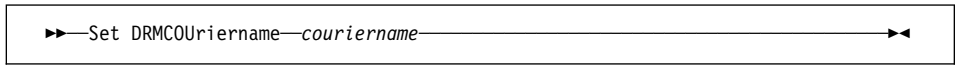
You can use the QUERY DRMSTATUS to see the name of the courier.

The courier name is used by the MOVE DRMEDIA command to set the location of volumes that are transitioning from the CHECKEDOUT state to the COURIER state.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

couriername

Specifies the name of the courier. This parameter is required. The maximum length of the courier name is 255. The courier name must be enclosed in quotation marks if it contains any blank characters.

Examples

Task

Set the name of the courier to fedex

Command: `set drmcouriername fedex`

Output:

```
ANR6700I SET DRMCOURIERNAME command completed successfully.
```

Related Commands

Table 161. Commands Related to SET DRMCOURIERNAME

Command	Description
MOVE DRMEDIA	Moves DRM media onsite and offsite.
QUERY DRMEDIA	Displays information about disaster recovery volumes.
QUERY DRMSTATUS	Displays DRM system parameters.

SET DRMDBBACKUPEXPIREDAYS (Specify Criteria for Database Backup Series Expiration)

This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

Use the SET DRMDBBACKUPEXPIREDAYS command to specify the number of days before expiration is used to expire a database series. To ensure that the database can be restored to an earlier level and database references to files in the storage pool are still valid, the number of days specified by this command and the number of days specified by the REUSEDELAY parameter in the copy storage pool definitions should be the same for the copy storage pools managed by DRM.

A database backup volume is considered eligible for expiration if all of the following conditions exist:

- The last volume of the series has exceeded the expiration value specified with the SET DRMDBBACKUPEXPIREDAYS command. The expiration value specifies the number of days that must elapse since the volume has been used by database backup.
- The volume's state is at the vault.
- The volume is not part of the most recent series (DRM will not expire the most recent database backup series).

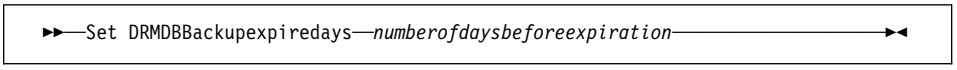
At installation, the number of days before database backup series expiration is set to 60. After installation, this command can be used to modify the number of days that must elapse before a database backup series is expired.

You can use the QUERY DRMSTATUS to see the value of the number of day before database backup series expiration.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

numberofdaysbeforeexpiration

Specifies the minimum number of days that must elapse since a database series was created before it is eligible to be expired by the MOVE DRMEDIA command. Only database backup volumes that are at the vault are expired with the MOVE DRMEDIA command. This parameter is required. You can specify an integer in the range of 0 to 9999.

SET DRMDBBACKUPEXPIREDAYS

Examples

Task

Set the database backup series expiration value to 60.

Command: `set drmdbbackupexpiredays 60`

Output:

```
ANR6700I SET DRMDBBACKUPEXPIREDAYS command completed successfully.
```

Related Commands

Table 162. Commands Related to SET DRMDBBACKUPEXPIREDAYS

Command	Description
DSMSERV RESTORE DB	Restores an ADSM database or database volume.
MOVE DRMEDIA	Moves DRM media onsite and offsite.
QUERY DRMEDIA	Displays information about disaster recovery volumes.
QUERY DRMSTATUS	Displays DRM system parameters.
QUERY VOLHISTORY	Displays sequential volume history information that has been collected by the server.

SET DRMFILEPROCESS (Specify File Processing)

This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

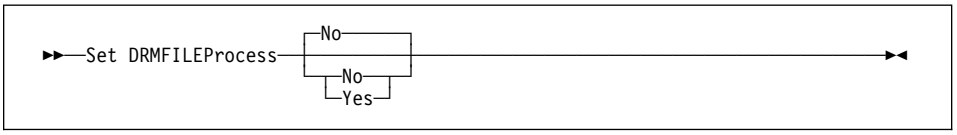
Use the SET DRMFILEPROCESS command to specify whether the MOVE DRMEDIA or QUERY DRMEDIA commands should process data base backup volumes and copy storage pool volumes that are associated with a device class with a DEVTYPE=FILE. At installation, the value of the DRMFILEPROCESS is set to No. After installation, this command can be used to modify the value.

You can use the QUERY DRMSTATUS to determine whether the MOVE DRMEDIA or QUERY DRMEDIA commands will process volumes associated with a device class with a DEVTYPE=FILE.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

No

Specifies that the MOVE DRMEDIA and QUERY DRMEDIA commands should not process database backup and copy storage pool volumes that are associated with a device class with a DEVTYPE=FILE.

Yes

Specifies that the MOVE DRMEDIA and QUERY DRMEDIA commands should process database backup and copy storage pool volumes that are associated with a device class with a DEVTYPE=FILE.

Examples

Task

Set the file processing value to no.

Command: `set drmfileprocess no`

Output:

```
ANR6700I SET DRMFILEPROCESS command completed successfully.
```

SET DRMFILEPROCESS

Related Commands

Table 163. Commands Related to Set DRMFILEPROCESS

Command	Description
MOVE DRMEDIA	Moves DRM media onsite and offsite.
QUERY DRMEDIA	Displays information about disaster recovery volumes.
QUERY DRMSTATUS	Displays DRM system parameters.

SET DRMINSTRPREFIX (Specify the Prefix for Recovery Plan Instructions Filenames)

This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

Use the SET DRMINSTRPREFIX to specify the prefix that the PREPARE command uses to locate the file containing the recovery instructions. This prefix is used when the PREPARE command is issued without the INSTRPREFIX parameter.

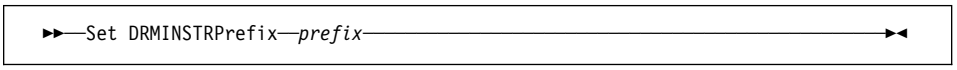
If a prefix has not been set or the null ("") string has been specified with the SET DRMINSTRPREFIX, the plan prefix is set to the directory representing this "instance" of the ADSM server which is typically the directory that the ADSM server was originally installed from.

You can use the QUERY DRMSTATUS command to display the current value for the recovery plan prefix. At installation, this default prefix is not set.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

prefix

Specifies the prefix portion of the path name used by the PREPARE command to locate the files containing the recovery instructions. This parameter is required. The maximum length of the prefix is 200 characters. This prefix is used when the PREPARE command is issued without the INSTRPREFIX parameter.

These site specific recovery instructions can include:

- General ADSM server recovery instructions. To find the file containing these instructions, the PREPARE command appends to the instruction prefix the string *RECOVERY.INSTRUCTIONS.GENERAL*.
- Offsite ADSM server tapes instructions. To find the file containing these instructions, the PREPARE command appends to the instruction prefix the string *RECOVERY.INSTRUCTIONS.OFFSITE*.
- ADSM server software install instructions. To find the file containing these instructions, the PREPARE command appends to the instruction prefix the string *RECOVERY.INSTRUCTIONS.INSTALL*.
- ADSM server database recovery instructions. To find the file containing these instructions, the PREPARE command appends to the instruction prefix the string *RECOVERY.INSTRUCTIONS.DATABASE*.

- ADSM server primary storage pool recovery instructions - To find the file containing these instructions, The PREPARE command appends to the instruction prefix the string *RECOVERY.INSTRUCTIONS.STGPOOL*.

For the prefix, you can specify:

1. A directory path
2. A directory path followed by a string
3. A string

The following describes the rules for possible prefix specifications:

- To specify a directory path for the prefix, end the prefix with the backslash (\) delimiter. The PREPARE command appends to the prefix the appropriate recovery plan file stanza name. For example, a PREPARE command is issued without the INSTRPREFIX parameter and the SET DRMINSTRPREFIX command is set to the following:

  ```
  c:\adsmsrv\recinstr\
  ```

  The PREPARE command obtains the recovery instructions from the following files:

  ```
  c:\adsmsrv\recinstr\RECOVERY.INSTRUCTIONS.GENERAL
  c:\adsmsrv\recinstr\RECOVERY.INSTRUCTIONS.OFFSITE
  c:\adsmsrv\recinstr\RECOVERY.INSTRUCTIONS.INSTALL
  c:\adsmsrv\recinstr\RECOVERY.INSTRUCTIONS.DATABASE
  c:\adsmsrv\recinstr\RECOVERY.INSTRUCTIONS.STGPOOL
  ```

  Note: Remember that if you issue the SET DRMINSTRPREFIX command from the ADSM Administrative command line client and the backslash is the last character in the command line, the backslash will be interpreted as a continuation character. To avoid this, simply place the prefix value within quotes. For example:

  ```
  "c:\adsmsrv\recinstr\"
  ```

- If the prefix is a directory path followed by a string, the PREPARE command assumes that the last component (that is, the string) is to be used as part of the filename. The PREPARE command appends to the prefix the appropriate recovery plan file stanza name. For example, a PREPARE command is issued without the INSTRPREFIX parameter and the SET DRMINSTRPREFIX command is set to the following:

  ```
  c:\adsmsrv\recinstr\accounts
  ```

  The PREPARE command obtains the recovery instructions from the following files:

  ```
  c:\adsmsrv\recinstr\accounts.RECOVERY.INSTRUCTIONS.GENERAL
  c:\adsmsrv\recinstr\accounts.RECOVERY.INSTRUCTIONS.OFFSITE
  c:\adsmsrv\recinstr\accounts.RECOVERY.INSTRUCTIONS.INSTALL
  c:\adsmsrv\recinstr\accounts.RECOVERY.INSTRUCTIONS.DATABASE
  c:\adsmsrv\recinstr\accounts.RECOVERY.INSTRUCTIONS.STGPOOL
  ```

- If the prefix is only a string (that is, the string is not preceded with a directory path name) the PREPARE command appends to the prefix the appropriate recovery plan file stanza name. If the prefix is only a string the directory path used by the PREPARE command is the directory representing this "instance" of the ADSM server which is typically the directory that the ADSM server was originally installed from. For example, a PREPARE command is issued without the INSTRPREFIX, the directory representing this instance of the server is c:\win32app\ibm\adsm\server2, and the SET DRMINSTRPREFIX command is set to:

  ```
  dock
  ```

  The PREPARE command obtains the recovery instructions from the following files:

  ```
  c:\win32app\ibm\adsm\server2\dock.RECOVERY.INSTRUCTIONS.GENERAL
  c:\win32app\ibm\adsm\server2\dock.RECOVERY.INSTRUCTIONS.OFFSITE
  c:\win32app\ibm\adsm\server2\dock.RECOVERY.INSTRUCTIONS.INSTALL
  c:\win32app\ibm\adsm\server2\dock.RECOVERY.INSTRUCTIONS.DATABASE
  c:\win32app\ibm\adsm\server2\dock.RECOVERY.INSTRUCTIONS.STGPOOL
  ```

Examples

Task

Specify reading the recovery plan instructions from directory c:\win32app\ibm\adsm\server2\

Command:

```
set drminstrprefix c:\win32app\ibm\adsm\server2\
```

Output:

```
ANR6700I SET DRMINSTRPREFIX command completed successfully.
```

Related Commands

Table 164. Commands Related to SET DRMINSTRPREFIX

Command	Description
PREPARE	Creates a recovery plan file
QUERY DRMSTATUS	Displays DRM system parameters.

SET DRMNOTMOUNTABLENAME (Specify the Not Mountable Location Name)

This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

Use the SET DRMNOTMOUNTABLENAME command to specify the location name for storing the media that are to be sent to offsite location. At installation, the name of the location is set to NOTMOUNTABLE. After installation, this command can be used to modify the name of the location.

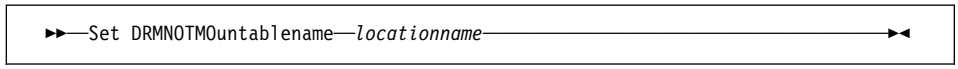
You can use the QUERY DRMSTATUS to see the name of the location.

The location name is used by the MOVE DRMEDIA command to set the location of volumes that are transitioning to the NOTMOUNTABLE state.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

notmountablename

Specifies the name of the location for storing the media to be sent to offsite location. This parameter is required. The maximum length of the location name is 255. The location name must be enclosed in quotation marks if it contains any blank characters.

Examples

Task

Set the name of the location to rm123/31.

Command: `set drmnotmountablename rm123/31`

Output:

```
ANR6700I SET DRMNOTMOUNTABLENAME command completed successfully.
```

Related Commands

Table 165 (Page 1 of 2). Commands Related to SET DRMNOTMOUNTABLENAME

Command	Description
MOVE DRMEDIA	Moves DRM media onsite and offsite.

Table 165 (Page 2 of 2). Commands Related to SET DRMNOTMOUNTABLENAME

Command	Description
QUERY DRMEDIA	Displays information about disaster recovery volumes.
QUERY DRMSTATUS	Displays DRM system parameters.

SET DRMPLANPREFIX (Specify a Prefix for Recovery Plan File Names)

This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

Use the SET DRMPLANPREFIX command to specify the prefix for a recovery plan filename. This prefix is used when the PREPARE command is issued without the PLANPREFIX parameter.

Use the SET DRMPLANPREFIX to specify the default prefix to be used by the PREPARE command to generate the recovery plan filename.

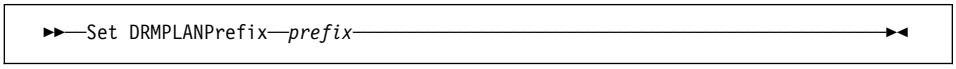
If a prefix has not been set or the null ("") string has been specified with the SET DRMPLANPREFIX, the plan prefix is set to the directory representing this "instance" of the ADSM server which is typically the directory that the ADSM server was originally installed from.

You can use the QUERY DRMSTATUS command to display the current value for the recovery plan prefix. At installation, this default prefix is not set.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

prefix

Specifies the prefix portion of the path name used to generate a recovery plan filename. This parameter is required. The maximum length of the prefix is 200 characters.

This prefix is used when the PREPARE command is issued without the PLANPREFIX parameter. During PREPARE processing, to build a unique recovery plan filename, the sortable date and time format yyyymmdd.hhmmss (for example, 19951115.051421) is appended to the prefix.

For the prefix, you can specify:

1. A directory path
2. A directory path followed by a string
3. A string

The following describes the rules for possible prefix specifications:

1. To specify a directory path for the prefix, end the prefix with the backslash (\) delimiter. The PREPARE command appends to the prefix the date and time information using the *yyyymmdd.hhmmss* format. For example, a PREPARE

command is issued without the PLANPREFIX parameter and the SET DRMPLANPREFIX is set to the following:

```
c:\adsmsrv\recplans\
```

The resulting recovery plan filename is the following:

```
c:\adsmsrv\recplans\19951115.051421
```

Note: Remember that if you issue the SET DRMPLANPREFIX command from the ADSM Administrative command line client and the backslash is the last character in the command line, the backslash will be interpreted as a continuation character. To avoid this, simply place the prefix value within quotes. For example:

```
"c:\adsmsrv\recplans\"
```

2. If the prefix is a directory path followed by a string, the PREPARE command assumes that the last component (that is, the string) is to be used as part of the filename. The PREPARE command appends to the prefix the date and time information using the *.yyyymmdd.hhmmss* format (note the period prior to the date and time). For example, a PREPARE command is issued without the PLANPREFIX parameter and the SET DRMPLANPREFIX is set to the following:

   ```
   c:\adsmsrv\recplans\accounting
   ```

   The resulting recovery plan filename is the following:

   ```
   c:\adsmsrv\recplans\accounting.19951115.051421
   ```

3. If the prefix is only a string (that is, the string is not preceded with a directory path), the PREPARE command appends to the prefix the date and time information using the *.yyyymmdd.hhmmss* format (again, note the period prior to the date and time). If the prefix is only a string the directory path used by the PREPARE command is the directory representing this "instance" of the ADSM server which is typically the directory that the ADSM server was originally installed from. For example, a PREPARE command is issued without the PLANPREFIX, the directory representing this instance of the server is c:\win32app\ibm\adsm\server2, and the SET DRMPLANPREFIX command is set to the following:

   ```
   shipping
   ```

   The resulting recovery plan filename is the following:

   ```
   c:\win32app\ibm\adsm\server2\shipping.19951115.051421
   ```

SET DRMPLANPREFIX

Examples

Task

Specify to store the generated recovery plan files in directory c:\drmtest\prepare\

Command: `set drmplanprefix c:\drmtest\prepare\`

Output:

```
ANR6700I SET DRMPLANPREFIX command completed successfully.
```

Related Commands

Table 166. Commands Related to SET DRMPLANPREFIX

Command	Description
PREPARE	Creates a recovery plan file
QUERY DRMSTATUS	Displays DRM system parameters.

SET DRMPLANVPOSTFIX (Specify Replacement Volume Names)

This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

Use the SET DRMPLANVPOSTFIX command to specify the character to be added to the end of the replacement volumes names in the recovery plan file. The DRMPLANVPOSTFIX can be used for two alternative purposes:

1. Make the replacement primary storage pool volume names easy to find in the recovery plan stanzas so that you can change them to desired names using an editor.
2. Automatically generate replacement volume names. To use this strategy you need to devise a volume naming strategy that works for any device type in your primary storage pools. Considerations include:
   - Generated length of replacement volume name
   - Legal characters in the replacement volume name
   - Conflicts with existing volume names
   - Each replacement volume name must be unique (that is, different from any other destroyed, existing, or new volume name)

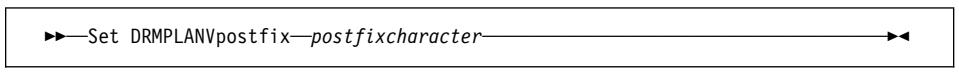
At installation, the character is set to @. After installation, this command can be used to change the character.

You can use the QUERY DRMSTATUS to see the character added to the end of the replacement volume names.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

postfixcharacter

Specifies the character added to the end of the replacement volume names in the recovery plan file. This parameter is required. You can specify 1 alphanumeric character or a special character such as @, however use of other special characters may cause unpredictable results depending upon their meaning in the Windows NT batch/command line environment in which they are encountered.

Examples

Task

Set the character appended to the replace volume names to R.

SET DRMPLANVPOSTFIX

Command: `set drmplanvpostfix R`

Output:

```
ANR6700I SET DRMPLANVPOSTFIX command completed successfully.
```

Related Commands

Table 167. Commands Related to SET DRMPLANVPOSTFIX

Command	Description
PREPARE	Creates a recovery plan file
QUERY DRMSTATUS	Displays DRM system parameters.

SET DRMPRIMSTGPOOL (Specify the Primary Storage Pools to be Managed by DRM)

This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

Use the SET DRMPRIMSTGPOOL command to specify the list of primary storage pool names that you want to recover. The PREPARE command processes this list of primary storage pools when the PRIMSTGPOOL parameter is not specified with the PREPARE command. For additional information, see the PREPARE command.

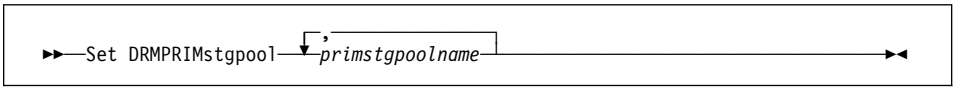
At installation, all primary storage pools defined to the server are eligible for DRM processing. Also, if a primary storage pool list has not been specified by the SET DRMPRIMSTGPOOL command or the null ("") string was specified with the SET DRMPRIMSTGPOOL command to remove previously defined primary storage pool names, all primary storage pools defined to the ADSM server are eligible for processing.

You can issue the QUERY DRMSTATUS command to display the current settings.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

primstgpoolname

Specifies a list of primary storage pool names. This parameter is required. This list should contain the primary storage pools you want to recover. Separate each storage pool name with a comma and no intervening spaces. You can use a pattern-matching expression for each storage pool name.

Note that the primary storage pool names specified are a complete replacement of the previous setting.

SET DRMPRIMSTGPOOL

Examples

Task

Set the primary storage pool to be managed by DRM to primstgpool1.

Command: `set drmprimstgpool primstgpool1`

Output:

```
ANR6700I SET DRMPRIMSTGPOOL command completed successfully.
```

Related Commands

Table 168. Commands Related to SET DRMPRIMSTGPOOL

Command	Description
PREPARE	Creates a recovery plan file
QUERY DRMSTATUS	Displays DRM system parameters.
SET DRMCOPYSTGPOOL	Specifies that copy storage pools are managed by DRM.

SET DRMVAULTNAME (Specify the Vault Name)

This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

Use the SET DRMVAULTNAME command to specify the vault name. At installation, the name of the vault is set to VAULT. After installation, this command can be used to modify the name of the vault.

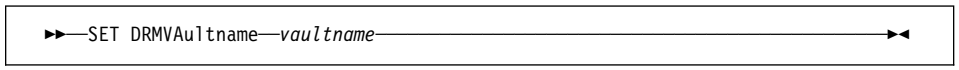
You can use the QUERY DRMSTATUS to see the name of the vault.

The vault name is used by the MOVE DRMEDIA command to set the location of volumes that are transitioning from the COURIER state to the VAULT state.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

vaultname

Specifies the name of the vault. This parameter is required. The maximum length of the vault name is 255. The vault name must be enclosed in quotation marks if it contains any blank characters.

Examples

Task

Specify a vault name of ironmountain.

Command: `set drmvaultname ironmountain`

Output:

```
ANR6700I SET DRMVAULTNAME command completed successfully.
```

Related Commands

Table 169. Commands Related to SET DRMVAULTNAME

Command	Description
MOVE DRMEDIA	Moves DRM media onsite and offsite.
QUERY DRMEDIA	Displays information about disaster recovery volumes.
QUERY DRMSTATUS	Displays DRM system parameters.

SET EVENTRETENTION (Specify the Retention Period for Event Records)

Use the SET EVENTRETENTION command to specify the retention period for event records in the server database. An event record is created whenever processing of a scheduled command is started or missed.

Event records are automatically removed from the database once both of the following conditions have been met:

- The specified retention period has passed from the scheduled execution date and time for the event
- The startup window for the event has elapsed.

Use this command to set a retention period for event records that will permit you to effectively monitor completed schedules. You can adjust the length of time event information is maintained to avoid insufficient or outdated data. To display event records, use the QUERY EVENT command.

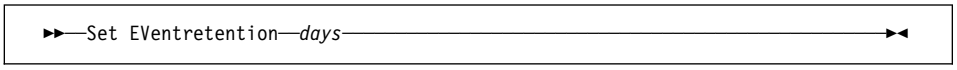
You can use the DELETE EVENT command to delete event records regardless of whether their retention period has elapsed.

You can display the value for the event retention period with the QUERY STATUS command. At installation, this value is set to 10 days.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

days

Specifies the number of days for which event records are retained in the database. This parameter is required. You can specify an integer in the range of 0 to 9999, inclusive. A value of 0 indicates that only event records for the current day will be retained.

Examples

Task

Maintain event records in the database for a period no longer than 15 days.

Command: `set eventretention 15`

Output:

```
ANR2521I Event record retention period set to 15 day(s).
```

Related Commands

Table 170. Commands Related to SET EVENTRETENTION

Command	Description
DELETE EVENT	Deletes event records prior to a specified date and time.
QUERY EVENT	Displays information about scheduled and completed events for selected clients.
QUERY STATUS	Displays the settings of server parameters, such as those selected by the SET commands.

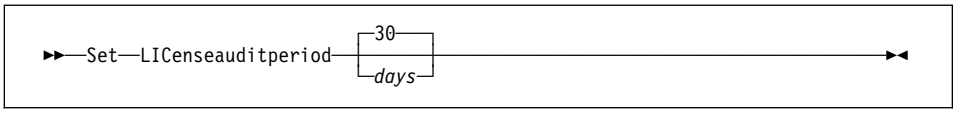
SET LICENSEAUDITPERIOD (Set License Audit Period)

Use the SET LICENSEAUDITPERIOD command to specify the period, in days, between automatic license audits performed by the ADSM server.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

days

Specifies the number of days between automatic server license audits on the ADSM server. This parameter is optional. The default value is 30. You can specify an integer in the range of 1 to 30, inclusive.

Examples

Task

Specify the license audit period for every 14 days.

Command: `set licenseauditperiod 14`

Output:

```
ANR2814I SET LICENSEAUDITPERIOD: License Audit Period
changed to 14 days.
```

Related Commands

Table 171. Commands Related to SET LICENSEAUDITPERIOD

Command	Description
AUDIT LICENSES	Checks for compliance with defined licenses.
QUERY AUDITOCCUPANCY	Displays the server storage utilization for a client node.
QUERY LICENSE	Displays information about licenses and audits.
QUERY STATUS	Displays the settings of server parameters, such as those selected by the SET commands.
REGISTER LICENSE	Registers a new license with the ADSM server.

SET LOGMODE (Set Mode for Saving Recovery Log Records)

Use the SET LOGMODE command to set the mode for saving recovery log records. The log mode determines how long ADSM saves records in the recovery log and the kind of database recovery you can use. The two log modes are NORMAL and ROLLFORWARD.

NORMAL mode

ADSM saves only those records needed to restore the database to the point of the last backup (point-in-time recovery). ADSM deletes any unnecessary records from the recovery log. Changes made to the database since the last backup cannot be recovered. Any backup versions of the database created by issuing the BACKUP DB command can only be used to perform point-in-time recovery.

ROLLFORWARD

ADSM saves all recovery log records that contain changes made to the database since the last time it was backed up. ADSM deletes recovery log records only when they become unnecessary because the database is successfully backed up. The recovery log records can be used to restore a database to its most current state (roll-forward recovery) after loading the most current database backup series. A database backup series created in ROLLFORWARD mode can be used for either point-in-time recovery or roll-forward recovery.

If you specify ROLLFORWARD for the log mode, you can use the DEFINE DBBACKUPTRIGGER command to specify how much space can be used in the recovery log before ADSM automatically runs a backup of the database and removes any unnecessary records from the recovery log. Setting a database backup trigger helps to ensure that the recovery log does not run out of space for new records before the next backup is run.

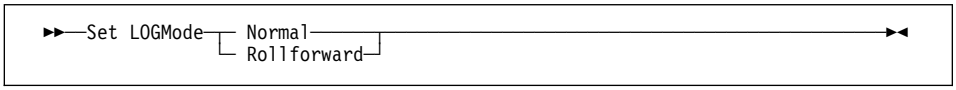
For more information on how the log mode affects database recovery, see *ADSM Administrator's Guide*.

You cannot use the SET LOGMODE command while the BACKUP DB command is running. You must wait for the backup to complete or cancel the background process started by the BACKUP DB command before you can change the log mode.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Parameters

Normal

Specifies that ADSM saves only those recovery log records that are needed to recover the database in case of a system failure. This is the default for the log mode.

When the log mode is NORMAL, no automatic backups are performed based on the database backup trigger. ADSM deletes recovery log records that were required to perform roll-forward recovery or to restore a single database volume. However, you can still use existing database backups to perform point-in-time recovery. ADSM keeps log records necessary to resume database processing if a system failure occurs.

In response to the change to NORMAL mode, ADSM may issue a message warning that only point-in-time database recovery will be possible. If the database backup trigger is set, the message also warns that the trigger will be disabled. If issued from an administrative client (not from the server console), ADSM asks whether to proceed with the change to NORMAL mode.

Rollforward

Specifies that ADSM saves enough log records to ensure that the database can be restored to its most current state using the most recent database backup series and recovery log records. If issued from an administrative client (not from the server console), ADSM asks whether to proceed with the change to ROLLFORWARD mode.

If the database trigger is defined, ADSM automatically and immediately runs a full backup.

If the database trigger is not defined when you change the log mode from NORMAL to ROLLFORWARD, a full backup is required the next time a backup is run. If you do not specify TYPE=FULL the next time you issue the BACKUP DB command, the command fails.

Examples

Task 1

Change the log mode from roll-forward to normal after the database backup trigger has been defined.

Command:

```
set logmode normal
```

SET LOGMODE

Output:

```
ANR2294I Log mode set to NORMAL.
```

Task 2

Change the log mode from normal to roll-forward. No database backup trigger is defined.

Command: `set logmode rollforward`

Output:

```
ANR2294I Log mode set to ROLLFORWARD.
```

Related Commands

Table 172. Commands Related to SET LOGMODE

Command	Description
BACKUP DB	Backs up the ADSM database to sequential access volumes.
DEFINE DBBACKUPTRIGGER	Defines a trigger for automatic ADSM database backups.
QUERY STATUS	Displays the settings of server parameters, such as those selected by the SET commands.
UPDATE DBBACKUPTRIGGER	Changes one or more attributes of the database backup trigger.

SET MAXCMDRETRIES (Set Number of Times Scheduler Retries Commands)

Use the SET MAXCMDRETRIES command to specify the maximum number of times that a scheduler on a client node can retry a scheduled command that fails.

The MAXCMDRETRIES parameter can be specified by each user at the time their client scheduler program is started. Refer to the appropriate client documentation for more information on setting the maximum command retries value from the client.

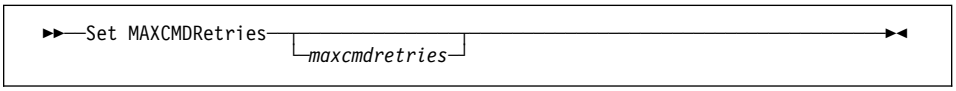
You can use the SET MAXCMDRETRIES command to set a global value for the maximum number of retries, which overrides the value specified by the user. The client's value is overridden only if the client can contact the server.

You can display the current value for the maximum command retries with the QUERY STATUS command. At installation, ADSM is configured so that each client determines its own value for this setting.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

maxcmdretries

Specifies the maximum number of times the scheduler on a client node can retry a scheduled command that fails. This parameter is optional.

You can specify an integer in the range of 0 to 9999, inclusive. If you do not specify a value for this parameter, each client determines its own value for this parameter.

This parameter only restricts the number of attempts that are made to retry a scheduled command that fails. This parameter does not limit the number of attempts made by the scheduler to contact the server to obtain a schedule.

Examples

Task 1

Have all client schedulers retry a failed attempt to execute a scheduled command only twice.

Command:

```
set maxcmdretries 2
```

SET MAXCMDRETRIES

Output:

```
ANR2525I Maximum number of command retries set to 2.
```

Task 2

Have each client determine how often to retry a failed command.

Command: `set maxcmdretries`

Output:

```
ANR2526I Maximum number of command retries reset to value
determined by each client.
```

Related Commands

Table 173. Command Related to SET MAXCMDRETRIES

Command	Description
QUERY STATUS	Displays the settings of server parameters, such as those selected by the SET commands.

SET MAXSCHEDSESSIONS (Set Maximum Scheduled Sessions)

Use the SET MAXSCHEDSESSIONS command to regulate the number of sessions that the server can use for processing scheduled work. This command specifies the maximum number of scheduled sessions as a percentage of the total number of server sessions available.

This setting should be changed if client nodes receive messages that server sessions are not available when trying to execute scheduled events. If you find that scheduled sessions are not contacting the server, you may have a network error.

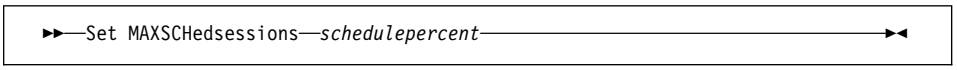
If you find that the number of sessions for scheduled operations is insufficient, you can increase either the total number of sessions or the maximum number of scheduled sessions. However, increasing the total number of sessions available can adversely affect server performance, and increasing the maximum number of scheduled sessions can reduce the server's opportunity to execute nonscheduled work.

You can use the QUERY STATUS command to display the current value for the maximum number of sessions and the maximum number of scheduled sessions. At installation, the value for the maximum number of scheduled sessions is set to 50 percent.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

schedulepercent

Specifies an integer that gives the percentage of total server sessions that can be used for the processing of scheduled work. This parameter is required. You can specify an integer in the range of 0 to 100, inclusive. The maximum number of total available server sessions is determined by the MAXSESSIONS parameter in the server's option file.

If you set the maximum number of scheduled sessions to a value of 0, no scheduled events can begin. If you set the maximum number of scheduled sessions to a value of 100, the MAXSESSIONS parameter determines the maximum number of scheduled sessions.

SET MAXSCHEDSESSIONS

Examples

Task

By setting MAXSESSIONS to 80, you limit the server to 80 active sessions at one time. You want only 25 percent of your total available sessions to be available for scheduled activity. The maximum number of client/server sessions available for scheduled work at any given time is 20 sessions.

Command: `set maxschedsessions 25`

Output:

```
ANR2520I Scheduled sessions set to 25 percent.
```

Related Commands

Table 174. Commands Related to SET MAXSCHEDSESSIONS

Command	Description
QUERY OPTION	Displays information about one or more options from the server options file.
QUERY STATUS	Displays the settings of server parameters, such as those selected by the SET commands.

SET PASSEXP (Set Password Expiration Date)

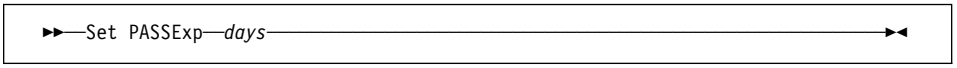
Use the SET PASSEXP command to set the password expiration period. The password expiration period applies to both administrator and client node passwords.

Use the QUERY STATUS command to display the current password expiration period. At installation, this value is set to 90 days.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

days

Specifies an integer that defines the number of days for which the password remains valid. This parameter is required. You can specify an integer in the range of 1 to 9999, inclusive. If an administrator or client node password expires, the server prompts for a new password when the administrator or client node attempts to contact the server.

Examples

Task

Set the administrator and client node password expiration period to 45 days.

Command: `set passexp 45`

Output:

```
ANR2092I Password expiration period set to 45 days.
```

SET PASSEXP

Related Commands

Table 175. Commands Related to SET PASSEXP

Command	Description
QUERY STATUS	Displays the settings of server parameters, such as those selected by the SET commands.
UPDATE ADMIN	Changes the password or contact information associated with any administrator.

SET QUERYSCHEDPERIOD (Set Query Period for Polling Client Nodes)

Use the SET QUERYSCHEDPERIOD command to regulate the frequency with which client nodes contact the server to obtain scheduled work when they are running in the client-polling mode.

The value for the QUERYSCHEDPERIOD parameter can be set by each client node at the time the client scheduler program is started.

You can set a global value for the period between attempts by the client to contact the server for scheduled work. This value overrides the value specified by the client.

The client's value is only overridden if the client can contact the server.

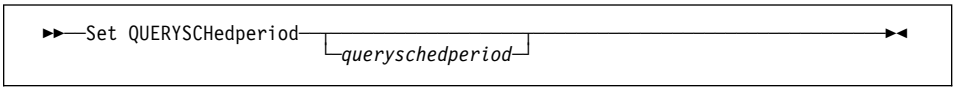
You can set this period to correspond to the frequency with which the schedule or client association changes are being made. If client nodes poll more frequently for schedules, changes to scheduling information (through administrator commands) are propagated more quickly to client nodes. However, increased polling by the client nodes also increases network traffic.

You can display the value for the period between schedule queries with the QUERY STATUS command. At installation, ADSM is configured so that each client node determines its own value for this setting.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

queryschedperiod

Specifies the maximum number of hours between attempts by the client to contact the server for scheduled commands. This parameter is optional. You can specify an integer in the range of 1 to 9999, inclusive. If you do not specify a value for this parameter, each client determines its own value for this parameter.

SET QUERYSCHEDPERIOD

Examples

Task 1

Have all clients using the POLLING scheduling mode contact the server every 24 hours.

Command: `set queryschedperiod 24`

Output:

```
ANR2523I Schedule query period set to 24 hour(s).
```

Task 2

Have all clients using the POLLING scheduling mode set their own query scheduling period.

Command: `set queryschedperiod`

Output:

```
ANR2524I Schedule query period reset to value determined by
client.
```

Related Commands

Table 176. Commands Related to SET QUERYSCHEDPERIOD

Command	Description
QUERY STATUS	Displays the settings of server parameters, such as those selected by the SET commands.
SET SCHEDMODES	Specifies the central scheduling mode for the server.

SET RANDOMIZE (Randomly Distribute Scheduled Start Times)

Use the SET RANDOMIZE command to specify the degree to which start times are randomized within the startup window of each schedule for clients using the client-polling mode.

Each schedule has an associated window during which execution can begin. To balance network and server load, the start times for individual clients can be scattered across that window. You can use this command to specify the fraction of the window over which start times for individual clients are to be distributed. The randomization occurs at the beginning of the window to allow time for retries, if necessary, unless the client's first contact with the server is after the start time for the event.

Set the randomization percentage to a value greater than 0 to prevent communication errors that can result from a large group of clients contacting the server simultaneously. If you do experience communication errors, you can increase the randomization percentage so that client contact is spread out, thus decreasing the chance for communication overload and failure.

It is possible, especially after a client or the server has been restarted, that a client may not poll the server until *after* the beginning of the time window in which the next scheduled event is to start. In this case, the starting time is randomized over the specified percentage of the *remaining* duration of the start window.

For example, consider the following situation:

- Randomization is set at 50 percent
- The startup window for a particular event is from 8:00 to 9:00
- Ten clients are associated with the schedule
- Nine clients poll the server before 8:00
- One client does not poll the server until 8:30

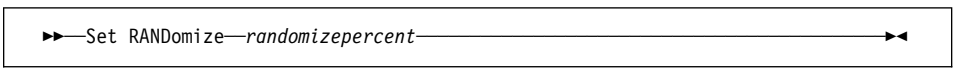
The nine clients that polled the server *before* the beginning of the startup window are assigned randomly selected starting times between 8:00 and 8:30. The client that polled at 8:30 receives randomly selected starting time that is between 8:30 and 8:45.

You can display the value for the schedule randomization percentage with the QUERY STATUS command. At installation, this value is set to 25 percent.

Privilege Class

To issue this command, you must have system privilege.

Syntax



SET RANDOMIZE

Parameters

randomizepercent

Indicates the percentage of the startup window over which the start times for individual clients are distributed. This value is specified as an integer in the range of 0 to 50, inclusive.

A value of 0 indicates that no randomization occurs and that all clients execute the schedule at the beginning of the window. A value of 50 indicates that clients are assigned start times that are randomly scattered across the first half of the startup window.

At installation, this value is set to 25, indicating that the first 25 percent of the window is used for randomization.

If you have specified DURUNITS=INDEFINITE in the DEFINE SCHEDULE command, the percentage specified by the RANDOMIZEPERCENT parameter is regarded as a fraction of a one-day time period. That is, if the value for the RANDOMIZEPERCENT parameter is 25, a schedule with an indefinite window duration has start times scattered over a 6-hour time range (24 multiplied by 0.25).

Examples

Task

Set randomization to 50 percent.

Command: `set randomize 50`

Output:

```
ANR2522I Randomization set to 50 percent.
```

Related Commands

Table 177. Commands Related to SET RANDOMIZE

Command	Description
DEFINE SCHEDULE	Defines a schedule for a client operation or an administrative command.
QUERY STATUS	Displays the settings of server parameters, such as those selected by the SET commands.
SET SCHEDMODES	Specifies the central scheduling mode for the server.

SET REGISTRATION (Set Open or Closed Registration)

Use the SET REGISTRATION command to either require a system or policy administrator to register client nodes (closed registration), or permit each user to register his or her own workstation as a client node with the server (open registration).

With *closed* registration, a system or policy administrator defines:

- Each workstation's node name
- Each user's password
- The policy domain to which the client node belongs
- Whether the user can choose to compress files before sending them to server storage
- Whether the user is allowed to delete backup or archive files from server storage

With *open* registration, when a user attempts to access the server from an unregistered client node, the server prompts the user for a node name, password, and contact information, and registers the workstation. The server sets the following defaults:

- Each client node is assigned to the policy domain named STANDARD.
- Each user defines whether data compression is used before files are sent to server storage.
- Each user is allowed to delete archived files from server storage. The user cannot delete backup files.
- The administrator can reassign domains or change node attributes using the UPDATE NODE command.

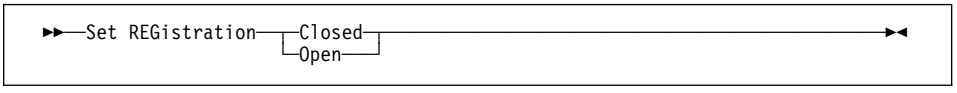
Existing registered client nodes are not affected by changes in the registration process.

Use the QUERY STATUS command to display the status of registration. At installation, this value is set to CLOSED.

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the policy domain to which the client node belongs.

Syntax



Parameters

Closed

Specifies that client nodes must be registered through a system or policy administrator.

SET REGISTRATION

Open
Specifies that users can register their workstations as client nodes with the server.

Examples

Task 1

Have a policy or system administrator register all client nodes to the server.

Command: `set registration closed`

Output:

```
ANR2093I Registration parameter set to CLOSED.
```

Task 2

Have all users register themselves as client nodes to the server.

Command: `set registration open`

Output:

```
ANR2093I Registration parameter set to OPEN.
```

Related Commands

Table 178. Command Related to SET REGISTRATION

Command	Description
QUERY STATUS	Displays the settings of server parameters, such as those selected by the SET commands.

SET RETRYPERIOD (Set Time between Retry Attempts)

Use the SET RETRYPERIOD command to specify the number of minutes the scheduler on a client node waits between retry attempts after a failed attempt to contact the server or after a scheduled command fails to process.

Each client can set their own retry period at the time their scheduler program is started. You can use this command to set a global value for the retry period which will override the value specified by all clients. The client's value is overridden only if the client is able to connect with the server.

When setting the period between retry attempts, set a time period that permits more than one retry attempt within a typical startup window.

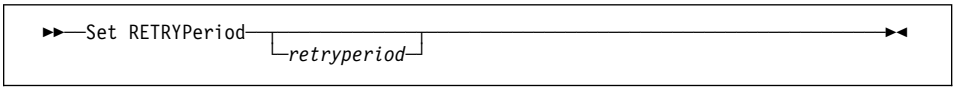
This command is used in conjunction with the SET MAXCMDRETRIES command to regulate the period of time and the number of retry attempts to execute a failed command.

You can display the value for the period between retries by issuing the QUERY STATUS command. At installation, ADSM is configured so that each client determines its own value for this setting.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

retryperiod

Specifies the number of minutes the scheduler on a client node waits between retry attempts after a failed attempt to contact the server or after a scheduled command fails to process. You can specify an integer in the range of 1 to 9999, inclusive. If you do not specify a value for this parameter, each client determines its own value for this parameter.

Examples

Task 1

Allow each client to specify their own period between retries.

Command: `set retryperiod`

SET RETRYPERIOD

Output:

```
ANR2528I Retry period set to value determined by each client.
```

Task 2

Have the client scheduler retry failed attempts to contact the server or to execute scheduled commands every 15 minutes.

Command: `set retryperiod 15`

Output:

```
ANR2527I Retry period set to 15 minute(s).
```

Related Commands

Table 179. Commands Related to SET RETRYPERIOD

Command	Description
QUERY STATUS	Displays the settings of server parameters, such as those selected by the SET commands.
SET MAXCMDRETRIES	Specifies the maximum number of retries after a failed attempt to execute a scheduled command.

SET SCHEDMODES (Select a Central Scheduling Mode)

Use the SET SCHEDMODES command to select the central scheduling modes that the server allows. Use this command when you set up central scheduling to determine how the clients communicate with the server to begin scheduled work.

You can restrict clients from using a scheduling mode with this command.

With client-polling scheduling, a client queries the server at prescribed time intervals to obtain scheduled work or to ensure that the schedules they are waiting to execute have not changed. At the scheduled start time, the client performs the scheduled backup or archive operations, sending the results to the server.

With server-prompted scheduling, clients wait to be contacted by the server when scheduled work needs to be performed and a session is available. When contacted, the client performs the scheduled backup or archive operations, sending the results to the server. The server-prompted mode can only be used between clients and servers that communicate through TCP/IP.

To select both server-prompted and client-polling modes, specify ANY.

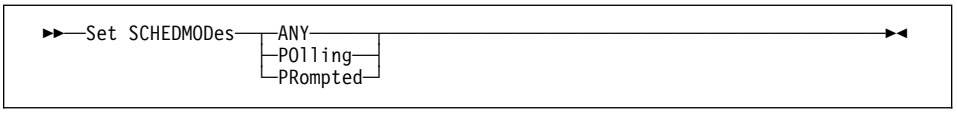
It is very important that you communicate to all users the scheduling modes allowed by the server.

You can display the value for the scheduling mode supported by issuing the QUERY STATUS command. At installation, this value is set to ANY.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

ANY
Specifies that the server allows clients to run in either the client-polling or the server-prompted scheduling mode. Each client must be configured to select the scheduling mode in which it operates.

POlling
Specifies that only the client-polling mode can be used. Client nodes poll the server at prescribed time intervals to obtain scheduled work. If this mode is selected, configure each client to use the client-polling mode.

SET SCHEDMODES

PRompted
Specifies that only the server-prompted mode can be used. This mode is only available for clients that communicate with TCP/IP. Client nodes wait to be contacted by the server when scheduled work needs to be performed and a session is available. If this mode is selected, configure each client to use the server-prompted mode.

Examples

Task 1

A server allows both server-prompted and client-polling central scheduling. You want to temporarily restrict the scheduled operations to clients that use the client-polling mode. If you set the schedule mode to POLLING, the server discontinues prompting clients to execute scheduled commands. This means that any client scheduler using the server-prompted mode waits until you set the schedule mode to ANY or PROMPTED.

Command: `set schedmodes polling`

Output:

```
ANR2529I Scheduling mode set to POLLING.
```

Task 2

Set the central scheduling mode to PROMPTED. Only clients that communicate with TCP/IP and that are configured to use the server-prompted mode will perform scheduled operations.

Command: `set schedmodes prompted`

Output:

```
ANR2530I Scheduling mode set to PROMPTED.
```

Related Commands

Table 180. Command Related to SET SCHEDMODES

Command	Description
QUERY STATUS	Displays the settings of server parameters, such as those selected by the SET commands.

SET SERVERNAME (Specify the Server Name)

Use the SET SERVERNAME command to specify the name by which the server is to be identified. At installation, the name of the server is set to ADSM. After installation, this command can be used to modify the name of the server.

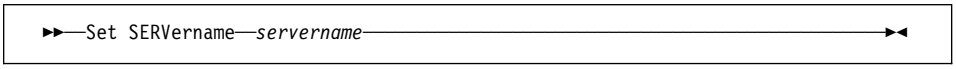
You can use the QUERY STATUS command to see the name of the server.

The server name is reported to a client node when it contacts the server.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

servername
Specifies the name by which the server is to be identified. This parameter is required. The maximum length of the name is 64 characters.

Examples

Task

Name the server WELLS_DESIGN_DEPT.

Command: `set servername wells_design_dept`

Output:

```
ANR2094I Server name set to WELLS_DESIGN_DEPT.
```

Related Commands

Table 181. Command Related to SET SERVERNAME

Command	Description
QUERY STATUS	Displays the settings of server parameters, such as those selected by the SET commands.

UNLOCK ADMIN (Unlock an Administrator)

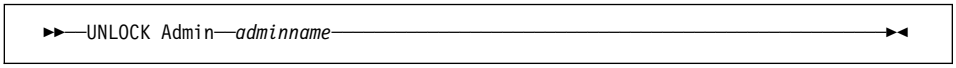
Use the UNLOCK ADMIN command to allow a locked administrator to reaccess the server.

By using the LOCK ADMIN and UNLOCK ADMIN commands, you can temporarily restrict an administrator from accessing the server.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Parameters

adminname
Specifies the name of the administrator to be unlocked. This parameter is required.

Examples

Task

The administrator JOE is locked out of ADSM. Permit JOE to reaccess the server.

Command: `unlock admin joe`

Output:

```
ANR2074I Administrator JOE unlocked.
```

Related Commands

Table 182. Commands Related to UNLOCK ADMIN

Command	Description
LOCK ADMIN	Prevents an administrator from accessing ADSM.
QUERY ADMIN	Displays information about one or more ADSM administrators.

UNLOCK NODE (Unlock a Client Node)

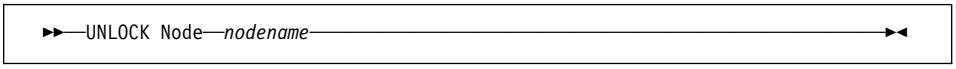
Use the UNLOCK NODE command to allow a locked client node to reaccess the server.

By using the LOCK NODE and UNLOCK NODE commands, you can temporarily restrict a client node from accessing the server.

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the policy domain to which the client node is assigned.

Syntax



Parameters

nodename
Specifies the name of the client node to be unlocked. This parameter is required.

Examples

Task

The client node SMITH is locked out of ADSM. Permit SMITH to reaccess the server.

Command: `unlock node smith`

Output:

```
ANR2066I Node SMITH unlocked.
```

Related Commands

Table 183. Commands Related to UNLOCK NODE

Command	Description
LOCK NODE	Prevents a client from accessing the server.
QUERY NODE	Displays partial or complete information about one or more clients.

UPDATE ADMIN (Update an Administrator)

Use the UPDATE ADMIN command to change the password or contact information for an administrator. However, you cannot update the server console administrator name.

You can use this command to modify selected parameters for the specified administrator. If you do not explicitly update a parameter, it remains unchanged.

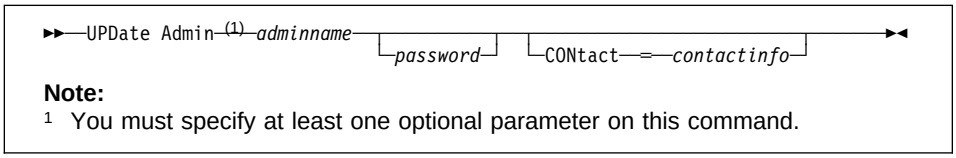
You must use the RENAME ADMIN command to change the name of a registered administrator.

Passwords for both administrative and client node sessions must be changed after a length of time determined by the password expiration period. The SET PASSEXP command is used to set this period.

Privilege Class

To issue this command to change another administrator's password or contact information, you must have system privilege. Any administrator can issue this command to update his or her own password or contact information.

Syntax



Note:
1 You must specify at least one optional parameter on this command.

Parameters

adminname
Specifies the name of the administrator to be updated. This parameter is required.

password
Specifies the administrator's password. This parameter is optional. Passwords remain current for a period determined by the password expiration period.

CONtact=*contactinfo*
Specifies a text string that identifies the administrator. This parameter is optional. The text string must be enclosed in quotation marks if it contains any blanks. To remove previously defined contact information, specify a null string ("") for this value.

Examples

Task

Update the administrator LARRY to have the password SECRETWORD.

Command: `update admin larry secretword`

Output:

```
ANR2071I Administrator LARRY updated.
```

Related Commands

Table 184. Commands Related to UPDATE ADMIN

Command	Description
QUERY ADMIN	Displays information about one or more ADSM administrators.
QUERY STATUS	Displays the settings of server parameters, such as those selected by the SET commands.
RENAME ADMIN	Changes an ADSM administrator's name.
SET PASSEXP	Specifies the number of days after which a password is expired and must be changed.

UPDATE COPYGROUP (Update a Copy Group)

Use the UPDATE COPYGROUP command to update a defined backup or archive copy group.

You can use this command to modify selected parameters for the specified copy group. If you do not explicitly update a parameter, it remains unchanged.

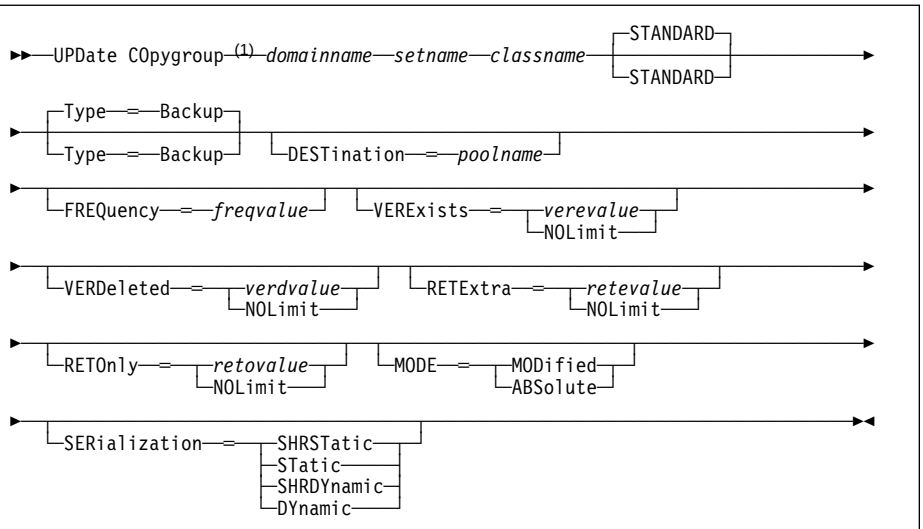
The UPDATE COPYGROUP command will fail if a copy storage pool name is specified as a destination.

The UPDATE COPYGROUP command takes two forms, depending upon whether the update is for a backup copy group or for an archive copy group. The syntax for each form is defined separately below.

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the policy domain to which the copy group belongs.

Syntax for Updating a Backup Copy Group



Note:
1 You must update at least one copy group attribute in this command.

Parameters for Updating a Backup Copy Group

domainname

Specifies the name of the policy domain in which the copy group is defined. This parameter is required.

setname
Specifies the name of the policy set in which the copy group to be updated is defined. This parameter is required.

classname
Specifies the name of the management class to which the copy group belongs. This parameter is required.

STANDARD
Specifies the name of the copy group. The name of the copy group must be STANDARD. The default value is STANDARD.

Type=**Backup**
Specifies that you want to update a backup copy group. This parameter is optional. The default value is BACKUP.

DESTination=*poolname*
Specifies the name of the primary storage pool in which backup data is to be stored. This parameter is optional. You can only specify one storage pool as the destination for a copy group.

FREQuency=*freqvalue*
Specifies the minimum number of days that must elapse between successive backups. This parameter is optional. ADSM does not perform a backup unless the specified number of days has elapsed since the last backup. You can specify a value from 0–9999, inclusive.

Backup frequency works in conjunction with the MODE parameter, which is described later.

VERExists=*verevalue*
Specifies the maximum number of different backup versions to retain for files that currently exist on the client file system. This parameter is optional.

If the maximum number of versions allowed is 5, and backup processing creates a sixth version, ADSM deletes the oldest backup version from server storage. Possible values are:

verevalue
Specifies the number of backup versions to retain for files that currently exist on the client file system. You can specify a value from 1–9999, inclusive.

NOLimit
Specifies that you want ADSM to retain all backup versions.

VERDeleted=*verdvalue*
Specifies the maximum number of backup versions to retain for files that have been deleted from the client file system after being backed up to the server. This parameter is optional. ADSM ignores this parameter if the file still resides on the client node.

If the client file is deleted, during the next backup ADSM changes the active backup version to inactive and erases the oldest versions that are in excess of

the number specified by this parameter. The expiration date for the remaining versions is determined by the values specified for the RETEXTRA and RETONLY parameters. Possible values are:

verdvalue
Specifies the number of backup versions to retain for files that have been deleted from the client file system after being backed up to the server. You can specify a value from 0–9999, inclusive.

NOLimit
Specifies that you want ADSM to retain all backup versions for files that are deleted from the client file system after being backed up to the server.

RETExtra=*retevalue*
Specifies how many days ADSM retains a backup version after that version becomes inactive (that is, a more recent backup version is stored). This parameter is optional. Possible values are:

retevalue
Specifies the number of days to retain all backup versions other than the active version. You can specify a value from 0–9999, inclusive. The default value is 30 days.

NOLimit
Specifies that you want ADSM to retain all backup versions, other than the most recent version, indefinitely (that is, inventory expiration processing does not affect the backup versions). The most recent version of a file that exists on the client workstation is retained indefinitely or until the user deletes the file on the workstation. If the user deletes the file on the workstation, the file is rolled off using the value specified for the VERDELETED parameter.

If the NOLIMIT value is specified, extra backup versions are deleted during backup processing under control of the VEREXISTS or VERDELETED parameters.

RETOnly=*retovalue*
Specifies the retention time, in days, that ADSM retains the last copy it has of a file that has been deleted from the client file system. This parameter is optional. Possible values are:

retovalue
Specifies the number of days to retain the last remaining inactive copy of a file. You can specify a value from 0–9999, inclusive.

NOLimit
Specifies that the last remaining inactive copy of a file be kept indefinitely.

If you specify NOLIMIT, only backup versions are deleted under control of the VEREXISTS or VERDELETED parameters.

MODE=*mode*
Specifies whether a file should be backed up based on changes made to the file since the last time it was backed up or regardless of whether it has changed. This parameter is only used by incremental backup. This parameter is optional. Possible values are:

MODified
Specifies that the file is backed up only if it has changed since the last backup. A file is considered changed if any of the following is true:

- The date last modified is different
- The file size is different
- The file owner is different
- The file permissions are different

ABSolute
Specifies that the file is backed up regardless of whether it has been changed.

SERialization=*serialvalue*
Specifies whether a file or directory can be in use during a backup operation and what the server should do if it is in use. This parameter is optional. The default value is SHRSTATIC.

Attention: Be careful about choosing a management class that contains a copy group that specifies SERIALIZATION=SHRDYNAMIC or SERIALIZATION=DYNAMIC.

If you choose a management class that allows a file to be backed up while it is in use, the backup version stored on the server might be a fuzzy backup. A fuzzy backup is a backup version that may not accurately reflect what is currently in the file. It might contain some, but not all, changes. If that is not acceptable, be sure to choose a management class that allows ADSM to create a backup version only if the file is not being used.

If a file is restored that contains a fuzzy backup, the file might not be usable, depending on the file's application.

Possible values are:

SHRSTatic
Specifies that a file or directory must not be backed up while being modified. The server attempts to perform a backup as many as four times, depending on the value specified for CHANGINGRETRIES specified in the client user options file. If the file or directory is in use during the backup process, the server will not back it up.

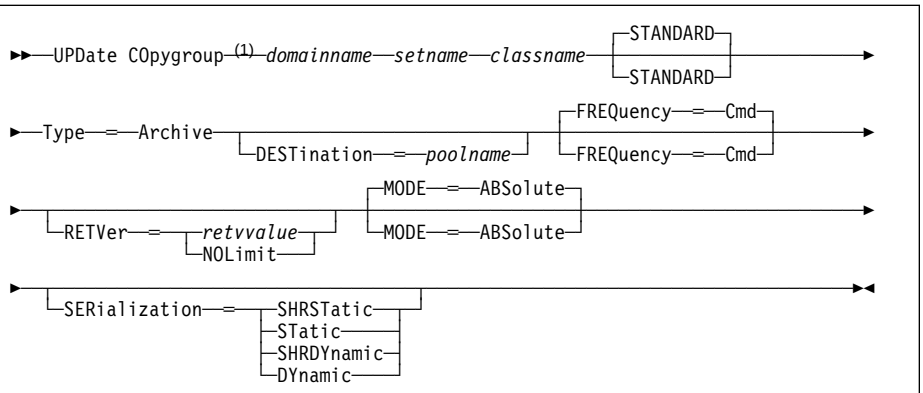
STatic
Specifies that a file or directory must not be modified during backup. If the file or directory changes during the backup attempt, it is not backed up.

Platforms that do not support the STATIC option default to SHRSTATIC. The STATIC option is not supported on the DOS platform.

SHRDYnamic
Specifies that if the file or directory is being modified during a backup attempt, the server will back it up on its last try even though the file or directory is in use.

DYnamic
Specifies that a file or directory is backed up on the first attempt by the server, regardless if the file or directory is in use during the backup process.

Syntax for Updating an Archive Copy Group



Note:
1 You must specify at least one optional parameter on this command.

Parameters for Updating an Archive Copy Group

domainname
Specifies the name of the policy domain in which the copy group is defined. This parameter is required. The maximum length of this name is 30 characters.

setname
Specifies the name of the policy set in which the copy group belongs. This parameter is required. The maximum length of this name is 30 characters.

classname
Specifies the name of the management class to which the copy group belongs. This parameter is required. The maximum length of this name is 30 characters.

STANDARD
Specifies the name of the copy group. The name of the copy group must be STANDARD. The default value is STANDARD.

Type=Archive
Specifies that you want to update an archive copy group. This parameter is required.

DESTination=*poolname*
Specifies the name of the storage pool where the archive files are to reside. This parameter is optional. You can only specify one storage pool as the destination for a copy group.

FREQuency=**Cmd**
Specifies that a file archived. The copy frequency must be CMD. This parameter is optional. A file is archived only when specified in an ARCHIVE command or when selected for archive using the graphical user interface.

RETVer=*retvvalue*
Specifies the number of days to retain an archive copy that is bound to this management class. The value of this parameter determines whether a copy is deleted during inventory expiration processing. This parameter is optional.

retvvalue
Specifies the number of days to retain an archive copy. You can specify a value from 0–9999, inclusive.

NOLimit
Specifies that an archive copy is maintained indefinitely (that is, inventory expiration processing does not affect the archive copy).

MODE=*ABSolute*
Specifies that the file is archived regardless of whether it has been changed since the last archive request. This parameter is optional. The default value is ABSOLUTE.

SERialization=*serialvalue*
Specifies whether a file can be in use during an archive operation and what the server should do if it is in use. This parameter is optional. The default value is SHRSTATIC.

Attention: Be careful about choosing a management class that contains a copy group that specifies SERIALIZATION=SHRDYNAMIC or SERIALIZATION=DYNAMIC.

If you choose a management class that allows a file to be archived while it is in use, the archive copy stored on the server might be a fuzzy copy. A fuzzy copy is an archive copy that may not accurately reflect what is currently in the file. It might contain some, but not all, changes. If that is not acceptable, be sure to choose a management class that allows ADSM to create an archive copy only if the file is not being used.

If a file is restored that contains a fuzzy copy, the file might not be usable, depending on the file's application.

Possible values are:

SHRSTatic
Specifies that a file must not be archived while being modified. The server attempts to perform an archive as many as four times, depending on the value specified for CHANGINGRETRIES specified in the client user options

file. If the file is in use during the archive process, the server will not archive.

STatic
Specifies that a file must not be modified during archive. If the file changes during the archive attempt, it is not archived.

Platforms that do not support the STATIC option default to SHRSTATIC. The STATIC option is not supported on the DOS platform.

SHRDYnamic
Specifies that if the file is being modified during an archive attempt, the server will archive it on its last try even though the file is in use.

DYnamic
Specifies that a file is archived on the first attempt by the server, regardless if the file is in use during the archive process.

Examples

Task 1

Update an archive copy group named STANDARD in the EMPLOYEE_RECORDS policy domain, VACATION policy set, ACTIVEFILES management class. The archive destination is BACKUPPOOL where the archive copies are kept for 190 days.

Command:
```
update copygroup employee_records vacation activefiles standard
type=archive destination=backuppool retver=190
```

Output:

```
ANR1537I Archive copy group STANDARD updated in policy domain
EMPLOYEE_RECORDS, set VACATION, management class ACTIVEFILES.
```

Task 2

Update a backup copy group named STANDARD in the EMPLOYEE_RECORDS policy domain, VACATION policy set, ACTIVEFILES management class. The backup destination is BACKUPPOOL, with a minimum interval of seven days between backups, regardless of whether the files have been modified. Retain up to two active backup versions.

Command:
```
update copygroup employee_records vacation activefiles standard
type=backup destination=backuppool frequency=7 verexists=2
mode=absolute
```

Output:

```
ANR1532I Backup copy group STANDARD updated in policy domain
EMPLOYEE_RECORDS, set VACATION, management class ACTIVEFILES.
```

Related Commands

Table 185. Commands Related to UPDATE COPYGROUP

Command	Description
ASSIGN DEFMGMTCLASS	Assigns an existing management class as the default for a specified policy set.
COPY MGMTCLASS	Creates a copy of an existing management class.
DEFINE COPYGROUP	Defines a copy group for backup or archive processing within a specified management class.
DEFINE MGMTCLASS	Defines a management class within the policy domain and policy set specified.
DELETE COPYGROUP	Deletes a backup or archive copy group from a policy domain and policy set.
DELETE MGMTCLASS	Deletes a management class and its copy groups from a policy domain and policy set.
EXPIRE INVENTORY	Manually starts inventory expiration processing.
QUERY COPYGROUP	Displays the attributes of an existing copy group.
QUERY MGMTCLASS	Displays information about one or more management classes.

UPDATE DBBACKUPTRIGGER (Update the Database Backup Trigger)

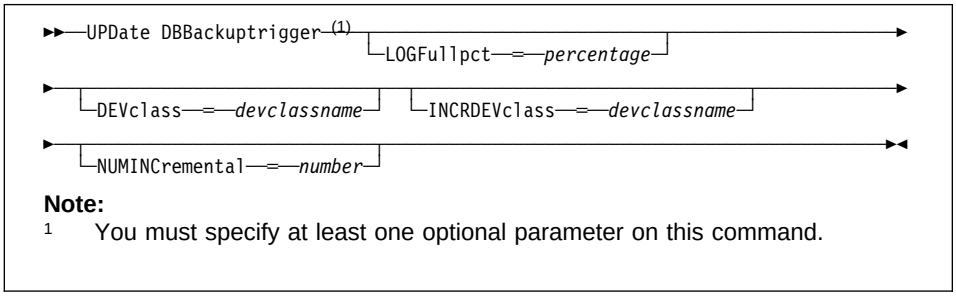
Use the UPDATE DBBACKUPTRIGGER command to change one or more parameters for the database backup trigger. You can use this command to change selected parameters. Any parameters you do not specify remain unchanged.

To display the current settings, use the QUERY DBBACKUPTRIGGER command.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Note:
1 You must specify at least one optional parameter on this command.

Parameters

LOGFullpct=*percentage*

Specifies when ADSM automatically backs up the database, based on the percentage of available space used for the recovery log. When the percentage of space used for the recovery log exceeds this value, ADSM performs an automatic backup of the database and removes unnecessary records from the recovery log. This parameter is optional. You can specify a value from 1–99. The default value is 50 percent.

DEVclass=*devclassname*

Specifies the name of the sequential access device class to use for backups. This parameter is optional.

If the mount limit for the device class specified has already been reached (all drives are busy) when the backup runs, ADSM automatically cancels lower priority operations, such as reclamation, to make a mount point available for the backup.

The server options file that is created during installation includes a DEVCONFIG option that specifies an external file named devcnfg.out. ADSM stores a backup copy of device class definitions in this file. If your ADSM database is damaged or lost and must be restored, the definitions created using the DEFINE DEVCLASS command will not be available and will need to be recreated manually.

The server options file also includes a VOLUMEHISTORY option that specifies an external file (named volhist.out) in which to store a backup copy of sequential volume history information. The volume history file is also used for database recovery.

INCRDEVclass=*devclassname*
Specifies the name of the sequential access device class to use for incremental backups. This parameter is optional. If you do not specify a value for this option, all backups are run using the device class specified with the DEVCLASS parameter.

If the mount limit for the device class specified has already been reached (all drives are busy) when the backup runs, ADSM automatically cancels lower priority operations, such as reclamation, to make a mount point available for the backup.

The server options file that is created during installation includes a DEVCONFIG option that specifies an external file named devcnfg.out. ADSM stores a backup copy of device class definitions in this file. If your ADSM database is damaged or lost and must be restored, the definitions created using the DEFINE DEVCLASS command will not be available and will need to be recreated manually.

NUMINCremental=*number*
Specifies the maximum number of incremental backups that can be run before a full backup is required. This parameter is optional. You can specify a value from 0–32. A 0 specifies that ADSM runs only full backups automatically. The default value is 6.

Each incremental backup, whether run automatically by ADSM or run by using the BACKUP DB command, is added to the count of incremental backups run.

Each full backup, whether run automatically by ADSM or run by using the BACKUP DB command, resets the count for incremental backups to 0.

Examples

Task

Reset the database backup trigger at 60 percent and the number of incremental backups that ADSM runs between full backups to 5.

Command: `update dbbackuptrigger logfull=60 numincremental=5`

Output:

```
ANR2285I Database backup trigger updated, but disabled.
```

UPDATE DBBACKUPTRIGGER

Related Commands

Table 186 provides references to related commands.

Table 186. Commands Related to UPDATE DBBACKUPTRIGGER

Command	Description	Reference
BACKUP DB	Backs up the ADSM database to sequential access volumes.	Page 53
DEFINE DBBACKUPTRIGGER	Defines a trigger for automatic ADSM database backups.	Page 103
DEFINE DEVCLASS	Defines a device class that can be used for storage pools, importing, or exporting.	Page 111
DELETE DBBACKUPTRIGGER	Deletes the database backup trigger.	Page 204
QUERY DBBACKUPTRIGGER	Displays information about the database backup trigger.	Page 370
SET LOGMODE	Sets the mode for saving records in the recovery log.	Page 582

UPDATE DEVCLASS (Change the Attributes of a Device Class)

Use the UPDATE DEVCLASS command to update a defined device class. You can use this command to modify selected parameters for the specified device class. If you do not explicitly update a parameter, it remains unchanged. You can use the DEFINE DEVCLASS command to create a new device class or the DELETE DEVCLASS command to eliminate existing device classes.

The DISK device class is predefined by ADSM and requires no user intervention. This also means that the DISK device class cannot be modified or eliminated with the UPDATE DEVCLASS or DELETE DEVCLASS commands.

The supported parameters for this command vary across device type. For more information on updating device classes, refer to *ADSM Administrator's Guide*.

The server options file that is created during installation includes a DEVCONFIG option that specifies a default device configuration file named devcnfg.out. You can specify other device configuration files with additional DEVCONFIG options. The files you specify with this option are automatically updated with the results of this command. The files are also automatically updated whenever a device class, library, or drive is defined, updated, or deleted.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

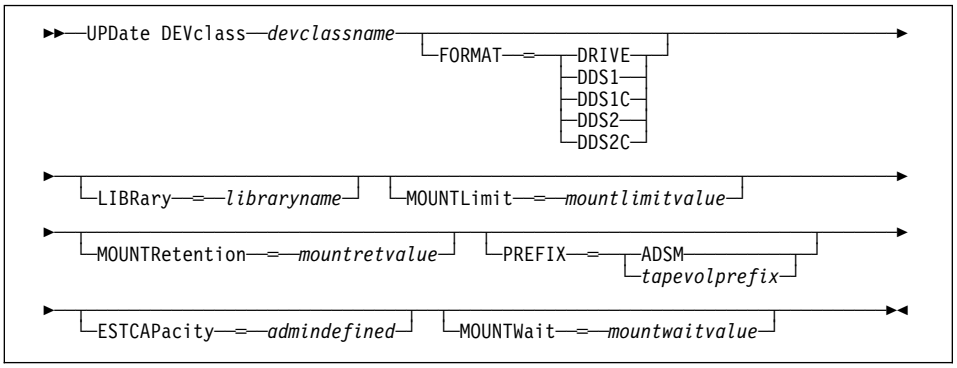
Syntax

The supported parameters for this command vary between device types; therefore, the syntax and parameter descriptions are provided according to the device type. The syntax and parameter information is presented in the following order:

- 4MM
- 8MM
- DLT
- FILE
- GENERICTAPE
- QIC
- REMOVABLEFILE

UPDATE DEVCLASS

Syntax for Updating a Device Class with a Device Type of 4MM



Parameters for Updating a Device Class with a Device Type of 4MM

devclassname
Specifies the name of the device class to be defined. This parameter is required.

FORMAT=*tapeformat*
Specifies the recording format to be used when writing data to sequential access media. This parameter is optional.

The following are the possible values for 4mm devices:

DRIVE
Specifies that ADSM selects the highest format that can be supported by the sequential access drive on which a volume is mounted.

Attention: Avoid specifying the DRIVE value when a mixture of devices are used within the same library. For example, if you have drives that support recording formats superior to other drives in a library, do not specify the FORMAT=DRIVE option.

DDS1
Specifies that ADSM writes data using the DDS-1 recording format for 4mm tapes, without compression. This format results in an uncompressed cartridge capacity of 1.3GB on 60 meter tape and 2GB on 90 meter tape. This format only applies to 60 and 90 meter tapes.

DDS1C
Specifies that ADSM writes data using the DDS-1 recording format for 4mm tapes, with compression enabled. This results in a cartridge capacity of approximately 1.3GB on a 60 meter tape, or 2GB on a 90 meter tape. This format, however, uses the tape drive hardware compression feature, so the actual capacity may be greater, depending on the effectiveness of compression. This format only applies to 60 and 90 meter tapes.

DDS2
Specifies that ADSM writes data using the DDS-2 recording format for 4mm tapes, without compression. This format results in a cartridge

capacity of 4GB on 120 meter tape. This format only applies to 120 meter tape.

DDS2C
Specifies that ADSM writes data using the DDS-2 recording format for 4mm tapes, with compression. This format results in a cartridge capacity of approximately 8GB on 120 meter tape. This format, however, uses the tape drive hardware compression feature, so the actual capacity may be greater, depending on the effectiveness of compression. This format only applies to 120 meter tape.

LIBRary=*libraryname*
Specifies the name of the defined library object that contains the 4mm tape drives used by this device class. This parameter is optional. For information about defining a library object, see the DEFINE LIBRARY command.

MOUNTLimit=*mountlimitvalue*
Specifies the maximum number of sequential access volumes that can be simultaneously mounted for the device class. This parameter is optional. You can specify an integer in the range of 1 to 256, inclusive. This value should be equal to the number of drives available to this device class.

If this value is set to 1, then it may not be possible for media-to-media operations (like reclamation) to work.

MOUNTRetention=*mountretvalue*
Specifies the amount of time, in minutes, to retain an idle sequential access volume before dismounting it. This parameter is optional. You can specify an integer in the range of 0 to 9999, inclusive.

This parameter can improve response time for sequential access media mounts by leaving previously mounted volumes online.

PREFIX=*tapevolprefix*
Specifies the prefix of the file name that the server writes into the sequential access media labels. For each sequential access volume assigned to this device class, ADSM uses this prefix to create the file name. This parameter is optional. The maximum length of this prefix is 8 characters.

If you have already established a media label naming convention that supports your current management system, consider using a volume prefix that conforms to your naming conventions.

ESTCAPacity=*admindefined*
Specifies the estimated capacity for the sequential access volumes categorized by this device class. This parameter is optional. You can specify this parameter if the default estimated capacity for the device class is inaccurate due to compression of data.

You must specify this value as an integer followed by a scale factor. The following are possible scale factors:

UPDATE DEVCLASS

Symbol	Symbol Name
K	Kilobyte
M	Megabyte
G	Gigabyte

For example, ESTCAPACITY=5M specifies that the estimated capacity for a volume in this device class is 5 megabytes. The smallest value allowed is 100KB (that is, ESTCAPACITY=100K).

For more information on the default estimated capacity for 4mm tapes, see Table 187.

Table 187. ADSM Default Estimated Capacity for 4mm Tape

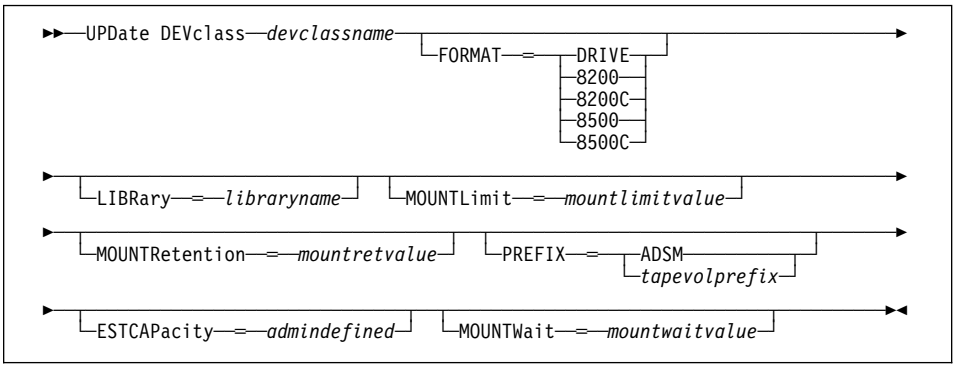
Tape Format	Estimated Capacity
DDS1	1.3 - 2.0GB
DDS1C	1.3 - 2.0GB (see note)
DDS2	4.0GB
DDS2C	8.0GB (see note)

Note: This format uses the tape drive hardware compression feature, depending on the effectiveness of compression the actual capacity may be greater than the listed value.

MOUNTWait=*mountwaitvalue*

Specifies the maximum length of time, in minutes, to wait for a sequential access volume to be mounted. This parameter is optional and does not apply to sequential access media libraries. If the mount request is not satisfied within the specified amount of time, the mount request is canceled. You can specify an integer in the range of 0 to 9999, inclusive.

Syntax for Updating a Device Class with a Device Type of 8MM



Parameters

Parameters for Updating a Device Class with a Device Type of 8MM

devclassname
Specifies the name of the device class to be updated. This parameter is required.

FORMAT=*tapeformat*
Specifies the recording format to be used when writing data to sequential access media. This parameter is optional.

Possible values for 8MM devices are:

DRIVE
Specifies that ADSM selects the highest format that can be supported by the sequential access drive on which a volume is mounted.

Attention: Avoid specifying the DRIVE value when a mixture of devices are used within the same library. For example, if you have drives that support recording formats superior to other drives in a library, do not specify the FORMAT=DRIVE option.

8200
Specifies that ADSM writes data using the 8200 recording format. This results in a tape capacity of 2.3GB when using standard 112M tape cartridges.

8200C
Specifies that ADSM writes data using the 8200C recording format. This results in a tape capacity of approximately 2.3GB when using standard 112 meter tape cartridges. This format, however, uses the tape drive's hardware compression feature, so the actual capacity may be greater than 2.3GB, depending on the effectiveness of the compression feature.

8500
Specifies that ADSM writes data using the 8500 recording format. This results in a tape capacity of 5.0GB when using standard 112M tape cartridges.

8500C
Specifies that ADSM writes data using the 8500C recording format. This results in a tape capacity of at least 5.0GB when using standard 112M tape cartridges. However, this format uses the tape drive's hardware compression feature, so the actual capacity of the cartridge may be greater than 5.0 GB, depending on the effectiveness of the compression feature.

LIBRary=*libraryname*
Specifies the name of the defined library object that contains the 8MM tape drives that can be used by this device class. For information about defining a library object see the DEFINE LIBRARY command.

MOUNTLimit=*mountlimitvalue*
Specifies the maximum number of sequential access volumes that can be simultaneously mounted for the device class. This parameter is optional. You can specify an integer in the range of 1 to 256, inclusive. This value should be equal to the number of drives available to this device class.

If this value is set to 1, then it may not be possible for media-to-media operations (like reclamation) to work.

MOUNTRetention=*mountretvalue*
Specifies the amount of time, in minutes, to retain an idle sequential access volume before dismounting it. This parameter is optional. You can specify an integer in the range of 0 to 9999, inclusive.

This parameter can improve response time for sequential access media mounts by leaving previously mounted volumes online.

PREFIX=*tapevolprefix*
Specifies the prefix of the file name which the server writes into the sequential access media labels. For each sequential access volume assigned to this device class, ADSM uses this prefix to create the file name. This parameter is optional. The default value is ADSM. The maximum length of this prefix is 8 characters.

If you have already established a media label naming convention that supports your current management system, consider using a volume prefix that conforms to your naming conventions.

ESTCAPacity=*admindefined*
Specifies the estimated capacity for the sequential access volumes categorized by this device class. This parameter is optional. You must specify this value as an integer followed by a scale factor. Possible scale factors are:

Symbol	Symbol Name
K	Kilobyte
M	Megabyte
G	Gigabyte

For example, ESTCAPACITY=5M specifies that the estimated capacity for a volume in this device class is 5 megabytes. The smallest value allowed is 100KB (that is, ESTCAPACITY=100K).

For more information on the default estimated capacity for 8MM tapes, see Table 188.

Table 188. ADSM Default Estimated Capacity for 8mm Tape

Tape Format	Estimated Capacity
8200	2.3GB
8200C	2.3GB (see note)
8500	5.0GB
8500C	5.0GB (see note)

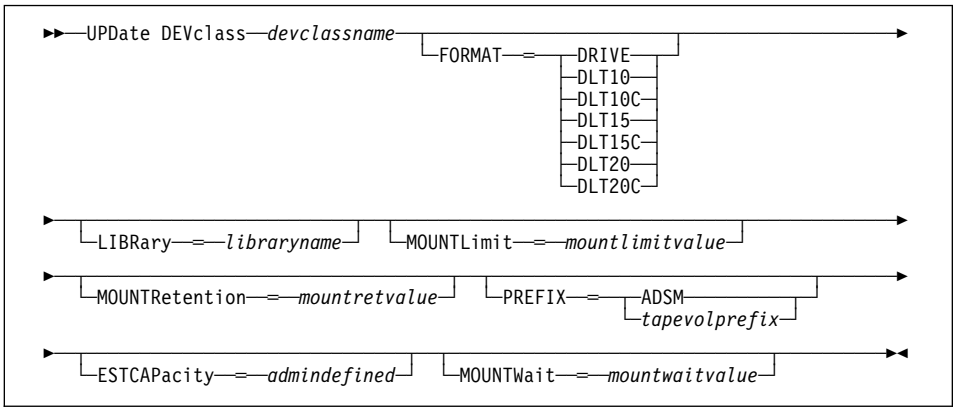
Note: This format uses the tape drive hardware compression feature, depending on the effectiveness of compression the actual capacity may be greater than the listed value.

MOUNTWait=*mountwaitvalue*

Specifies the maximum length of time, in minutes, to wait for a sequential access volume to be mounted. This parameter is optional and does not apply to sequential access media libraries. If the mount request is not satisfied within the specified amount of time, the mount request is canceled. You can specify an integer in the range of 0 to 9999, inclusive.

UPDATE DEVCLASS

Syntax for Updating a Device Class with a Device Type of DLT



Parameters

Parameters for Updating a Device Class with a Device Type of DLT

devclassname
Specifies the name of the device class to be updated. This parameter is required.

FORMAT=*tapeformat*
Specifies the recording format to be used when writing data to sequential access media. This parameter is optional.

Possible values for DLT devices are:

DRIVE
Specifies that ADSM selects the highest format that can be supported by the sequential access drive on which a volume is mounted.

Attention: Avoid specifying the DRIVE value when a mixture of devices are used within the same library. For example, if you have drives that support recording formats superior to other drives in a library, do not specify the FORMAT=DRIVE option.

DLT10
Specifies that ADSM writes data using the DLT10 recording format. This results in a tape capacity of approximately 10.0GB when using CompacTape III or CompacTape IV cartridges.

DLT10C
Specifies that ADSM writes data using the DLT10C recording format. This results in a tape capacity of approximately 10.0GB when using CompacTape III and CompacTape IV cartridges. This format, however, uses the tape drive's hardware compression feature, so the actual capacity may be greater than 10.0GB, depending on the effectiveness of the compression feature.

DLT15
Specifies that ADSM writes data using the DLT15 recording format. This results in a tape capacity of approximately 15.0GB when using CompacTape III or CompacTape IV cartridges.

DLT15C
Specifies that ADSM writes data using the DLT15C recording format. This results in a tape capacity of approximately 15.0GB when using CompacTape III and CompacTape IV cartridges. This format, however, uses the tape drive's hardware compression feature, so the actual capacity may be greater than 15.0GB, depending on the effectiveness of the compression feature.

DLT20
Specifies that ADSM writes data using the DLT20 recording format. This results in a tape capacity of approximately 20.0GB when using CompacTape IV cartridges.

Attention: The DLT20 format can only be used with CompacTape IV cartridges in a DLT4000 drive.

DLT20C
Specifies that ADSM writes data using the DLT20C recording format. This results in a tape capacity of approximately 20.0GB when using CompacTape IV cartridges. This format, however, uses the tape drive's hardware compression feature, so the actual capacity of the cartridge may be greater than 20.0GB, depending on the effectiveness of the compression feature.

Attention: The DLT20C format can only be used with CompacTape IV cartridges in a DLT4000 drive.

LIBRary=*libraryname*
Specifies the name of the defined library object that contains the DLT drives that can be used by this device class. For information about defining a library object see the DEFINE LIBRARY command.

MOUNTLimit=*mountlimitvalue*
Specifies the maximum number of sequential access volumes that can be simultaneously mounted for the device class. This parameter is optional. You can specify an integer in the range of 1 to 256, inclusive. This value should be equal to the number of drives available to this device class.

If this value is set to 1, then it may not be possible for media-to-media operations (like reclamation) to work.

MOUNTRetention=*mountretvalue*
Specifies the amount of time, in minutes, to retain an idle sequential access volume before dismounting it. This parameter is optional. You can specify an integer in the range of 0 to 9999, inclusive.

This parameter can improve response time for sequential access media mounts by leaving previously mounted volumes online.

UPDATE DEVCLASS

PREFIX=*tapevolprefix*

Specifies the prefix of the file name which the server writes into the sequential access media labels. For each sequential access volume assigned to this device class, ADSM uses this prefix to create the file name. This parameter is optional. The default value is ADSM. The maximum length of this prefix is 8 characters.

If you have already established a media label naming convention that supports your current management system, consider using a volume prefix that conforms to your naming conventions.

ESTCAPacity=*admindefined*

Specifies the estimated capacity for the sequential access volumes categorized by this device class. This parameter is optional. You must specify this value as an integer followed by a scale factor. Possible scale factors are:

Symbol	Symbol Name
K	Kilobyte
M	Megabyte
G	Gigabyte

For example, ESTCAPACITY=5M specifies that the estimated capacity for a volume in this device class is 5 megabytes. The smallest value allowed is 100KB (that is, ESTCAPACITY=100K).

For more information on the default estimated capacity for DLT, see Table 189.

Table 189. ADSM Default Estimated Capacity for DLT

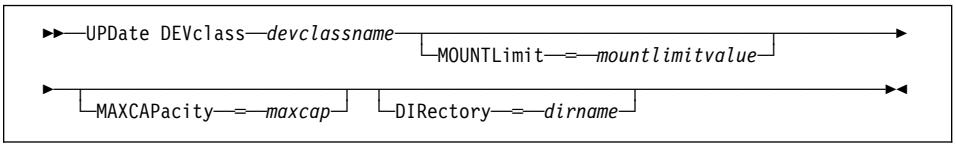
Tape Format	Estimated Capacity
DLT10	10.0GB
DLT10C	10.0GB (see note)
DLT20	20.0GB
DLT20C	20.0GB (see note)

Note: This format uses the tape drive hardware compression feature, depending on the effectiveness of compression the actual capacity may be greater than the listed value.

MOUNTWait=*mountwaitvalue*

Specifies the maximum length of time, in minutes, to wait for a sequential access volume to be mounted. This parameter is optional and does not apply to sequential access media libraries. If the mount request is not satisfied within the specified amount of time, the mount request is canceled. You can specify an integer in the range of 0 to 9999, inclusive.

Syntax for Updating a Device Class with a Device Type of FILE



Parameters

Parameters for Updating a Device Class with a Device Type of FILE

devclassname
Specifies the name of the device class to be updated. This parameter is required.

MOUNTLimit=*mountlimitvalue*
Specifies the maximum number of files that can be simultaneously open for input/output. This parameter is optional. You can specify an integer in the range of 1 to 256, inclusive.

MAXCAPacity=*maxcap*
Specifies the maximum size of any data storage files categorized by this device class. This parameter is optional. You must specify this value as an integer followed by a scale factor. Possible scale factors are:

Symbol	Symbol Name
K	Kilobyte
M	Megabyte
G	Gigabyte

For example, MAXCAPACITY=5M specifies that the maximum capacity for a volume in this device class is 5 megabytes. The smallest value allowed is 100KB (that is, MAXCAPACITY=100K).

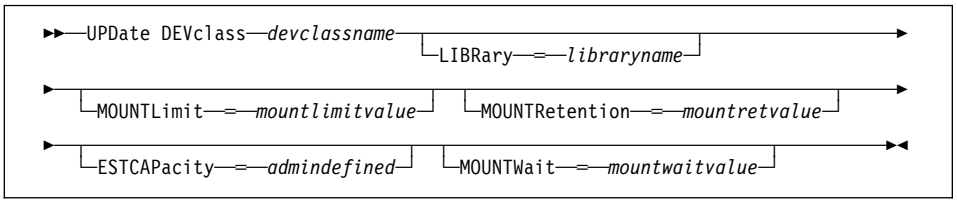
DIRectory=*dirname*
Specifies the directory location of the file or files used in this device class. This parameter is optional.

By specifying a directory name, you identify the location where the server places the files that represent storage volumes for this device class. While processing the command, the server expands the specified directory name into its fully qualified form, starting from the root directory.

Later, if the server needs to allocate a scratch volume, it creates a new file in this directory. For scratch volumes used to store client data, the file created by the server has a file name extension of .BFS. For scratch volumes used to store export data, a file name extension of .EXP is used. For example, suppose you define a device class with a DIRECTORY of **\ADSMSTOR** and the server needs a scratch volume in this device class to store export data. The file which the server creates might then be named **\ADSMSTOR\00566497.EXP**.

UPDATE DEVCLASS

Syntax for Updating a Device Class with a Device Type of GENERICTAPE



Parameters for Updating a Device Class with a Device Type of GENERICTAPE

devclassname
Specifies the name of the device class to be updated. This parameter is required.

LIBRary=*libraryname*
Specifies the name of the defined library object that contains the tape drives used by this device class. This parameter is optional. For information about defining a library object, see the DEFINE LIBRARY command.

MOUNTLimit=*mountlimitvalue*
Specifies the maximum number of volumes that can be simultaneously open for input/output in this device class. This parameter is optional. You can specify an integer in the range of 1 to 256, inclusive. It is recommended that this value is equal to the number of drives available to this device class.

If this value is set to 1, it may not be possible for media-to-media operations (such as reclamation) to work.

MOUNTRetention=*mountretvalue*
Specifies the amount of time, in minutes, to retain an idle sequential access volume before dismounting it. This parameter is optional. You can specify an integer in the range of 0 to 9999, inclusive.

This parameter can improve response time for sequential access media mounts by leaving previously mounted volumes online.

ESTCAPacity=*admindefined*
Specifies the estimated capacity for the sequential access volumes categorized by this device class. This parameter is optional. You must specify this value as an integer followed by a scale factor. Possible scale factors are:

Symbol	Symbol Name
K	Kilobyte
M	Megabyte
G	Gigabyte

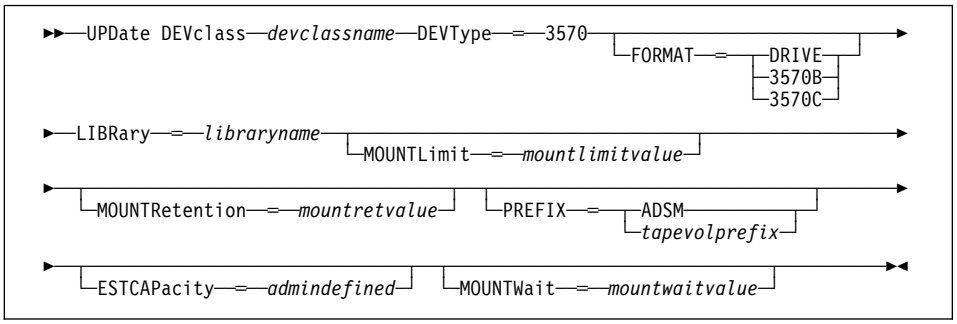
For example, ESTCAPACITY=5M specifies that the estimated capacity for a volume in this device class is 5 megabytes. The smallest value allowed is 100KB (that is, ESTCAPACITY=100K). Specify a capacity appropriate to the particular tape drive being used.

MOUNTWait=*mountwaitvalue*

Specifies the maximum length of time, in minutes, to wait for a sequential access volume to be mounted. This parameter is optional and does not apply to sequential access media libraries. If the mount request is not satisfied within the specified amount of time, the mount request is canceled. You can specify an integer in the range of 0 to 9999, inclusive.

UPDATE DEVCLASS

Syntax for Updating a Device Class with a Device Type of 3570



Parameters for Updating a Device Class with a Device Type of 3570

devclassname
Specifies the name of the device class to be defined. This parameter is required.

DEVType=3570
Specifies the 3570 device type is assigned to the device class. This parameter is required. 3570 indicates that IBM 3590 cartridge tape devices are assigned to this device class.

FORMAT=*tapeformat*
Specifies the recording format to be used when writing data to sequential access media. This parameter is optional.

The following are possible values for 3570 devices:

DRIVE Specifies that ADSM selects the highest format that can be supported by the sequential access drive on which a volume is mounted.

Attention: Avoid specifying the DRIVE value when a mixture of devices are used within the same library. For example, if you have drives that support recording formats superior to other drives in a library, do not specify the FORMAT=DRIVE option.

3570B Specifies that ADSM writes data using the basic (uncompressed) format. This results in a tape capacity of approximately 5GB.

3570C Specifies that ADSM writes data using the compressed format. This results in a tape capacity of approximately 5GB. This format, however, uses the tape drive's hardware compression feature, so the actual capacity may be greater, depending on the effectiveness of compression.

LIBRary=*libraryname*
Specifies the name of the defined library object that contains the tape drives that can be used by this device class. For information about defining a library object, see the DEFINE LIBRARY command.

MOUNTLimit=*mountlimitvalue*
Specifies the maximum number of sequential access volumes that can be simultaneously mounted for the device class. This parameter is optional. You can specify an integer in the range of 1 to 256, inclusive. This value should be equal to the number of drives available to this device class.

If this value is set to 1, then it may not be possible for media-to-media operations (like reclamation) to work.

MOUNTRetention=*mountretvalue*
Specifies the amount of time, in minutes, to retain an idle sequential access volume before dismounting it. This parameter is optional. You can specify an integer in the range of 0 to 9999, inclusive.

This parameter can improve response time for sequential access media mounts by leaving previously mounted volumes online.

PREFIX=*tapevolprefix*
Specifies the high level qualifier of the data set name that the server writes into the sequential access media labels. For each sequential access volume assigned to this device class, ADSM uses this prefix to create the data set name. This parameter is optional. The maximum length of this prefix is 8 characters.

If you have already established a media label naming convention that supports your current management system, consider using a volume prefix that conforms to your naming conventions.

ESTCAPacity=*admindefined*
Specifies the estimated capacity for the sequential access volumes categorized by this device class. This parameter is optional. You can specify this parameter if the default estimated capacity for the device class is inaccurate due to compression of data.

You must specify this value as an integer followed by a scale factor. The following are possible scale factors:

Symbol	Symbol Name
K	Kilobyte
M	Megabyte
G	Gigabyte

For example, ESTCAPACITY=5M specifies that the estimated capacity for a volume in this device class is 5 megabytes. The smallest value allowed is 100KB (that is, ESTCAPACITY=100K).

For more information on the default estimated capacity for 3570 cartridge tapes, see Table 190 on page 632.

UPDATE DEVCLASS

Table 190. ADSM Estimated Capacity for 3570 Cartridge Tape

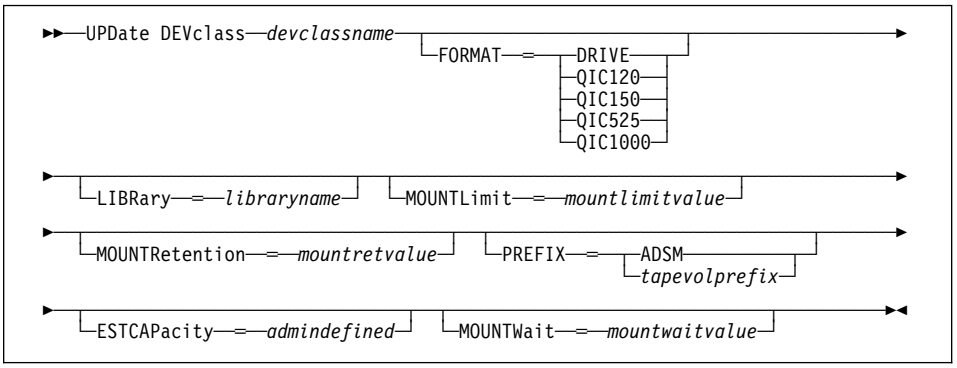
Tape Format	Estimated Capacity
3570B	5GB
3570C	5GB (see note)

Note: This format uses the tape drive hardware compression feature, depending on the effectiveness of compression the actual capacity may be greater than the listed value.

MOUNTWait=*mountwaitvalue*

Specifies the maximum length of time, in minutes, to wait for a sequential access volume to be mounted. This parameter is optional. If the mount request is not satisfied within the specified amount of time, the mount request is canceled. You can specify an integer in the range of 0 to 9999, inclusive.

Syntax for Updating a Device Class with a Device Type of QIC



Parameters for Updating a Device Class with a Device Type of QIC

devclassname
Specifies the name of the device class to be defined. This parameter is required.

FORMAT=*tapeformat*
Specifies the recording format to be used when writing data to sequential access media. This parameter is optional.

The following are possible values for QIC devices:

DRIVE Specifies that ADSM selects the highest format that can be supported by the sequential access drive on which a volume is mounted.

Attention: Avoid specifying the DRIVE value when a mixture of devices are used within the same library. For example, if you have drives that support recording formats superior to other drives in a library, do not specify the FORMAT=DRIVE option.

QIC120 See Table 191 on page 634.

QIC150 See Table 191 on page 634.

QIC525 See Table 191 on page 634.

QIC1000 See Table 191 on page 634.

UPDATE DEVCLASS

Table 191. QIC Tape Recording Format Selections

Tape/Format	QIC-120	QIC-150	QIC-525	QIC-1000
3M DC300XLP	–	–	–	–
3M DC600A	Read	–	–	–
3M DC600XTD	Read/Write	Read/Write	–	–
3M DC6150	Read/Write	Read/Write	–	–
3M DC6320	Read/Write	Read/Write	Read/Write	–
3M DC6525	Read/Write	Read/Write	Read/Write	–
3M DC9100	–	–	–	Read/Write
3M DC9120XL	–	–	–	Read/Write

Note: ADSM cannot use 3M DC300XLP and 3M DC600A tapes.

LIBRary=*libraryname*
Specifies the name of the defined library object that contains the QIC tape drives that can be used by this device class. For information about defining a library object, see the DEFINE LIBRARY command.

MOUNTLimit=*mountlimitvalue*
Specifies the maximum number of sequential access volumes that can be simultaneously mounted for the device class. This parameter is optional. You can specify an integer in the range of 1 to 256, inclusive. This value should be equal to the number of drives available to this device class.

If this value is set to 1, then it may not be possible for media-to-media operations (like reclamation) to work.

MOUNTRetention=*mountretvalue*
Specifies the amount of time, in minutes, to retain an idle sequential access volume before dismounting it. This parameter is optional. You can specify an integer in the range of 0 to 9999, inclusive.

This parameter can improve response time for sequential access media mounts by leaving previously mounted volumes online.

PREFIX=*tapevolprefix*
Specifies the prefix of the file name that the server writes into the sequential access media labels. For each sequential access volume assigned to this device class, ADSM uses this prefix to create the file name. This parameter is optional. The maximum length of this prefix is 8 characters.

If you have already established a media label naming convention that supports your current management system, consider using a volume prefix that conforms to your naming conventions.

ESTCAPacity=*admindefined*
Specifies the estimated capacity for the sequential access volumes categorized by this device class. This parameter is optional. You can specify this parameter if the default estimated capacity for the device class is inaccurate due to compression of data.

You must specify this value as an integer followed by a scale factor. The following are possible scale factors:

Symbol	Symbol Name
K	Kilobyte
M	Megabyte
G	Gigabyte

For example, ESTCAPACITY=5M specifies that the estimated capacity for a volume in this device class is 5 megabytes. The smallest value allowed is 100KB (that is, ESTCAPACITY=100K).

For more information on the default estimated capacity for QIC tapes, see Table 192.

Table 192. ADSM Default Estimated Capacity for QIC Tape

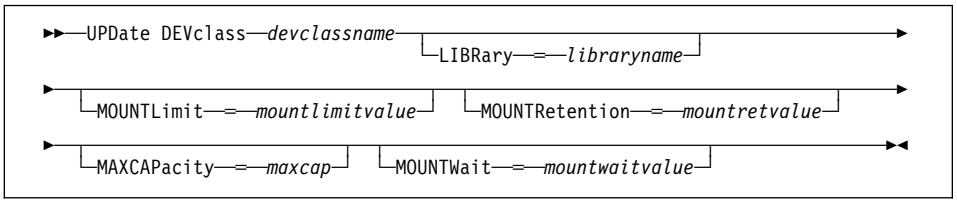
Tape Format	Estimated Capacity (range)
QIC120	26MB–172MB
QIC150	31MB–207MB
QIC525	65MB–427MB
QIC1000	169MB–1.1GB

MOUNTWait=*mountwaitvalue*

Specifies the maximum length of time, in minutes, to wait for a sequential access volume to be mounted. This parameter is optional. If the mount request is not satisfied within the specified amount of time, the mount request is canceled. You can specify an integer in the range of 0 to 9999, inclusive.

UPDATE DEVCLASS

Syntax for Updating a Device Class with a Device Type of REMOVABLEFILE



Parameters for Updating a Device Class with a Device Type of REMOVABLEFILE

devclassname
Specifies the name of the device class to be updated. This parameter is required.

LIBRary=*libraryname*
Specifies the name of the defined library object that contains the removable media drives used by this device class. This parameter is optional. For information about defining a library object, see the DEFINE LIBRARY command.

MOUNTLimit=*mountlimitvalue*
Specifies the maximum number of files that can be simultaneously open for input/output in this device class. This parameter is optional. You can specify an integer in the range of 1 to 256, inclusive.

Each removable medium contains only one file. It is recommended that this value is equal to the number of drives available to this device class.

If this value is set to 1, it may not be possible for media-to-media operations (such as reclamation) to work.

MOUNTRetention=*mountretvalue*
Specifies the amount of time, in minutes, to retain an idle sequential access volume before dismounting it. This parameter is optional. You can specify an integer in the range of 0 to 9999, inclusive.

This parameter can improve response time for sequential access media mounts by leaving previously mounted volumes online.

MAXCAPacity=*maxcap*
Specifies the maximum size of any volumes (which are actually files) defined to a storage pool categorized by this device class. This parameter is optional. You must specify this value as an integer followed by a scale factor. The following are possible scale factors:

Symbol	Symbol Name
K	Kilobyte
M	Megabyte
G	Gigabyte

For example, MAXCAPACITY=5M specifies that the maximum capacity for a volume in this device class is 5 megabytes. The default value is 4MB (that is,

MAXCAPACITY=4M). The smallest value allowed is 100KB (that is, MAXCAPACITY=100K).

Because the server opens only one file per physical removable medium, specify a capacity such that the one file makes full use of your media capacity.

MOUNTWait=*mountwaitvalue*
Specifies the maximum length of time, in minutes, to wait for a sequential access volume to be mounted. This parameter is optional and does not apply to sequential access media libraries. If the mount request is not satisfied within the specified amount of time, the mount request is canceled. You can specify an integer in the range of 0 to 9999, inclusive.

Examples

Task 1

Update a file device class named PLAINFILES to a maximum capacity of 25MB.

Command: `update devclass plainfiles maxcapacity=25m`

Output:

```
ANR2205I Device class PLAINFILES updated.
```

Task 2

Update an 8mm device class named 8MMTAPE to a 15 minute mount retention.

Command: `update devclass 8mmtape mountretention=15`

Output:

```
ANR2205I Device class 8MMTAPE updated.
```

Related Commands

Table 193 (Page 1 of 2). Commands Related to UPDATE DEVCLASS

Command	Description
BACKUP DEVCONFIG	Backs up ADSM device information to a file.
DEFINE DEVCLASS	Defines a device class that can be used for storage pools, importing, or exporting.
DEFINE LIBRARY	Defines an automated or manual library.
DELETE DEVCLASS	Deletes a device class name.

UPDATE DEVCLASS

Table 193 (Page 2 of 2). Commands Related to UPDATE DEVCLASS

Command	Description
QUERY DEVCLASS	Displays information about one or more device classes.

UPDATE DOMAIN (Update a Policy Domain)

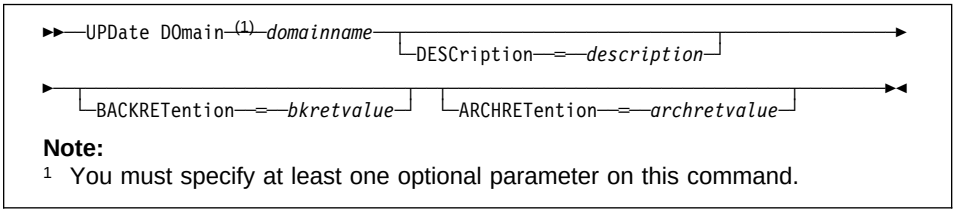
Use the UPDATE DOMAIN command to modify an existing policy domain.

You can use this command to update selected parameters for the specified policy domain. Any parameters that are not explicitly updated remain unchanged.

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the specified policy domain.

Syntax



Note:
1 You must specify at least one optional parameter on this command.

Parameters

domainname
Specifies the name of an existing policy domain to be updated. This parameter is required. The maximum length of this name is 30 characters.

DESCription=*description*
Describes the policy domain using a text string. This parameter is optional. The maximum length of the description is 255 characters. The description must be enclosed in quotation marks if it contains any blank characters. To remove a previously defined description, specify a null string ("") for this value.

BACKRETention=*bkretvalue*
Specifies the number of days (from the date of deactivation) to retain inactive backup versions of files when either of the following conditions are present:

- A file's management class is changed, but neither the new management class nor default management class contains a backup copy group.
- The management class to which a file is bound no longer exists, and the default management class does not contain a backup copy group.

Backup retention values can be in the range of 0 to 9999, inclusive.

ARCHRETention=*archretvalue*
Specifies the number of days (from the date of archive) to retain archive copies. The archive retention value is used by ADSM to manage copies of files when the management class to which a file is bound no longer exists, and the default management class does not contain an archive copy group. Backup retention values can be in the range of 0 to 9999, inclusive.

UPDATE DOMAIN

Examples

Task 1

Update the description of the EMPLOYEE_RECORDS policy domain to Employee Information and set the backup retention parameter to 50 days.

Command:
```
update domain employee_records description="Employee Information"
backretention=50
```

Output:

```
ANR1502I Policy domain EMPLOYEE_RECORDS updated.
```

Task 2

Update the description of the EMPLOYEE_RECORDS policy domain to Development Programming Group. Set the backup retention parameter to 45 days and the archive retention parameter to 75 days.

Command:
```
update domain employee_records description="Development
Programming Group" backretention=45 archretention=75
```

Output:

```
ANR1502I Policy domain EMPLOYEE_RECORDS updated.
```

Related Commands

Table 194. Commands Related to UPDATE DOMAIN

Command	Description
COPY DOMAIN	Creates a copy of an existing policy domain.
DEFINE DOMAIN	Defines a policy domain that can be assigned to one or more clients.
DEFINE POLICYSET	Defines a policy set within the specified policy domain.
DELETE DOMAIN	Deletes a policy domain along with any policy objects in the policy domain.
QUERY DOMAIN	Displays information about one or more policy domains.

UPDATE DRIVE (Update a Drive)

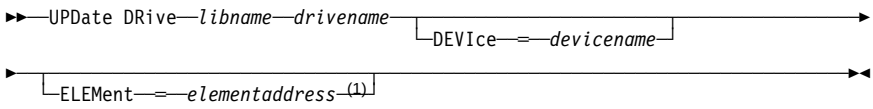
Use the UPDATE DRIVE command to update a drive that ADSM can use to access data on storage volumes. You typically use this command to redefine the device name during system reconfiguration.

The server options file that is created during installation includes a DEVCONFIG option that specifies a default device configuration file named devcnfg.out. You can specify other device configuration files with additional DEVCONFIG options. The files you specify with this option are automatically updated with the results of this command. The files are also automatically updated whenever a device class, library, or drive is defined, updated, or deleted.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Note:
1 The ELEMENT parameter is invalid for drives in non-SCSI libraries.

Parameters

libname
Specifies the name of the library to which the drive is assigned. This parameter is required for all drives, including stand-alone drives. It is also required for drives that are device type REMOVABLEFILE.

drivename
Specifies the name that is assigned to the drive. This parameter is required.

DEVIce=*devicename*
Specifies the name, to be updated, of the device that corresponds to the drive. For example, you might specify mt3. This parameter is optional. For additional information about device names, refer to the DEVICE parameter description for the DEFINE LIBRARY command and the *ADSM Administrator's Guide*.

ELEMent=*elementaddress*
Specifies the new value to be used for the drive's element address within a SCSI library. This parameter is optional and is only valid for a drive located in a SCSI library. For a description of which element address values to use for various library configurations, see *ADSM Administrator's Guide*.

UPDATE DRIVE

Examples

Task

Update the drive named DRIVE3 located in the library named AUTO by changing the element address to 119.

Command: `update drive auto drive3 element=119`

Output:

```
ANR8467I Drive DRIVE3 in library AUTO updated.
```

Related Commands

Table 195 provides references to related commands.

Table 195. Commands Related to UPDATE DRIVE

Command	Description	Reference
DEFINE DRIVE	Assigns a drive to a library.	Page 139
DELETE DRIVE	Deletes a drive from a library.	Page 212
QUERY DRIVE	Displays information about one or more drives.	Page 384
QUERY LIBRARY	Displays information about one or more libraries.	Page 419

UPDATE LIBRARY (Update a Library)

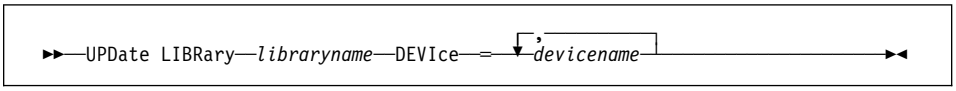
Use the UPDATE LIBRARY command to modify a library device name.

The server options file that is created during installation includes a DEVCONFIG option that specifies a default device configuration file named devcnfg.out. You can specify other device configuration files with additional DEVCONFIG options. The files you specify with this option are automatically updated with the results of this command. The files specified are also automatically updated whenever a device class, library, or drive is defined, updated, or deleted.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Parameters

libraryname
Specifies the name of the library to be updated. This parameter is required.

DEVIce=*devicename*
Specifies the new names of the devices that access the library's robotic mechanism. This parameter is required for SCSI, but is not valid for MANUAL library types If the library type is SCSI, only one device name is allowed. For additional information about device names, refer to the DEVICE parameter description for the DEFINE LIBRARY command and the *ADSM Administrator's Guide*.

Examples

Task

Update the library named AUTO with a new device name of mt3.0.0.0

Command: `update library auto device=mt3.0.0.0`

Output:

```
ANR8465I Library AUTO updated.
```

UPDATE LIBRARY

Related Commands

Table 196 provides references to related commands.

Table 196. Commands Related to UPDATE LIBRARY

Command	Description	Reference
AUDIT LIBRARY	Ensures that an automated library is in a consistent state.	Page 43
DEFINE DRIVE	Assigns a drive to a library.	Page 139
DEFINE LIBRARY	Defines an automated or manual library.	Page 142
DELETE DRIVE	Deletes a drive from a library.	Page 212
DELETE LIBRARY	Deletes a library.	Page 222
QUERY DRIVE	Displays information about one or more drives.	Page 384
QUERY LIBRARY	Displays information about one or more libraries.	Page 419
UPDATE DRIVE	Changes the attributes of a drive.	Page 641

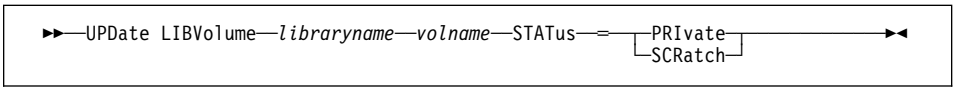
UPDATE LIBVOLUME (Change the Status of a Storage Volume)

Use the UPDATE LIBVOLUME command to change the status of a sequential access storage volume in an existing library.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Parameters

libraryname
Specifies the name of the library where the storage volume is located. This parameter is required.

volname
Specifies the volume name of the storage volume. This parameter is required.

STATus=*voltype*
Specifies a change to the state of a storage volume. This keyword is required. Possible values are:

PRIvate
Specifies that the storage volume is being updated to a private volume.

SCRatch
Specifies that the storage volume is being updated to a scratch volume.

Examples

Task

Update the volume named WPDV00 located in the library named AUTO to reflect a status of PRIVATE.

Command: `update libvolume auto wpdv00 status=private`

Output:

```
ANR8445I Volume WPDV00 in library AUTO updated.
```

UPDATE LIBVOLUME

Related Commands

Table 197. Commands Related to UPDATE LIBVOLUME

Command	Description
AUDIT LIBRARY	Ensures that an automated library is in a consistent state.
CHECKIN LIBVOLUME	Checks a storage volume into an automated library.
CHECKOUT LIBVOLUME	Checks a storage volume out of an automated library.
DEFINE LIBRARY	Defines an automated or manual library.
QUERY LIBRARY	Displays information about one or more libraries.
QUERY LIBVOLUME	Displays information about a library volume.

UPDATE MACHINE (Update Machine Information)

This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

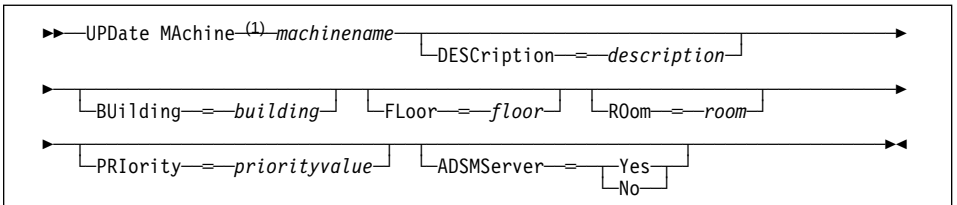
Use the UPDATE MACHINE command to modify a defined machine.

This command is provided for your use in documenting, in the ADSM server database, the machine information required to recover an ADSM client machine should a disaster occur. The ADSM server database will be used to store this information for you, and QUERY commands are provided to retrieve the information should you need to reference it in the case of a disaster. The information provided by this command is NOT used by the server in any way to coordinate disaster recovery or to manage the server under normal operation. The information provided in this command is solely determined by you in planning for client machine disaster recovery.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Note:
1 You must specify at least one optional parameter on this command.

Parameters

machinename
Specifies the name of the machine to be updated. This parameter is required.

DESCription=*description*
Specifies the description of the machine. This parameter is optional. The maximum length of the description is 255 characters. The description must be enclosed in quotation marks if it contains any blank characters. To remove a previously defined description, specify a null string ("") for the value.

BUilding=*building*
Specifies the building name or number that this machine is in. You can enter a building name or a building number. The maximum length of the building name or number is 16 characters. The building must be enclosed in quotation marks if it contains any blank characters. To remove a previously defined building, specify a null string ("") for the value.

UPDATE MACHINE

FLoor=*floor*
Specifies the floor name or number that this machine is in. You can enter a floor name or a floor number. The maximum length of the floor name or number is 16 characters. The floor must be enclosed in quotation marks if it contains any blank characters. To remove a previously defined floor, specify a null string ("") for the value.

ROom=*room*
Specifies the room name or number that this machine is in. You can enter a room name or a room number. The maximum length of the room name or number is 16 characters. The room must be enclosed in quotation marks if it contains any blank characters. To remove a previously defined room, specify a null string ("") for the value.

PRIority=*priorityvalue*
Specifies the restore priority value for the machine. You can specify an integer in the range of 1 to 99, inclusive, with 1 being the highest priority and 99 being the lowest. This value is used to provide a prioritized list for client machine recovery.

ADSMServer=*adsmservervalue*
Specifies whether the machine being defined contains the ADSM server. Possible values are:

No
Specifies that this machine does not contain an ADSM server.

Yes
Specifies that this machine contains an ADSM server. Only one machine can be defined as containing the ADSM server.

Examples

Task

Update the DISTRICT5 machine information to reflect that it contains the ADSM server.

Command:
```
update machine district5 adsmserver=yes
```

Output:

```
ANR6612I Machine DISTRICT5 updated.
```

Related Commands

Table 198 (Page 1 of 2). Commands Related to UPDATE MACHINE

Command	Description
DEFINE MACHINE	Defines a machine for DRM.
DELETE MACHINE	Deletes an existing machine.
INSERT MACHINE	Inserts machine characteristics or recovery instructions into the ADSM database.

Table 198 (Page 2 of 2). Commands Related to UPDATE MACHINE

Command	Description
QUERY MACHINE	Displays information about one or more machines.

UPDATE MGMTCLASS (Update a Management Class)

Use the UPDATE MGMTCLASS command to modify selected parameters for the specified management class. If you do not explicitly update a parameter, it remains unchanged.

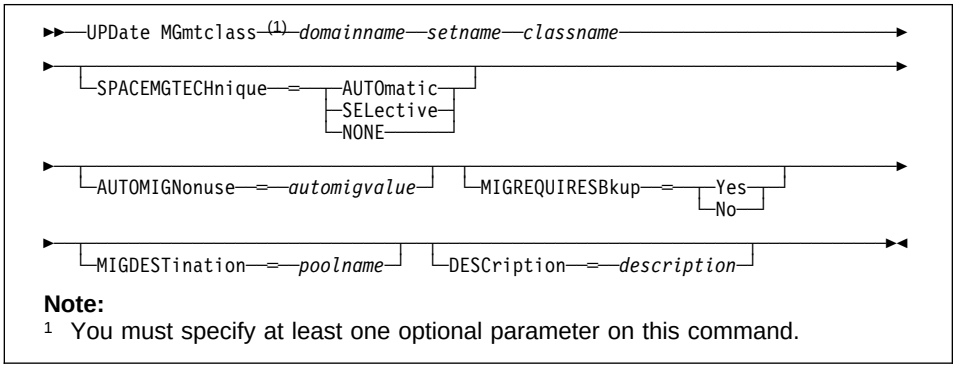
The following parameters affect only HSM clients that use this management class, and have no effect on backup-archive clients:

SPACEMGTECHNIQUE
AUTOMIGNONUSE
MIGREQUIRESBKUP
MIGDESTINATION

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the policy domain to which the policy set belongs.

Syntax



Note:
1 You must specify at least one optional parameter on this command.

Parameters

domainname
Specifies the name of the policy domain to which the management class belongs. This parameter is required. The maximum length of this name is 30 characters.

setname
Specifies the name of the policy set to which the management class belongs. This parameter is required. The maximum length of this name is 30 characters. You cannot update a management class that belongs to the ACTIVE policy set.

classname
Specifies the name of the management class that you want to update. This parameter is required.

SPACEMGTECHnique=*smtvalue*
Specifies the space management technique to use for the management class. This parameter is optional. Possible values are:

AUTOmatic
Specifies that the file is eligible for automatic migration or selective migration.

SELective
Specifies that the file is eligible for selective migration only.

NONE
Specifies that the file is not eligible for migration.

The default in the management class named STANDARD is NONE.

This parameter is effective only for HSM clients, not for backup-archive clients.

AUTOMIGNonuse=*automigvalue*
Specifies the number of days that must elapse since the file was last used before it is eligible for automatic migration. This parameter is optional.

If the SPACEMGTECHNIQUE parameter is not AUTOMATIC, ADSM ignores this attribute. You can specify a value from 0–9999. The default value is 0.

This parameter is effective only for HSM clients, not for backup-archive clients.

MIGREQUIRESBkup=*migreqvalue*
Specifies whether a backup version of a file must exist before a file can be migrated. This parameter is optional. Possible values are:

Yes
A backup version must exist.

No
A backup version is optional.

This parameter is effective only for HSM clients, not for backup-archive clients.

MIGDESTination=*poolname*
Specifies the name of a primary storage pool that is the destination for migrated files. This parameter is optional. The default destination is SPACEMGPOOL.

A file must be associated with a management class that specifies an appropriate storage pool for migrated files. The type of storage devices in a storage pool and options specified for the storage pool affects the speed with which a migrated file can be recalled to a local file system.

The command fails if a copy storage pool is specified as the destination.

This parameter is effective only for HSM clients, not for backup-archive clients.

UPDATE MGMTCLASS

DESCription=*description*
Specifies a text string that describes the management class. This parameter is optional. The maximum length of the description is 255 characters. The description must be enclosed in quotation marks if it contains any blank characters. To remove a previously defined description, specify a null string ("") for this value.

Examples

Task

Update the management class called ACTIVEFILES, for policy set VACATION in the EMPLOYEE_RECORDS policy domain, with a description of Technical Design Support Mgmt Class.

Command:
```
update mgmtclass employee_records vacation activefiles
description="Technical Design Support Mgmt Class"
```

Output:

```
ANR1522I Management class ACTIVEFILES updated in policy domain
EMPLOYEE_RECORDS, set VACATION.
```

Related Commands

Table 199 (Page 1 of 2). Commands Related to UPDATE MGMTCLASS

Command	Description
ASSIGN DEFMGMTCLASS	Assigns an existing management class as the default for a specified policy set.
COPY MGMTCLASS	Creates a copy of an existing management class.
DEFINE COPYGROUP	Defines a copy group for backup or archive processing within a specified management class.
DEFINE POLICYSET	Defines a policy set within the specified policy domain.
DEFINE MGMTCLASS	Defines a management class within the policy domain and policy set specified.
DELETE MGMTCLASS	Deletes a management class and its copy groups from a policy domain and policy set.
QUERY COPYGROUP	Displays the attributes of an existing copy group.
QUERY MGMTCLASS	Displays information about one or more management classes.
QUERY POLICYSET	Displays information about one or more policy sets.

Table 199 (Page 2 of 2). Commands Related to UPDATE MGMTCLASS

Command	Description
UPDATE COPYGROUP	Changes one or more attributes of a copy group.

UPDATE NODE (Update a Client Node)

Use the UPDATE NODE command to modify the attributes of a registered client node.

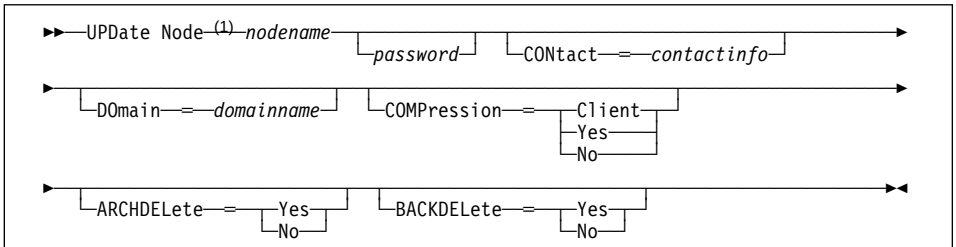
You can use this command to modify selected parameters for the specified client node. If you do not explicitly update a parameter, it remains unchanged.

You must use the RENAME NODE command to change the name of a registered client node.

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the policy domain to which the client node belongs.

Syntax



Note:
1 You must specify at least one optional parameter on this command.

Parameters

nodename
Specifies the name of the client node to be updated. This parameter is required.

password
Specifies the new password for the client node. This parameter is optional. The maximum length of the name is 64 characters. Passwords remain current for a period determined by the password expiration period.

CONtact=*contactinfo*
Specifies a text string of information identifying the client node. This parameter is optional. The maximum length of the text string is 255 characters. The contact information must be enclosed in quotation marks if it contains any blanks. To remove previously defined contact information, specify a null string ("") for this value.

DOmain=*domainname*
Specifies the name of the policy domain to which the client node is registered. This parameter is optional.

COMPression=*compressionvalue*
Specifies whether the client node compresses its files before sending them to the server for backup and archive. This parameter is optional. Possible values are:

Client
Specifies that the client determines whether files will be compressed.

Yes
Specifies that the client node compresses its files before sending them to the server for backup and archive.

No
Specifies that the client node does not compress its files before sending them to the server for backup and archive.

ARCHDELete=*archdeletevalue*
Specifies whether the client node can delete its own archived files from the server. This parameter is optional. Possible values are:

Yes
Specifies that the client node can delete its own archive files from the server.

No
Specifies that the client node cannot delete its own archive files from the server.

BACKDELete=*backdeletevalue*
Specifies whether the client node can delete its own backup files from the server. This parameter is optional. Possible values are:

Yes
Specifies that the client node can delete its own backup files from the server.

No
Specifies that the client node cannot delete its own backup files from the server.

Examples

Task

Update node LARRY so that the data on node LARRY will be compressed when it is backed up or archived by ADSM and so that the client cannot delete archived files.

Command: `update node larry compression=yes archdelete=no`

Output:

```
ANR2063I Node LARRY updated.
```

UPDATE NODE

Related Commands

Table 200. Commands Related to UPDATE NODE

Command	Description
QUERY NODE	Displays partial or complete information about one or more clients.
REGISTER NODE	Defines a client to the server and sets options for that user.
REMOVE NODE	Removes a client from the list of registered nodes for a specific policy domain.
RENAME NODE	Changes the name for an existing user that belongs to a specific policy domain.

UPDATE POLICYSET (Update a Policy Set)

Use the UPDATE POLICYSET command to modify the description of an existing policy set.

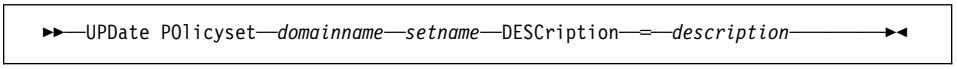
You can use this command to modify the description for the specified policy set. If you do not explicitly update the DESCRIPTION parameter, it remains unchanged.

You cannot modify the description of the ACTIVE policy set.

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the policy domain to which the policy set belongs.

Syntax



Parameters

domainname
Specifies the name of the policy domain to which the policy set belongs. This parameter is required.

setname
Specifies the name of the policy set to be updated. This parameter is required. You cannot modify the attributes of the ACTIVE policy set.

DESCription=*description*
Specifies a text string that describes the policy set. This parameter is required. The maximum length of the description is 255 characters. The description must be enclosed in quotation marks if it contains any blank characters. To remove a previously defined description, specify a null string ("") for this value.

Examples

Task

Update a policy set called VACATION for the EMPLOYEE_RECORDS policy domain with a description of Schedule Planning Information.

Command:
```
update policyset employee_records vacation description="Schedule
Planning Information"
```

Output:

```
ANR1512I Policy set VACATION updated in policy domain
EMPLOYEE_RECORDS.
```

UPDATE POLICYSET

Related Commands

Table 201. Commands Related to UPDATE POLICYSET

Command	Description
ACTIVATE POLICYSET	Validates and activates a policy set within a policy domain.
COPY MGMTCLASS	Creates a copy of an existing management class.
DEFINE DOMAIN	Defines a policy domain that can be assigned to one or more clients.
DEFINE MGMTCLASS	Defines a management class within the policy domain and policy set specified.
DEFINE POLICYSET	Defines a policy set within the specified policy domain.
DELETE POLICYSET	Deletes a policy set, including its management classes and copy groups, from a policy domain.
QUERY POLICYSET	Displays information about one or more policy sets.
VALIDATE POLICYSET	Verifies and reports on conditions the administrator must consider before activating the policy set.

UPDATE RECOVERYMEDIA (Update Recovery Media)

This command only applies to environments licensed to use the ADSM Disaster Recovery Manager (DRM) feature.

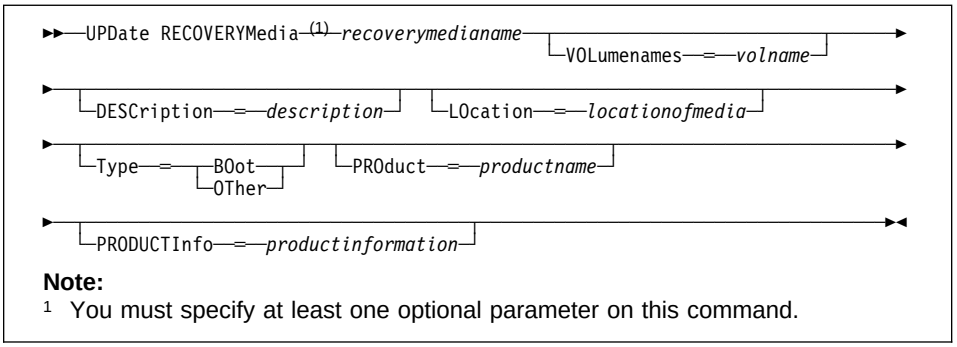
Use the UPDATE RECOVERYMEDIA command to modify a defined recovery media.

This command is provided for your use in documenting, in the ADSM server database, the media required to recover an ADSM client machine should a disaster occur. The ADSM server database will be used to store this information for you, and QUERY commands are provided to retrieve the information should you need to reference it in the case of a disaster. The information provided by this command is NOT used by the server in any way to coordinate disaster recovery or to manage the server under normal operation. The information provided in this command is solely determined by you in planning for client machine disaster recovery.

Privilege Class

To issue this command, you must have system privilege.

Syntax



Note:
1 You must specify at least one optional parameter on this command.

Parameters

recoverymedianame
Specifies the name of the recovery media to be updated. This parameter is required.

DESCription=*description*
Specifies the description of the recovery media. The maximum length of the description is 255 characters. The description must be enclosed in quotation marks if it contains any blank characters. To remove a previously defined description, specify a null string ("") for the value.

VOLumenames=*volname*
Specifies the list of volume names that contain the recoverable data (for example, OS/2 4.0 operating system image copies). This parameter is optional. It is recommended that the boot media volume names specified in the list are in the same order the boot media volumes are inserted into the machine at recovery

time. The volume names list must be enclosed in quotation marks if it contains any blank characters. The maximum length of the volume names list is 255 characters. If a boot type recovery media is specified, the volume names that contain the boot media must be specified. To remove a previously defined volume names list, specify a null string ("") for the value.

LOcation=*locationofmedia*
Specifies the location of the recovery media. For example, "Building=021 Floor=02 Room=2846 Cabinet=1A0 Drawer=#2 Key=behind the cabinet". The maximum length of the location is 255 characters. The location description must be enclosed in quotation marks if it contains any blank characters. To remove a previously defined location, specify a null string ("") for the value.

Type=*typemode*
Specifies the type of recovery media. Possible values are:

BOot
Specifies that this is boot media. VOLumenames must be specified when BOot is specified.

OTher
Specifies that this is not boot media. Example usage for this might be to track a CD ROM that contains operating system manuals.

PROduct=*productname*
Specifies the product name that wrote to this media. This parameter is optional. The maximum length of the product is 16 characters. The product name must be enclosed in quotation marks if it contains any blank characters. To remove a previously defined product name, specify a null string ("") for the value.

PRODUCTInfo=*productinformation*
Specifies any information about the product that wrote to the media which may be needed for restoring the machine. The maximum length of the product information is 255 characters. The product information must be enclosed in quotation marks if it contains any blank characters. To remove a previously defined product information, specify a null string ("") for the value.

Examples

Task

Update the DIST5RM recovery media's location to the corporate headquarters data vault.

Command:
```
update recoverymedia dist5rm location='Corporate Headquarters
Data Vault'
```

Output:

```
ANR6633I Recovery media DIST5RM updated.
```

Related Commands

Table 202. Commands Related to UPDATE RECOVERYMEDIA

Command	Description
DEFINE RECOVERYMEDIA	Defines the media required to recover a machine.
DELETE RECOVERYMEDIA	Deletes existing recovery media.
QUERY RECOVERYMEDIA	Displays media available for machine recovery.

UPDATE SCHEDULE (Update a Client or an Administrative Command Schedule)

Use the UPDATE SCHEDULE command to modify an existing schedule. The UPDATE SCHEDULE command takes two forms, depending on whether the schedule applies to client operations or administrative commands. The syntax and parameters for each form are defined separately.

Restrictions:

1. Not all clients can run all scheduled operations, even though ADSM allows you to define the schedule on the server and associate it with the client. For example, a Windows 3.1 client cannot run a schedule when the action is to restore or retrieve files, issue a command, or run an executable script (called a macro by ADSM). An executable script is also known as a command file, a batch file, or a script on different client operating systems. A Macintosh client cannot run a schedule when the action is to restore or retrieve files, or run an executable script.
2. You cannot schedule MACRO or QUERY ACTLOG commands.

Updating Client Schedules

Use the UPDATE SCHEDULE command to modify selected parameters for the specified schedule. If you do not explicitly update a parameter, it remains unchanged.

This command does not change the client associations that have been made to this schedule. Any clients that are associated with the original schedule execute the modified schedule.

A schedule determines:

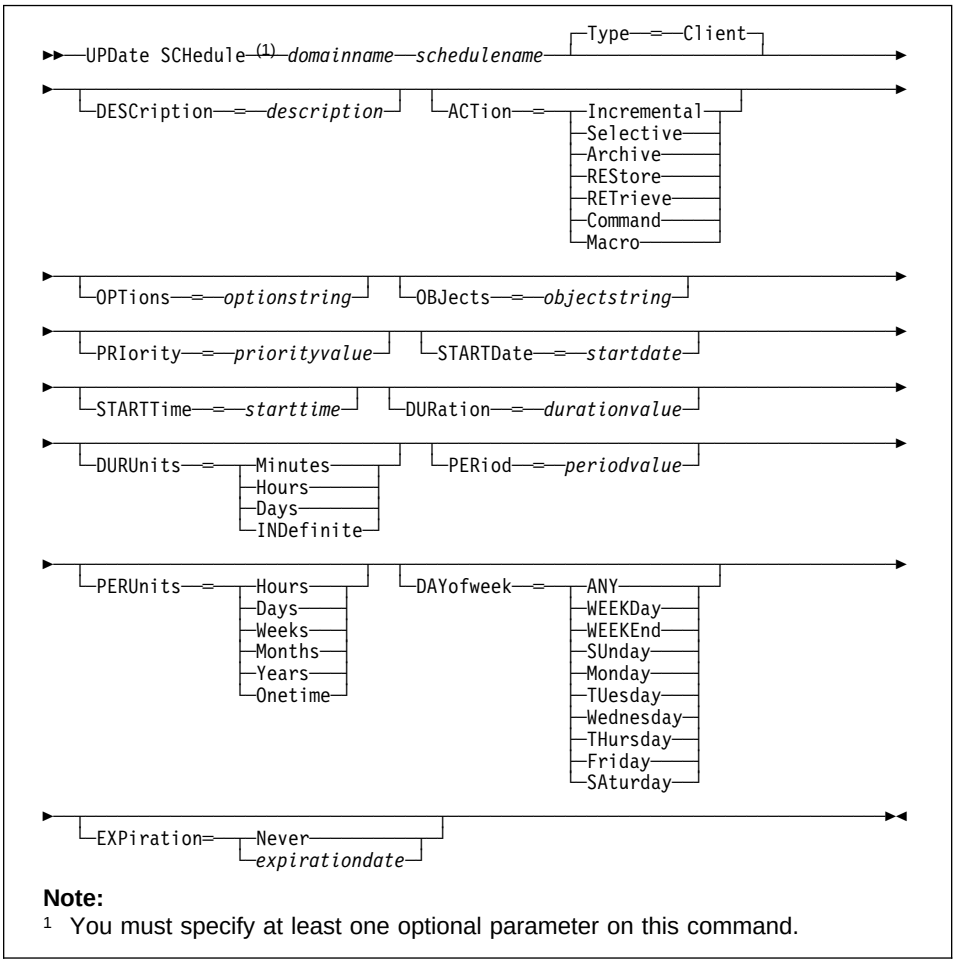
- The automatic function to be performed, for example, an incremental backup
- A startup window that indicates a time range during which the operation can begin
- The time period between startup windows

For each schedule, a startup window is specified. The startup window is the time period within which the scheduled operation must begin execution. The operation does not necessarily complete execution within this window. If the operation needs to be retried for any reason, the retry attempt must begin before the startup window elapses, or the operation is not retried.

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the policy domain to which the schedule belongs.

Syntax for Updating Client Schedules



Note:
1 You must specify at least one optional parameter on this command.

Parameters for Updating Client Schedules

domainname
Specifies the name of the policy domain to which this schedule belongs. This parameter is required.

schedulename
Specifies the name of the schedule to be updated. This parameter is required.

Type=Client
Specifies that this schedule updates a client schedule. This parameter is optional. The default value is CLIENT. Administrative command schedules are updated by specifying TYPE=ADMINISTRATIVE.

UPDATE SCHEDULE

DESCription=*description*
Specifies a description of the schedule. This parameter is optional. The maximum length of the description is 255 characters. The description must be enclosed in quotation marks if it contains any blank characters. To remove a previously defined description, specify a null string ("") for this value.

ACTion=*actionvalue*
Specifies the action that occurs when this schedule is executed. This parameter is optional. Possible values are:

Incremental
Specifies that you want this schedule to initiate the backup of any files that have changed since the last backup and for which the specified time between backups has elapsed.

Selective
Specifies that you want this schedule to back up only the files specified with the OBJECTS parameter.

Archive
Specifies that you want to archive the files specified with the OBJECTS parameter.

REStore
Specifies that you want this schedule to restore the files specified with the OBJECTS parameter.

RETrieve
Specifies that you want this schedule to retrieve the files specified with the OBJECTS parameter.

Command
Specifies that the action is to be a client operating system command string specified with the OBJECTS parameter.

Macro
Specifies that a macro whose file name is specified with the OBJECTS parameter is to be executed.

OPTions=*optionstring*
Specifies options that are supplied to the DSMC command at the time the schedule is executed. Only those options that are valid on the DSMC command line may be specified for this parameter. Refer to the appropriate client manual for information on which options are valid from the command line. This parameter is optional.

You can specify most options from the client's option file. The option string must be enclosed in quotation marks if it contains any blank characters. When applicable, these options override the options specified by a client after it has successfully contacted the server.

Do not include the following options because they have no effect on the client's execution of the scheduled command:

MAXCMDRETRIES
QUERYSCHEDPERIOD
RETRYPERIOD
SCHEDLOGNAME
SCHEDMODE
TCPCLIENTADDRESS
TCPCLIENTPORT

OBJects=*objectstring*
Specifies the objects for which the specified action is performed. This parameter is optional. The allowed objects depend on the action you specify with the ACTION parameter and the operating system used by the clients associated with the schedule.

You can specify more than one object by separating the objects with commas, with no intervening spaces. For example, you can enter a string of file names or file spaces. If the value for this parameter contains any blank characters, you must enclose it in quotation marks.

When you specify ACTION=INCREMENTAL and do not specify any objects with this parameter, the DSMC command is invoked without specified objects and attempts to process objects as defined in the client's option file.

PRiority=*priorityvalue*
Specifies the priority value for a schedule. This parameter is optional. You can specify an integer from 1–10, inclusive, with 1 being the highest priority and 10 being the lowest.

If two or more schedules for a given client have the same window start time, this value determines the order of execution. The schedule with the highest priority starts first. For example, a schedule with PRIORITY=3 starts before a schedule with PRIORITY=5.

STARTDate=*startdate*
Specifies the date for the beginning of the window in which the schedule is first executed. This parameter is optional. This parameter is used in conjunction with the STARTTIME parameter to specify when the initial startup window begins.

Possible values are:

MM/DD/YYYY
Specifies the date for the beginning of the startup window in MM/DD/YYYY format (for example, 01/31/1995).

TODAY
Specifies that the beginning of the startup window is on the current date.

TODAY+*numdays* **or** +*numdays*
Specifies that the beginning of the startup window is a specific number of days after the current date. The maximum value for the number of days is 9999.

For example, to specify that the beginning of the initial startup window is 3 days from now, you can specify STARTDATE=TODAY+3 or STARTDATE=+3.

STARTTime=*starttime*

Specifies the time for the beginning of the window in which the schedule is first executed, in HH:MM format. This parameter is optional. This parameter is used in conjunction with the STARTDATE parameter to specify when the startup window begins.

Possible values are:

HH:MM:SS

Specifies the time for the beginning of the startup window in HH:MM:SS format (for example, 12:33:28).

NOW

Specifies that the beginning of the startup window is at the current time on the specified start date.

NOW+*numhours:numminutes* **or** +*numhours:numminutes*

Specifies the time for the beginning of the startup window is the current time plus a specific number of hours (and, optionally, minutes) on the specified start date.

For example, if you issue the UPDATE SCHEDULE command at 5:00 with STARTTIME=NOW+02:00 or STARTTIME=+02:00, the beginning of the initial startup window is at 7:00.

NOW–*numhours:numminutes* **or** –*numhours:numminutes*

Specifies the time for the beginning of the startup window is at the current time minus a specific number of hours (and, optionally, minutes) on the specified start date.

For example, if you issue the UPDATE SCHEDULE command at 5:00 with STARTTIME=NOW–02:00 or STARTTIME=–02:00, the beginning of the initial startup window is at 3:00.

DURation=*durationvalue*

Specifies the number of units that define the length of the startup window. This parameter is optional. You can specify an integer from 1–999, inclusive.

This parameter is used in conjunction with the DURUNITS parameter to specify the length of the startup window. For example, if DURATION=20 and DURUNITS=MINUTES, the schedule must be started within 20 minutes of the start date and start time. The duration of the window must be shorter than the period between windows.

This value is ignored if you specify DURUNITS=INDEFINITE.

DURUnits=*durunitsvalue*

Specifies the time units used to determine the duration of the window in which this schedule can start. This parameter is optional.

This parameter is used in conjunction with the DURATION parameter to specify how long the startup window remains open to execute the schedule. For example, if DURATION=20 and DURUNITS=MINUTES, the schedule must be started within 20 minutes of the start date and start time. The duration of the window must be shorter than the period between windows. Possible values are:

Minutes
Specifies that the duration of the window is defined in minutes.

Hours
Specifies that the duration of the window is defined in hours.

Days
Specifies that the duration of the window is defined in days.

INDefinite
Specifies that the startup window has an indefinite duration. The schedule can run any time after the scheduled start time, until the schedule expires. You cannot specify DURUNITS=INDEFINITE unless PERUNITS=ONETIME is also specified for the schedule.

PERiod=*periodvalue*
Specifies the length of time between startup windows for this schedule. This parameter is optional. You can specify an integer from 1–999, inclusive.

This parameter is used in conjunction with the PERUNITS parameter to specify the period between startup windows. For example, if you specify PERIOD=5 and PERUNITS=DAYS (assuming that DAYOFWEEK=ANY), the operation is scheduled every 5 days after the initial start date and start time. The period between startup windows must exceed the duration of each window.

This value is ignored if you specify PERUNITS=ONETIME.

PERUnits=*perunitsvalue*
Specifies the time units used to determine the period between startup windows for this schedule. This parameter is optional.

This parameter is used in conjunction with the PERIOD parameter to specify the period between startup windows. For example, if PERIOD=5 and PERUNITS=DAYS (assuming that DAYOFWEEK=ANY), the period between startup windows is scheduled every 5 days after the initial start date and start time. The period between startup windows must exceed the duration of each window. Possible values are:

Hours
Specifies that time between startup windows for the schedule is specified in hours.

Days
Specifies that time between startup windows for the schedule is specified in days.

Weeks
Specifies that time between startup windows for the schedule is specified in weeks.

Months
Specifies that time between startup windows for the schedule is specified in months.

Years
Specifies that time between startup windows for the schedule is specified in years.

Onetime
Specifies that the schedule executes only once. This value overrides the value specified by the PERIOD parameter.

DAYofweek=*dayofweekvalue*
Specifies the day of the week on which the startup window begins. If the beginning of the calculated startup window falls on a day that does not correspond with your value for the DAYOFWEEK parameter, the startup window will be shifted forward in 24-hour increments until the DAYOFWEEK parameter is satisfied.

If you select a value for DAYOFWEEK other than ANY, and depending on the values for PERIOD and PERUNITS, schedules may not be executed when you would expect. Use the QUERY EVENT command to project when schedules will be executed and thereby ensure that the desired result is achieved.

Possible values are:

ANY
Specifies that the startup window can begin on any day of the week.

WEEKDay
Specifies that the startup window can begin on Monday, Tuesday, Wednesday, Thursday, or Friday.

WEEKEnd
Specifies that the startup window can begin on Saturday or Sunday.

SUnday
Specifies that the startup window begins on Sunday.

Monday
Specifies that the startup window begins on Monday.

TUesday
Specifies that the startup window begins on Tuesday.

Wednesday
Specifies that the startup window begins on Wednesday.

THursday
Specifies that the startup window begins on Thursday.

Friday
Specifies that the startup window begins on Friday.

SAturday
Specifies that the startup window begins on Saturday.

EXPiration=*expirationdate*
Specifies the date on which this schedule will no longer be used, in MM/DD/YYYY format. This parameter is optional. Possible values are:

Never
Specifies that the schedule never expires.

expirationdate
Specifies the date on which the schedule will no longer be used, in MM/DD/YYYY format. If you specify an expiration date, the schedule expires at 23:59:59 on the specified date.

Updating Administrative Command Schedules

Use the UPDATE SCHEDULE command to modify selected parameters for the specified schedule. If you do not explicitly update a parameter, it remains unchanged.

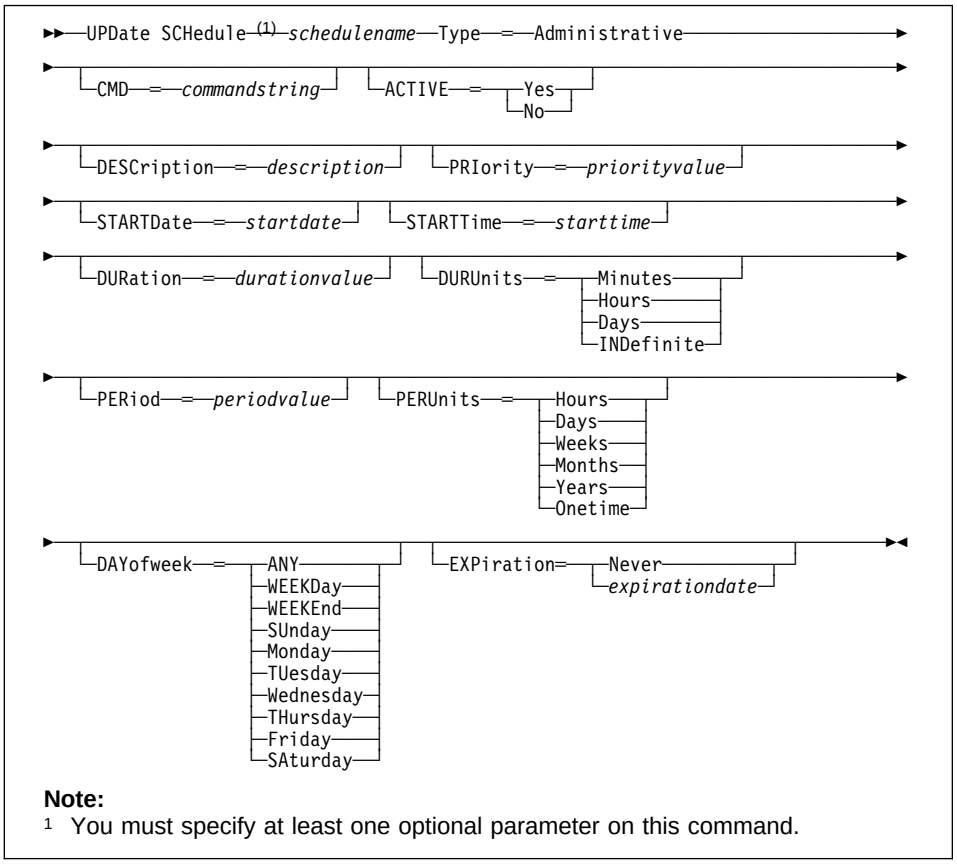
For each schedule, a startup window is specified. The startup window is the time period during which the schedule must be initiated. The schedule will not necessarily complete execution within this window. If the server is not running when this window starts but is started before the end of the defined window is reached, the schedule will run when the server is restarted.

Privilege Class

To issue this command, you must have system privilege.

UPDATE SCHEDULE

Syntax for Updating Administrative Command Schedules



Note:
1 You must specify at least one optional parameter on this command.

Parameters for Updating Administrative Command Schedules

schedulename
Specifies the name of the schedule to be updated. This parameter is required.

Type=**Administrative**
Specifies that the schedule to be updated is an administrative schedule. This parameter is required for updating administrative command schedules.

CMD=*commandstring*
Specifies the actual administrative command that is to be scheduled. This parameter is optional. The maximum length of the command is 512 characters. The administrative command must be enclosed in quotation marks if it contains any blank characters.

ACTIVE=*activevalue*
Specifies whether the defined administrative command is eligible for scheduled execution. This parameter is optional. A defined administrative command

schedule will not be executed unless it is set into the active state. Possible values are:

YES Specifies that the defined administrative command is eligible for scheduled execution.

NO Specifies that the defined administrative command is not eligible for scheduled execution.

DESCription=*description*
Specifies a description of the schedule. This parameter is optional. The maximum length of the description is 255 characters. The description must be enclosed in quotation marks if it contains any blank characters. To remove a previously defined description, specify a null string ("") for this value.

PRiority=*priorityvalue*
Specifies the priority value for a schedule. This parameter is optional. You can specify an integer from 1–10, inclusive, with 1 being the highest priority and 10 being the lowest.

If two or more schedules for a given client have the same window start time, this value determines the order of execution. The schedule with the highest priority starts first. For example, a schedule with PRIORITY=3 starts before a schedule with PRIORITY=5.

STARTDate=*startdate*
Specifies the date for the beginning of the window in which the schedule is first executed. This parameter is optional. This parameter is used in conjunction with the STARTTIME parameter to specify when the initial startup window begins.

Possible values are:

MM/DD/YYYY
Specifies the date for the beginning of the startup window in MM/DD/YYYY format (for example, 01/31/1995).

TODAY
Specifies that the beginning of the startup window is on the current date.

TODAY+*numdays* **or** +*numdays*
Specifies that the beginning of the startup window is a specific number of days after the current date. The maximum value for the number of days is 9999.

For example, to specify that the beginning of the initial startup window is 3 days from now, you can specify STARTDATE=TODAY+3 or STARTDATE=+3.

STARTTime=*starttime*
Specifies the time for the beginning of the window in which the schedule is first executed, in HH:MM format. This parameter is optional. This parameter is used in conjunction with the STARTDATE parameter to specify when the startup window begins.

Possible values are:

HH:MM:SS
Specifies the time for the beginning of the startup window in HH:MM:SS format (for example, 12:33:28).

NOW
Specifies that the beginning of the startup window is at the current time on the specified start date.

NOW+*numhours:numminutes* **or** +*numhours:numminutes*
Specifies the time for the beginning of the startup window is the current time plus a specific number of hours (and, optionally, minutes) on the specified start date.

For example, if you issue the UPDATE SCHEDULE command at 5:00 with STARTTIME=NOW+02:00 or STARTTIME=+02:00, the beginning of the initial startup window is at 7:00.

NOW–*numhours:numminutes* **or** –*numhours:numminutes*
Specifies the time for the beginning of the startup window is at the current time minus a specific number of hours (and, optionally, minutes) on the specified start date.

For example, if you issue the UPDATE SCHEDULE command at 5:00 with STARTTIME=NOW–02:00 or STARTTIME=–02:00, the beginning of the initial startup window is at 3:00.

DURation=*durationvalue*
Specifies the number of units that define the length of the startup window. This parameter is optional. You can specify an integer in the range of 1–999, inclusive.

This parameter is used in conjunction with the DURUNITS parameter to specify the length of the startup window. For example, if DURATION=20 and DURUNITS=MINUTES, the schedule must be started within 20 minutes of the start date and start time. The duration of the window must be shorter than the period between windows.

This value is ignored if you specify DURUNITS=INDEFINITE.

DURUnits=*durunitsvalue*
Specifies the time units used to determine the duration of the window in which this schedule can start. This parameter is optional.

This parameter is used in conjunction with the DURATION parameter to specify how long the startup window remains open to execute the schedule. For example, if DURATION=20 and DURUNITS=MINUTES, the schedule must be started within 20 minutes of the start date and start time. The duration of the window must be shorter than the period between windows. Possible values are:

Minutes
Specifies that the duration of the window is defined in minutes.

Hours
Specifies that the duration of the window is defined in hours.

Days
Specifies that the duration of the window is defined in days.

INDefinite
Specifies that the startup window has an indefinite duration. The schedule can run any time after the scheduled start time, until the schedule expires. You cannot specify DURUNITS=INDEFINITE unless PERUNITS=ONETIME is also specified for the schedule.

PERiod=*periodvalue*
Specifies the length of time between startup windows for this schedule. This parameter is optional. You can specify an integer in the range of 1–999, inclusive.

This parameter is used in conjunction with the PERUNITS parameter to specify the period between startup windows. For example, if you specify PERIOD=5 and PERUNITS=DAYS (assuming that DAYOFWEEK=ANY), the operation is scheduled every 5 days after the initial start date and start time. The period between startup windows must exceed the duration of each window.

This value is ignored if you specify PERUNITS=ONETIME.

PERUnits=*perunitsvalue*
Specifies the time units used to determine the period between startup windows for this schedule. This parameter is optional.

This parameter is used in conjunction with the PERIOD parameter to specify the period between startup windows. For example, if PERIOD=5 and PERUNITS=DAYS (assuming that DAYOFWEEK=ANY), the period between startup windows is scheduled every 5 days after the initial start date and start time. The period between startup windows must exceed the duration of each window. Possible values are:

Hours
Specifies that time between startup windows for the schedule is specified in hours.

Days
Specifies that time between startup windows for the schedule is specified in days.

Weeks
Specifies that time between startup windows for the schedule is specified in weeks.

Months
Specifies that time between startup windows for the schedule is specified in months.

Years
Specifies that time between startup windows for the schedule is specified in years.

Onetime
Specifies that the schedule executes only once. This value overrides the value specified by the PERIOD parameter.

DAYofweek=*dayofweekvalue*
Specifies the day of the week on which the startup window begins. If the beginning of the calculated startup window falls on a day that does not correspond with your value for the DAYOFWEEK parameter, the startup window will be shifted forward in 24-hour increments until the DAYOFWEEK parameter is satisfied.

If you select a value for DAYOFWEEK other than ANY, depending on the values for PERIOD and PERUNITS, schedules may not be executed when you would expect. Use the QUERY EVENT command to project when schedules will be executed and thereby ensure that the desired result is achieved. Possible values are:

ANY
Specifies that the startup window can begin on any day of the week.

WEEKDay
Specifies that the startup window can begin on Monday, Tuesday, Wednesday, Thursday, or Friday.

WEEKEnd
Specifies that the startup window can begin on Saturday or Sunday.

SUnday
Specifies that the startup window begins on Sunday.

Monday
Specifies that the startup window begins on Monday.

TUesday
Specifies that the startup window begins on Tuesday.

Wednesday
Specifies that the startup window begins on Wednesday.

THursday
Specifies that the startup window begins on Thursday.

Friday
Specifies that the startup window begins on Friday.

SAturday
Specifies that the startup window begins on Saturday.

EXPiration=*expirationdate*
Specifies the date on which this schedule will no longer be used, in MM/DD/YYYY format. This parameter is optional. Possible values are:

Never
Specifies that the schedule never expires.

expirationdate
Specifies the date on which the schedule will no longer be used, in MM/DD/YYYY format. If you specify an expiration date, the schedule expires at 23:59:59 on the specified date.

Examples

Task 1

Update the MONTHLY_BACKUP schedule that belongs to the STANDARD policy domain by setting its priority value to 1.

Command:
```
update schedule standard monthly_backup priority=1
```

Output:

```
ANR2502I Schedule MONTHLY_BACKUP updated in policy domain
STANDARD.
```

Task 2

Update the WEEKLY_BACKUP schedule that belongs to the EMPLOYEE_RECORDS policy domain to expire on March 29, 1996 (03/29/1996).

Command:
```
update schedule employee_records weekly_backup
expiration=05/29/1996
```

Output:

```
ANR2502I Schedule WEEKLY_BACKUP updated in policy domain EMPLOYEE_RECORDS.
```

Task 3

Update existing administrative schedule named BACKUP_BACKUPPOOL so that starting today, the BACKUPPOOL primary storage pool is backed up to the COPYSTG copy storage pool every three days at 10:00 p.m.

Command:
```
update schedule backup_backuppool type=administrative cmd="backup
stgpool backuppool copystg" active=yes starttime=22:00 period=3
```

UPDATE SCHEDULE

Output:

```
ANR2532I Schedule BACKUP_BACKUPPOOL updated.
```

Related Commands

Table 203. Commands Related to UPDATE SCHEDULE

Command	Description
COPY SCHEDULE	Creates a copy of an existing schedule.
DEFINE SCHEDULE	Defines a schedule for a client operation or an administrative command.
DELETE SCHEDULE	Deletes a schedule from the database.
QUERY EVENT	Displays information about scheduled and completed events for selected clients.
QUERY SCHEDULE	Displays information about one or more schedules.
SET MAXCMDRETRIES	Specifies the maximum number of retries after a failed attempt to execute a scheduled command.
SET RETRYPERIOD	Specifies the time between retry attempts by the client scheduler.

UPDATE STGPOOL (Change the Attributes of a Storage Pool)

Use the UPDATE STGPOOL command to change any parameters in an existing storage pool.

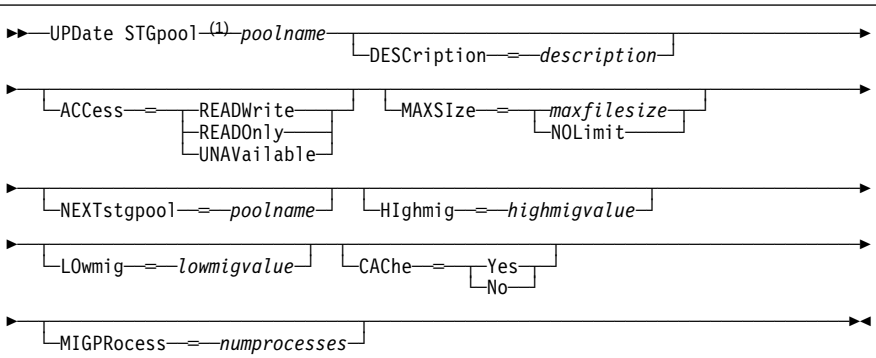
You can use this command to modify selected parameters for the specified storage pool. If you do not explicitly update a parameter, it remains unchanged.

The UPDATE STGPOOL command takes three forms, depending on whether the update is for a primary storage pool assigned to random access devices, a primary storage pool assigned to sequential access devices, or a copy storage pool. The syntax and parameters for each form are defined separately.

Privilege Class

To issue this command, you must have system privilege, unrestricted storage privilege, or restricted storage privilege for the storage pool to be updated.

Syntax for Updating a Random Access Storage Pool



Note:
1 You must specify at least one optional parameter on this command.

Parameters for Updating a Random Access Storage Pool

poolname

Specifies the name of the storage pool to be updated. This parameter is required.

DESCription=*description*

Specifies a description of the storage pool to be updated. This parameter is optional. The maximum length of the description is 255 characters. The description must be enclosed in quotation marks if it contains any blank characters. To remove a previously defined description, specify a null string ("") for this value.

UPDATE STGPOOL

ACCess=*accessmode*

Specifies how users and system processes (like migration and reclamation) can access files in the storage pool. This parameter is optional. Possible values are:

READWrite

Specifies that users and system processes (like migration) can read and write to files stored on volumes in the storage pool.

READOnly

Specifies that users can only read files stored on the volumes in the storage pool.

No new writes are permitted to the volumes in the storage pool from other volumes outside the storage pool. However, system processes (like reclamation) are permitted to move files within the volumes in the storage pool.

If this storage pool has been specified as a subordinate storage pool (with the NEXTSTGPOOL parameter) and is defined as *readonly*, the storage pool is skipped when system processes (like migration) attempt to write files to the storage pool from volumes in another storage pool.

UNAVailable

Specifies that users cannot access files stored on volumes in the storage pool.

No new writes are permitted to the volumes in the storage pool from other volumes outside the storage pool. However, system processes (like reclamation) are permitted to move files within the volumes in the storage pool. Files can also be moved or copied from this storage pool to another storage pool.

If this storage pool has been specified as a subordinate storage pool (with the NEXTSTGPOOL parameter) and is defined as *unavailable*, the storage pool is skipped when system processes (like migration) attempt to write files to the storage pool.

MAXSIze=*maxfilesize*

Specifies the maximum file size for the storage pool. This parameter is optional. The value of this parameter can be either NOLIMIT, or an integer followed by a scale factor. The value NOLIMIT specifies that there is no maximum size limit for files stored in the storage pool.

To limit the maximum file size, specify an integer (1–999999) followed by a scale factor. Scale factors and their meanings are:

Scale Factor	Meaning
K	Kilobyte
M	Megabyte
G	Gigabyte
T	Terabyte

For example, MAXSIZE=5G specifies that the maximum file size for this storage pool is 5 gigabytes.

If a file exceeds the maximum size and no pool is specified as the NEXTSTGPOOL, the file is not stored. If a file exceeds the maximum size and a pool is specified as the NEXTSTGPOOL, the file is stored in the next storage pool that can accept the file size. If you specify the NEXTSTGPOOL parameter, at least one storage pool in the hierarchy should have a MAXSIZE value of NOLIMIT. By setting MAXSIZE to NOLIMIT for at least one pool, you ensure that no matter what its size, a file can be stored somewhere.

NEXTstgpool=*poolname*

Specifies the name of the storage pool to which files can be migrated. This parameter is optional. The pool specified must be a primary storage pool. A copy storage pool cannot be specified.

To remove an existing storage pool from the storage hierarchy, specify a null string ("") for this value.

If you do not specify a value for this parameter, migration cannot occur and files that exceed the value specified for the MAXSIZE parameter cannot be placed in another storage pool.

You cannot create a chain of storage pools that leads to an endless loop through the NEXTSTGPOOL parameter. At least one storage pool in the hierarchy must have no value specified for NEXTSTGPOOL.

HIghmig=*highmigvalue*

Specifies when ADSM can start migration for this storage pool, as a percentage of the storage pool occupancy. This parameter is optional. You can specify an integer from 0–100, inclusive.

When the storage pool occupancy exceeds the value for this parameter, ADSM can start migration, by node, to the next storage pool, as defined with the NEXTSTGPOOL parameter. You can specify HIGHMIG=100 to prevent migration for this storage pool (assuming you have defined the NEXTSTGPOOL parameter).

LOwmig=*lowmigvalue*

Specifies when ADSM can stop migration for this storage pool, as a percentage of the storage pool occupancy. This parameter is optional. You can specify an integer from 0–99, inclusive.

When the storage pool occupancy reaches the value for this parameter, ADSM does not initiate migration of another node's files. Because all file spaces that belong to a node are migrated together, the occupancy of the storage pool can fall below the value you specified for this parameter. You can set LOWMIG=0 to permit migration to empty the storage pool.

CAChe=*cachingvalue*

For random access storage pools only, specifies whether a cached copy of a file that has been migrated remains in the random access storage pool. This

parameter is optional. The primary copy of the file is migrated to the next storage pool, as defined with the NEXTSTGPOOL parameter.
Caching improves the time it takes to retrieve files that have been migrated to sequential access storage pools by permitting cached copies of files to remain in the random access storage pool. The cached copies are available, if needed, or can be overwritten when necessary. Possible values are:

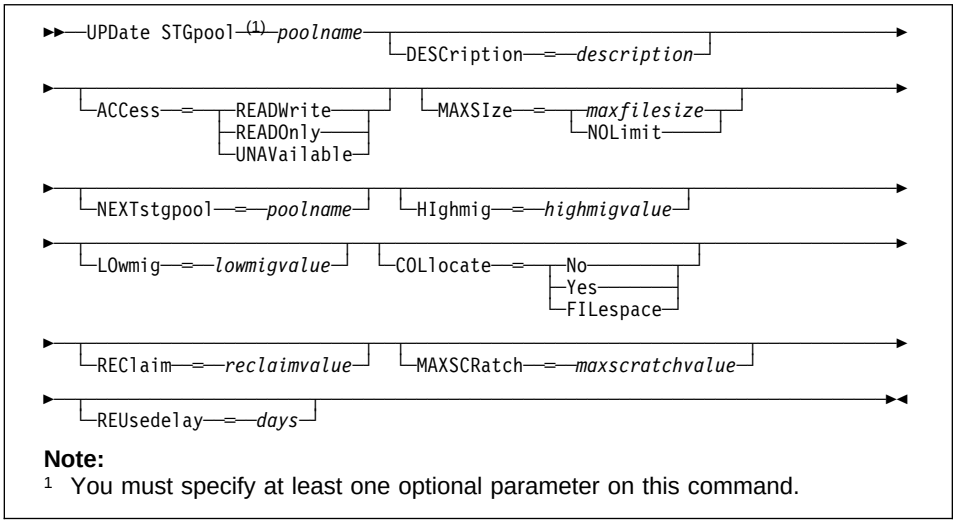
Yes
Specifies that caching is enabled.

No
Specifies that caching is disabled.

MIGPRocess=*numprocesses*
For random access storage pools only, specifies the number of processes that are used for migrating files from this storage pool. This parameter is optional. You can specify an integer from 1–999, inclusive.

During migration, these processes are performed in parallel to provide the potential for improved migration rates.

Syntax for Updating a Primary Sequential Access Storage Pool



Note:
1 You must specify at least one optional parameter on this command.

Parameters for Updating a Primary Sequential Access Storage Pool

poolname
Specifies the name of the storage pool to be updated. This parameter is required.

DESCription=*description*
Specifies a description of the storage pool to be updated. This parameter is optional. The maximum length of the description is 255 characters. The description must be enclosed in quotation marks if it contains any blank

characters. To remove a previously defined description, specify a null string ("") for this value.

ACCess=*accessmode*
Specifies how users and system processes (like migration and reclamation) can access files in the storage pool. This parameter is optional. Possible values are:

READWrite
Specifies that users and system processes (like migration) can read and write files stored on volumes in the storage pool.

READOnly
Specifies that users can only read files stored on the volumes in the storage pool.

No new writes are permitted to the volumes in the storage pool from other volumes outside the storage pool. However, system processes (like reclamation) are permitted to move files within the volumes in the storage pool.

If this storage pool has been specified as a subordinate storage pool (with the NEXTSTGPOOL parameter) and is defined as *readonly*, the storage pool is skipped when system processes (like migration) attempt to write files to the storage pool from volumes in another storage pool.

UNAVailable
Specifies that users cannot access files stored on volumes in the storage pool.

No new writes are permitted to the volumes in the storage pool from other volumes outside the storage pool. However, system processes (like reclamation) are permitted to move files within the volumes in the storage pool. Files can also be moved or copied from this storage pool to another storage pool.

If this storage pool has been specified as a subordinate storage pool (with the NEXTSTGPOOL parameter) and is defined as *unavailable*, the storage pool is skipped when system processes (like migration) attempt to write files to the storage pool.

MAXSIze=*maxfilesize*
Specifies the maximum file size for the storage pool. This parameter is optional. The value of this parameter can be either NOLIMIT, or an integer followed by a scale factor. The value NOLIMIT specifies that there is no maximum size limit for files stored in the storage pool.

To limit the maximum file size, specify an integer (1–999999) followed by a scale factor. Scale factors and their meanings are:

Scale Factor	Meaning
K	Kilobyte
M	Megabyte
G	Gigabyte
T	Terabyte

For example, MAXSIZE=5G specifies that the maximum file size for this storage pool is 5 gigabytes.

If a file exceeds the maximum size and no pool is specified as the NEXTSTGPOOL, the file is not stored. If a file exceeds the maximum size and a pool is specified as the NEXTSTGPOOL, the file is stored in the next storage pool that can accept the file size. If you specify the NEXTSTGPOOL parameter, at least one storage pool in the hierarchy should have a MAXSIZE value of NOLIMIT. By setting MAXSIZE to NOLIMIT for at least one pool, you ensure that no matter what its size, a file can be stored somewhere.

NEXTstgpool=*poolname*
Specifies the name of the storage pool to which files can be migrated. This parameter is optional. The storage pool must be a primary storage pool. A copy storage pool cannot be specified.

To remove an existing storage pool from the storage hierarchy, specify a null string ("") for this value.

If you do not specify a value for this parameter, migration cannot occur and files that exceed the value specified for the MAXSIZE parameter cannot be placed in another storage pool.

You cannot create a chain of storage pools that leads to an endless loop through the NEXTSTGPOOL parameter. At least one storage pool in the hierarchy must have no value specified for NEXTSTGPOOL.

HIghmig=*highmigvalue*
Specifies when ADSM can start migration for this storage pool, as a percentage of the storage pool occupancy. This parameter is optional. You can specify an integer from 1–100, inclusive.

When the storage pool occupancy exceeds the value for this parameter, ADSM can start migration, by volume, to the next storage pool, as defined with the NEXTSTGPOOL parameter. You can specify HIGHMIG=100 to prevent migration for this storage pool (assuming you have defined the NEXTSTGPOOL parameter).

LOwmig=*lowmigvalue*
Specifies when ADSM can stop migration for this storage pool, as a percentage of the storage pool occupancy. This parameter is optional. You can specify an integer from 0–99, inclusive.

When the storage pool occupancy reaches the value for this parameter, ADSM does not initiate migration of files from another volume. Because all files that are on a single volume are migrated together, the occupancy of the storage pool can fall below the value you specified for the LOWMIG parameter. You can set LOWMIG=0 to permit migration to empty the storage pool.

COLlocate=*collocation*
Specifies whether ADSM attempts to keep data belonging to a single client node assigned to as few volumes as possible; or attempts to keep data belonging to a

single client node's filespace assigned to as few volumes as possible. This parameter is optional.

Collocation reduces the number of sequential access media mounts for restore, retrieve, and recall operations. However, collocation increases both the amount of server time needed to collocate files for storing, and the number of volumes required. Collocation may not be useful on systems with only one or two sequential devices. For additional information, see *ADSM Administrator's Guide*.

Possible values are:

Yes
Specifies that collocation is enabled at the client node level. The server tries to put data for one node on as few volumes as possible. If the node has multiple filespaces, no attempt is made to collocate those filespaces.

No
Specifies that collocation is disabled.

FILespace
Specifies that collocation is enabled at the filespace level for client nodes. The server tries to put data for one node and filespace on as few volumes as possible. If a node has multiple filespaces, the server attempts to put data for different filespaces on different volumes.

RECLaim=*reclaimvalue*
Specifies when to initiate reclamation of fragmented space on volumes in the storage pool, based on the percentage of reclaimable space on a volume. Reclamation makes the fragmented space usable again by moving any remaining active files from one volume to another volume, thus making the original volume available for reuse. This parameter is optional. You can specify an integer from 1–100, inclusive.

Space becomes fragmented as files on a volume are deleted because of processes such as expiration or file space deletion. The amount of space that can be reclaimed on a volume increases as files on the volume are deleted. When the percentage of space that can be reclaimed on a volume rises above the value for the RECLAIM parameter, the volume is reclaimed. Active files on the volume are rewritten to other volumes in the storage pool, making the original volume available for new files.

For storage pools, it is recommended that you specify a value of 50 percent or greater for this parameter so that files stored on two volumes can be combined onto a single output volume.

MAXSCRatch=*maxscratchvalue*
Specifies the maximum number of scratch volumes that can be requested by ADSM. This parameter is optional. You can specify an integer from 0–100000000, inclusive.

If you do not specify a value for this parameter, no scratch media are requested by ADSM.

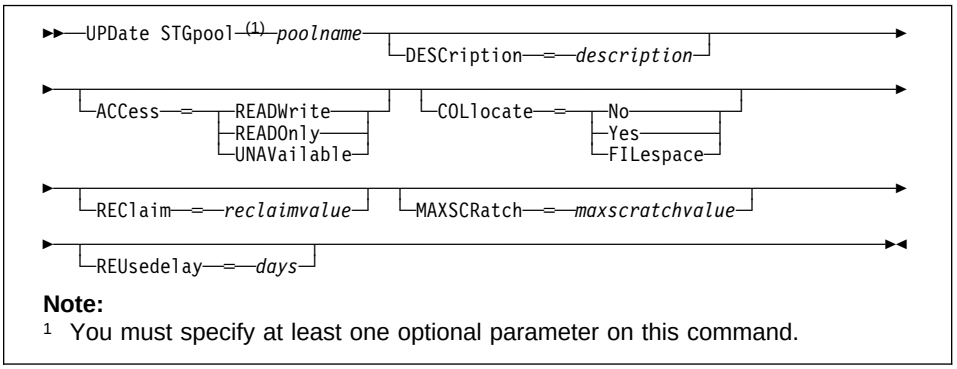
Scratch volumes are automatically deleted from the storage pool when they become empty. When scratch volumes with the device type of FILE are deleted, the space that the volumes occupied is freed by ADSM and returned to the file system.

REUsedelay=*days*

Specifies the number of days that must elapse after all files have been deleted from a volume, before the volume can be rewritten or returned to the scratch pool. This parameter is optional. You can specify an integer from 0–9999, inclusive. The value 0 means that a volume can be rewritten or returned to the scratch pool as soon as all files have been deleted from the volume.

By specifying this parameter, you can ensure that the database could be restored to an earlier level and database references to files in the storage pool would still be valid.

Syntax for Updating a Copy Storage Pool



Note:
1 You must specify at least one optional parameter on this command.

Parameters for Updating a Copy Storage Pool

poolname

Specifies the name of the copy storage pool to be updated. This parameter is required.

DESCription=*description*

Specifies a description of the copy storage pool to be updated. This parameter is optional. The maximum length of the description is 255 characters. The description must be enclosed in quotation marks if it contains any blank characters. To remove a previously defined description, specify a null string ("") for this value.

ACCess=*accessmode*

Specifies how users and system processes (like reclamation) can access files in the copy storage pool. This parameter is optional. Possible values are:

READWrite

Specifies that files can be read from and written to the volumes in the copy storage pool.

READOnly

Specifies that users can only read files stored on the volumes in the copy storage pool.

No new writes are permitted to the volumes in the copy storage pool from other volumes outside the copy storage pool. However, system processes (like reclamation) are permitted to move files within the volumes in the storage pool. Files cannot be backed up to the copy storage pool, but existing backup copies can be restored.

UNAVailable

Specifies that users cannot access files stored on volumes in the copy storage pool.

No new writes are permitted to the volumes in the copy storage pool from other volumes outside the copy storage pool. However, system processes (like reclamation) are permitted to move files within the volumes in the copy

storage pool. Files cannot be backed up to the copy storage pool, but existing backup copies can be restored.

COLlocate=*collocation*
Specifies whether ADSM attempts to keep data belonging to a single client node assigned to as few volumes as possible; or attempts to keep data belonging to a single client node's filespace assigned to as few volumes as possible. This parameter is optional.

Collocation reduces the number of sequential access media mounts for restore, retrieve, and recall operations. However, collocation increases both the amount of server time needed to collocate files for storing, and the number of volumes required. Collocation may not be useful on systems with only one or two sequential devices. For additional information, see *ADSM Administrator's Guide*.

Possible values are:

Yes
Specifies that collocation is enabled at the client node level. The server tries to put data for one node on as few volumes as possible. If the node has multiple filespaces, no attempt is made to collocate those filespaces.

No
Specifies that collocation is disabled.

FILespace
Specifies that collocation is enabled at the filespace level for client nodes. The server tries to put data for one node and filespace on as few volumes as possible. If a node has multiple filespaces, the server attempts to put data for different filespaces on different volumes.

RECLaim=*reclaimvalue*
Specifies when to initiate reclamation of fragmented space on volumes in the copy storage pool, based on the percentage of reclaimable space on a volume. Reclamation makes the fragmented space usable again by moving any remaining active files from one volume to another volume, thus making the original volume available for reuse. This parameter is optional. You can specify an integer from 1–100, inclusive. The value 100 means that reclamation is not performed.

The amount of space that can be reclaimed on a volume increases as files on the volume are deleted because of processes such as expiration or file space deletion. It is recommended that you specify a value of 50 percent or greater for this parameter so that files stored on two volumes can be combined onto a single output volume.

When reclamation occurs and how reclamation processing is done depends on whether the volumes are marked as offsite.

For volumes that are not marked as offsite volumes, reclamation can occur only after the volume has been filled, and then begins to empty because of file deletion. When the percentage of reclaimable space on a volume that had once been full rises above the value for the RECLAIM parameter, the volume is

reclaimed. Active files on the volume are rewritten to other volumes in the storage pool, making the original volume available for new files.

For offsite volumes, reclamation can occur regardless of whether the volume has ever been filled. An offsite volume is eligible for reclamation when the percentage of unused space on the volume is greater than the reclaim parameter value. The unused space includes both space that has never been used on the volume and space that has become empty because of file deletion.

Reclamation processing also works differently for offsite storage pool volumes. When a copy pool volume that is offsite becomes eligible for reclamation, the reclamation process attempts to retrieve the active files on the reclaimable volume from a primary or copy storage pool that is onsite, and then write these files to an available volume in the original copy storage pool. Effectively, these files are moved back to the onsite location, although they could be obtained from the offsite volume after a disaster if a database backup is used which references the files on the offsite volume. Because of the way reclamation works with offsite volumes, use it carefully with copy storage pools.

MAXSCRatch=*maxscratchvalue*

Specifies the maximum number of scratch volumes that can be requested by ADSM. This parameter is optional. You can specify an integer from 0–100000000, inclusive.

If you do not specify a value for this parameter, no scratch media are requested by ADSM.

A scratch volume is automatically deleted from the copy pool after all files have been deleted and the time specified by the REUSEDELAY parameter has elapsed. However, if the access mode for a scratch volume is OFFSITE, the volume is not deleted from the copy pool until the access mode is changed; this allows an administrator to query ADSM for empty, offsite scratch volumes and return these to the onsite location.

When scratch volumes with the device type of FILE become empty and are deleted, the space that the volumes occupied is freed by ADSM and returned to the file system.

REUsedelay=*days*

Specifies the number of days that must elapse after all files have been deleted from a volume, before the volume can be rewritten or returned to the scratch pool. This parameter is optional. You can specify an integer from 0–9999, inclusive. A value of 0 means that a volume can be rewritten or returned to the scratch pool as soon as all files have been deleted from the volume.

Important: By specifying this parameter, you can ensure that the database can be restored to an earlier level and database references to files in the copy storage pool are still valid. For this to happen, you must set this parameter to a value greater than the number of days you plan on retaining the oldest database backup. For additional information, refer to *ADSM Administrator's Guide*.

UPDATE STGPOOL

Examples

Task 1

Update the primary storage pool named 8MMPOOL to permit as many as 10 scratch volumes to be mounted.

Command: `update stgpool 8mmpool maxscratch=10`

Output:

```
ANR2202I Storage pool 8MMPOOL updated.
```

Task 2

Update the primary storage pool named BACKUPPOOL to permit caching.

Command: `update stgpool backuppool cache=yes`

Output:

```
ANR2202I Storage pool BACKUPPOOL updated.
```

Task 3

Update the copy storage pool named COPYSTG to permit as many as 10 scratch volumes to be mounted and to collate files.

Command: `update stgpool copystg collocate=yes maxscratch=10`

Output:

```
ANR2202I Storage pool COPYSTG updated.
```

Related Commands

Table 204 provides references to related commands.

Table 204 (Page 1 of 2). Commands Related to UPDATE STGPOOL

Command	Description	Reference
BACKUP DB	Backs up the ADSM database to sequential access volumes.	Page 53
BACKUP STGPOOL	Backs up a primary storage pool to a copy storage pool.	Page 59

Table 204 (Page 2 of 2). Commands Related to UPDATE STGPOOL

Command	Description	Reference
DEFINE STGPOOL	Defines a storage pool as a named collection of server storage media.	Page 182
DELETE STGPOOL	Deletes a storage pool from server storage.	Page 240
QUERY STGPOOL	Displays information about one or more storage pools.	Page 485
RESTORE STGPOOL	Restores files to a primary storage pool from copy storage pools.	Page 533
RESTORE VOLUME	Restores files stored on specified volumes in a primary storage pool from copy storage pools.	Page 538

UPDATE VOLHISTORY (Update Information about a Database Dump, Database Backup, or Export Volume)

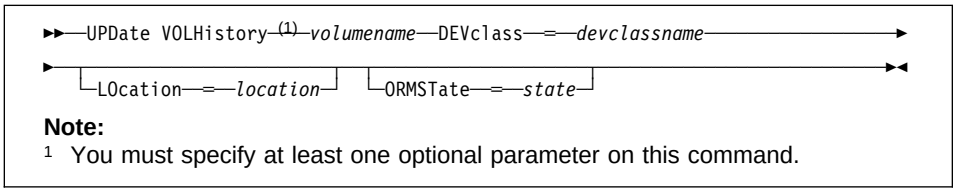
Use the UPDATE VOLHISTORY command:

- To add or update the physical location information for a volume that contains the results of a database dump, a database backup (full or incremental), or an export operation. You can use the LOcation parameter to help track volumes that move offsite. The location is added or updated to the volume history files as a comment above the specified volume's detail information.
- To update the state of a database backup volume. The ADSM Disaster Recovery Manager (DRM) feature uses the ORMSTate parameter to update the state of the database backup volume.

Privilege Class

To issue this command, you must have system privilege or unrestricted storage privilege.

Syntax



Note:
1 You must specify at least one optional parameter on this command.

Parameters

volumename
Specifies the name of the volume for which you want to add location information. The volume must have been used for a database dump, a database backup (full or incremental), or an export operation. This parameter is required.

DEVclass=*devclassname*
Specifies the name of the device class for the volume specified. This parameter is required.

LOcation=*location*
Describes the location of the volume. This parameter is required if the ORMSTate parameter is not specified. The maximum length of the location is 255 characters. The location must be enclosed in quotation marks if it contains any blank characters.

ORMSTate=*state*
Specifies a change to the state of a database backup volume. This parameter is required if the LOcation parameter is not specified. The ORMSTate parameter is managed and used by the MOVE DRMEDIA and QUERY DRMEDIA commands. Use caution when invoking this parameter. Possible values are:

MOuntable
Specifies that volumes in the MOUNTABLE state contain valid data and are accessible for onsite processing.

NOTMOuntable
Specifies that volumes in the NOTMOUNTABLE state are onsite, contain valid data, and not accessible for onsite processing.

COUrier
Specifies that volumes in the COURIER state are with the courier and being moved to an offsite location.

VAult
Specifies that volumes in the VAULT state are offsite, contain valid data, and are not accessible for onsite processing.

COURIERRetrieve
Specifies that volumes in the COURIERRETRIEVE state are with the courier and being moved back to the onsite location.

Examples

Task

Update the location of a volume used for database backup, BACKUP1, to show that it has been moved to an offsite location.

Command:
```
update volhistory backup1 devclass=tapebkup location="700 W.
Magee Rd."
```

Output:

```
ANR2473I UPDATE VOLHISTORY for volume backup1 completed.
```

Related Commands

Table 205. Commands Related to UPDATE VOLHISTORY

Command	Description
BACKUP VOLHISTORY	Records sequential volume history information in external files.
DELETE VOLHISTORY	Removes sequential volume history information from the volume history file.
MOVE DRMEDIA	Moves DRM media onsite and offsite.
QUERY DRMEDIA	Displays information about disaster recovery volumes.
QUERY VOLHISTORY	Displays sequential volume history information that has been collected by the server.

UPDATE VOLUME (Change the Attributes of One or More Storage Pool Volumes)

Use the UPDATE VOLUME command to change the access mode for one or more volumes in random or sequential access storage pools. You can also use this command to change the location information for one or more volumes in sequential access storage pools. This command can be used to update volumes assigned to primary or copy storage pools. If you do not explicitly update a parameter, it remains unchanged.

You can reset any error state associated with a volume by updating the volume to an access mode of READWRITE.

A random access volume must be varied offline before you can update the volume to *unavailable* or *destroyed*. To vary a volume offline, use the VARY command.

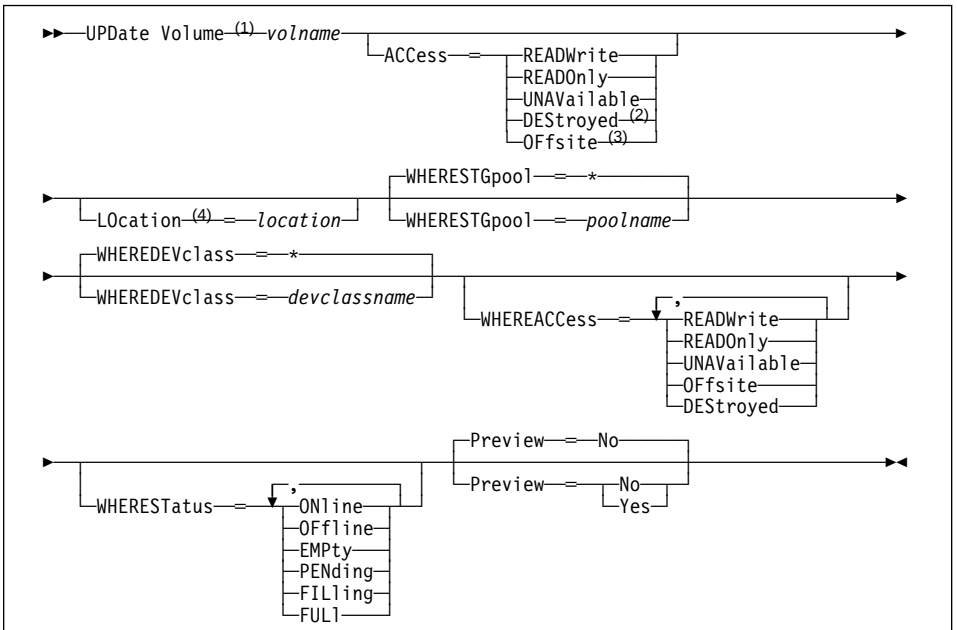
If a scratch volume with a status of EMPTY and an access mode of OFFSITE is updated so that the access mode is READWRITE, READONLY, or UNAVAILABLE, the volume is deleted from the database.

Use the QUERY VOLUME command to display the set of defined storage pool volumes.

Privilege Class

To issue this command, you must have system privilege or operator privilege.

Syntax



Notes:

1. You must update at least one attribute (ACCESS or LOCATION).
2. This option is supported only for volumes in primary storage pools.
3. This option is supported only for volumes in copy storage pools.
4. This attribute can be specified only for volumes in sequential-access storage pools.

Parameters

volname

Specifies name of the storage pool volume to be updated. This parameter is required; however, you can use a pattern-matching expression to specify this name. All matching volumes are included in the update.

ACCess=*newaccessmode*

Specifies how users and system processes (like migration) can access files in the storage pool volume. The access mode of all updated volumes will be changed to this value. This parameter is optional. Possible values are:

READWrite

Specifies that users and system processes (like migration) can read from and write to files stored on the volume.

If the volume being updated is an empty scratch volume that had an access mode of offsite, the volume is deleted from the ADSM database.

UPDATE VOLUME

READOnly
Specifies that users and system processes (like migration) can only read files stored on the volume.

If the volume being updated is an empty scratch volume that had an access mode of offsite, the volume is deleted from the ADSM database.

UNAVailable
Specifies that neither users nor system processes (like migration) can access files stored on the volume.

If you update a random access volume to *unavailable*, you cannot vary the volume online.

If you update a sequential access volume to *unavailable*, ADSM does not attempt to mount the volume.

If the volume being updated is an empty scratch volume that had an access mode of offsite, the volume is deleted from the ADSM database.

DEStroyed
Specifies that a primary storage pool volume has been permanently damaged. Neither users nor system processes (like migration) can access files stored on the volume.

Only volumes in primary storage pools can be updated to *destroyed*.

If you update a random access volume to *destroyed*, you cannot vary the volume online.

If you update a sequential access volume to *destroyed*, ADSM does not attempt to mount the volume.

This access mode is used to indicate an entire volume that should be restored by using the RESTORE STGPOOL command. After all files on a destroyed volume have been restored, the volume is automatically deleted from the database.

If a volume contains no files and the UPDATE VOLUME command is used to change the access mode to *destroyed*, the volume is deleted from the database.

OFfsite
Specifies that a copy storage pool volume is at an offsite location from which it cannot be mounted. Only volumes in copy storage pools can be updated to *offsite*.

Use this mode to help you track volumes that you move to offsite locations. ADSM treats offsite volumes differently than other volumes:

- Mount requests are not generated for volumes located offsite
- Data can be reclaimed or moved from offsite volumes by retrieving files from other storage pools
- Empty, offsite scratch volumes are not deleted from the copy storage pool

LOcation=*location*
Specifies the location of the volume. This parameter is optional. It can be specified only for volumes in sequential-access storage pools. The maximum length of the location is 255 characters. The location must be enclosed in quotation marks if it contains any blank characters. To remove a previously defined description, specify the null string ("").

Note: If you specify values for both the ACCESS and LOCATION parameters but the access mode cannot be updated for a particular volume, the location attribute is also not updated for that volume. For example, if you specify ACCESS=OFFSITE and LOCATION for primary storage pool volumes, neither the access nor location values are updated because these volumes cannot be given an access mode of OFFSITE.

WHERESTGpool=*poolname*
Specifies the name of the storage pool for volumes to be updated. This parameter can be used to restrict the update by storage pool. This parameter is optional. You can use a pattern-matching expression to specify this name. If you do not specify a storage pool name, volumes belonging to any storage pool are updated.

WHEREDEVclass=*devclassname*
Specifies the name of the device class for volumes to be updated. This parameter can be used to restrict the update by device class. This parameter is optional. You can use a pattern-matching expression to specify this name. If you do not specify a device class name, volumes with any device class are updated.

WHEREACCess=*accessmode*
Specifies the current access mode of volumes to be updated. This parameter can be used to restrict the update to volumes that currently have the specified access mode.

This parameter is optional. You can specify more than one access mode in a list by separating each mode with a comma, with no intervening spaces. If you do not specify a value for this parameter, the update is not restricted by the volumes' current access mode. Possible values are:

READWrite
Specifies that volumes with an access mode of READWRITE are updated.

READOnly
Specifies that volumes with an access mode of READONLY are updated.

UNAVailable
Specifies that volumes with an access mode of UNAVAILABLE are updated.

OFfsite
Specifies that volumes with an access mode of OFFSITE are updated.

DEStroyed
Specifies that volumes with an access mode of DESTROYED are updated.

WHERESTatus=*status*
Specifies the status of volumes to be updated. This parameter can be used to restrict the update to volumes that have a specified status. This parameter is optional. You can specify more than one status in a list by separating each status with a comma, with no intervening spaces. If you do not specify a value for this parameter, the updated volumes are not restricted by volume status. Possible values are:

ONline
Specifies that volumes with a status of ONLINE are updated.

OFfline
Specifies that volumes with a status of OFFLINE are updated.

EMPty
Specifies that volumes with a status of EMPTY are updated.

PENding
Specifies that volumes with a status of PENDING are updated. These are volumes from which all files have been deleted, but the time specified by the REUSEDELAY parameter has not elapsed.

FILling
Specifies that volumes with a status of FILLING are updated.

FULl
Specifies that volumes with a status of FULL are updated.

Preview=*value*
Specifies whether you want to preview the update operation without actually performing it. This parameter is optional. The default value is NO. Possible values are:

No
Specifies that volumes are actually updated.

Yes
Specifies that you only want to preview the update operation. This option displays the volumes that will be updated if you actually perform the update operation.

Examples

Task 1

Update a tape volume named DSMT20 to make it unavailable to users and system processes (like migration).

Command:
```
update volume dsmt20 access=unavailable
```

Output:

```
ANR2207I Volume DSMT20 updated.
```

Task 2

Update all empty, offsite volumes in the COPYSTG storage pool. Set the access mode to READWRITE and delete the location information for the updated volumes.

Command:
```
update volume * access=readwrite location="" wherestgpool=copystg
whereaccess=offsite,unavailable wherestatus=empty
```

Output:

```
ANR2207I Volume COVOL1 updated.
ANR2207I Volume COVOL2 updated.
ANR2207I Volume COVOL3 updated.
```

Related Commands

Table 206. Commands Related to UPDATE VOLUME

Command	Description
DEFINE VOLUME	Assigns a volume to be used for storage within a specified storage pool.
DELETE VOLUME	Deletes a volume from a storage pool.
QUERY VOLUME	Displays information about one or more storage pool volumes.
VARY	Specifies whether a disk volume is available to the server for use.

VALIDATE POLICYSET (Verify a Policy Set)

Use the VALIDATE POLICYSET command to verify that a policy set is complete and valid prior to activating it. The validate command examines the management class and copy group definitions in a specified policy set and reports on conditions that need to be considered if the policy set is to be activated.

The VALIDATE POLICY SET command will fail if any of the following conditions exist:

- A default management class is not defined for the policy set.
- A copy group within the policy set specifies a copy storage pool as a destination.
- A management class specifies a copy pool as the destination for space-managed files.

The following conditions result in warning messages issued during VALIDATE POLICYSET command processing:

- The destinations specified in the policy set copy group definitions do not refer to defined storage pools.

  If a policy set is activated with copy group definitions that do not specify valid storage pool names, the client backup or archive operations fail.
- The active policy set in a policy domain contains management classes that are not defined in the policy set being validated.

  If the policy set is activated, the backup files bound to the deleted management class are rebound to the default management class in the new active policy set.
- The active policy set in the policy domain contains copy groups that are not defined in the policy set being activated.

  Files bound to the management classes with deleted copy group definitions are no longer archived or backed up.
- The default management class does not contain a backup or archive copy group in the policy set being activated. If this default management class is used files are not backed up or archived by default.
- A storage pool specified as a destination for files migrated from client nodes (MIGDESTINATION) is not defined.
- A management class specifies that a backup version must exist before a file can be migrated from a client node (MIGREQUIRESBKUP=YES), but the management class does not contain a backup copy group.

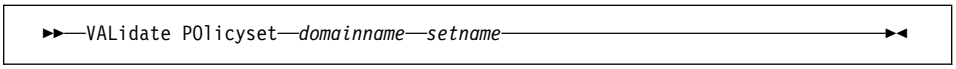
After you are satisfied with the results of validation processing, use the ACTIVATE POLICYSET command to permit the attributes of the validated policy set to be defined in your storage hierarchy.

VALIDATE POLICYSET

Privilege Class

To issue this command, you must have system privilege, unrestricted policy privilege, or restricted policy privilege for the policy domain to which the policy set belongs.

Syntax



Parameters

domainname
Specifies the name of the policy domain to which the policy set is assigned. This parameter is required.

setname
Specifies the name of the policy set to be verified. This parameter is required.

Examples

Task 1

Validate the policy set VACATION located in the EMPLOYEE_RECORDS policy domain.

Command: `validate policyset employee_records vacation`

Output:

```
ANR1515I Policy set VACATION validated in
domain EMPLOYEE_RECORDS (ready for activation).
```

Task 2

Validate the policy set SET1 located in the PROG1 policy domain.

Command: `validate policyset prog1 set1`

Output:

```
ANR1553W DEFAULT Management class TOM in policy set SET1
PROG1 does not have a BACKUP copygroup: files will not be
backed up by default if this set is activated.
ANR1554W DEFAULT Management class TOM in policy set SET1
PROG1 does not have an ARCHIVE copygroup: files will not be
archived by default if this set is activated.
ANR1515I Policy set TOM validated in domain TOM (ready for
activation).
```

VALIDATE POLICYSET

Task 3

Validate the policy set STANDARD located in the STANDARD policy domain.

Command: `validate policyset standard standard`

Output:

Note: The following output is displayed when an invalid space management destination is specified.

```
ANR1557W The space management migration destination
in management class MCLASS2
does not refer to a defined storage pool: MCLASS2.
If this pool does not exist
when policy set STANDARD is activated, clients will fail
when using this management class to migrate space-managed
files to the server.
ANR1515I Policy set STANDARD validated in domain
STANDARD (ready for activation).
```

Related Commands

Table 207. Commands Related to VALIDATE POLICYSET

Command	Description
ACTIVATE POLICYSET	Validates and activates a policy set within a policy domain.
COPY POLICYSET	Creates a copy of an existing policy set.
DEFINE COPYGROUP	Defines a copy group for backup or archive processing within a specified management class.
DEFINE MGMTCLASS	Defines a management class within the policy domain and policy set specified.
DELETE POLICYSET	Deletes a policy set, including its management classes and copy groups, from a policy domain.
QUERY POLICYSET	Displays information about one or more policy sets.
UPDATE COPYGROUP	Changes one or more attributes of a copy group.
UPDATE POLICYSET	Changes the description of a policy set.

VARY (Bring a Random Access Volume Online or Offline)

Use the VARY command to make a random access volume available or unavailable to the server for use as a database, recovery log, or storage pool volume. This command is only valid for volumes that reside on random access devices. Examples of when you would use this command are during maintenance or corrective action of a random access volume.

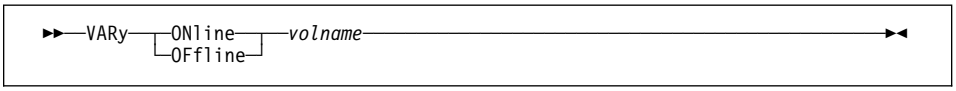
You cannot vary a random access volume online that is defined as *unavailable*.

Varying a database or recovery log volume online can start a background process when ADSM synchronizes the volume. Use the CANCEL PROCESS command to cancel this process. To display information on background processes, use the QUERY PROCESS command.

Privilege Class

To issue this command, you must have system privilege or operator privilege.

Syntax



Parameters

ONline
Specifies that the random access volume can be used by the server as a database, recovery log, or storage pool volume.

OFfline
Specifies that the random access volume *cannot* be used by the server as a database, recovery log, or storage pool volume.

volname
Specifies the volume identifier. This parameter is required.

Any volume name used by ADSM cannot contain any embedded blanks or equal signs.

Examples

Task 1

Make db2.dsm available to the server for use as a database volume.

Command: `vary online db2.dsm`

Output:

```
ANR2210I Vary on-line initiated for disk volume
L:\WIN32APP\IBM\ADSM\SERVER\DB2.DSM.
ANR1305I Disk volume L:\WIN32APP\IBM\ADSM\SERVER\DB2.DSM
varied on-line.
```

Task 2

Make volume named mnvol unavailable to the server for use as a database volume.

Command: `vary offline mnvol`

Output:

```
ANR2211I Vary off-line initiated for disk
volume L:\WIN32APP\IBM\ADSM\SERVER\MNVOL.
ANR1307I Disk volume L:\WIN32APP\IBM\ADSM\SERVER\MNVOL varied
off-line.
```

Related Commands

Table 208 provides references to related commands.

Table 208 (Page 1 of 2). Commands Related to VARY

Command	Description	Reference
CANCEL PROCESS	Cancels a background server process.	Page 65
DEFINE DBVOLUME	Assigns a volume to be used for database storage.	Page 109
DEFINE LOGVOLUME	Defines a disk volume to the recovery log.	Page 147
DEFINE VOLUME	Assigns a volume to be used for storage within a specified storage pool.	Page 196
DELETE DBVOLUME	Deletes a volume from the database.	Page 206
DELETE LOGVOLUME	Deletes a volume from the recovery log.	Page 224
DELETE VOLUME	Deletes a volume from a storage pool.	Page 246
QUERY DBVOLUME	Displays information about one or more database volumes.	Page 372

Table 208 (Page 2 of 2). Commands Related to VARY

Command	Description	Reference
QUERY LOGVOLUME	Displays information about one or more log volumes.	Page 433
QUERY PROCESS	Displays information about one or all background server processes.	Page 464
QUERY VOLUME	Displays information about one or more storage pool volumes.	Page 498

VARY

Appendix A. Miscellaneous Utilities

ADSM for Windows NT includes GUI and command-line utility programs. These programs are available in the default directory C:\WIN32APP\IBM\ADSM\UTILS after the server has been installed.

The following GUI-based utility programs are included with ADSM for Windows NT:

ADSM Includes an ADSM service interface, volume formatting wizards, a server options file editor, client configuration wizards, a server accounting file viewer, a SCSI device detector, and an interface to the World Wide Web. For more information, see the ADSM utilities online help.

DSMCFG Reads a client configuration file and writes output to a client options file.

LABELER Writes labels to storage volumes (except volumes for device type REMOVABLEFILE) in preparation for using them with the ADSM server.

The following command-line utilities are available with ADSM for Windows NT:

DSMFMT Use to pre-allocate space for database, recovery log, and storage pool volumes.

DSMLABEL Use to write labels to storage volumes (except volumes for device type REMOVABLEFILE) in preparation for using them with the ADSM server.

GETIPXAD Use to display the IPX/SPX address of the Windows NT system on which ADSM for Windows NT is running. The address is needed for configuring the IPX/SPX protocol on an Windows NT server. This command is run on the system on which you will install your clients.

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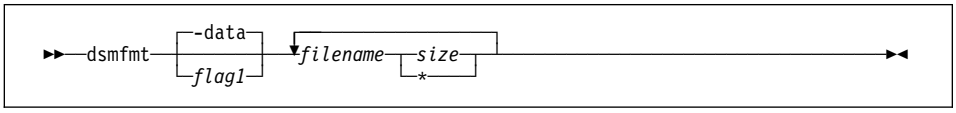
DSMFMT (Formatting Files for the Server)

The DSMFMT utility is used to allocate the file space needed for database, recovery log, and storage pool volumes.

Note: For performance reasons, allocate database, recovery log, and storage pool volumes on disk drives that reside on the ADSM server machine, not on remotely mounted file systems.

This utility is delivered as part of the ADSM server; it is not a server command. The parameters are not case-sensitive and do not have abbreviations.

Syntax



Parameters

flag1

Specifies the intended use of the files to be formatted. The default is -data. This option is positional and is not case-sensitive. Possible values are:

-db
Specifies the file is for a database volume.

-log
Specifies the file is for a recovery log volume.

-data
Specifies the file is for a storage volume in data storage.

filename

Specifies the name of the file to be formatted. This filename must not already exist.

size

Specifies the size (in megabyes) of the file to be formatted, expressed as a positive integer or an asterisk (*).

- For database and recovery log files, the allocated file size is always a multiple of 4MB (plus an additional 1MB for overhead). The minimum file sizes are 9MB for the recovery log and 5MB for the database. For data storage files, the minimum size is 1MB.
- If you use an asterisk (*) for the file size, the size will equal the remaining space minus 32KB. The minimum requirements for size must still be met.

Usage Notes

- The DSMFMT utility does not destroy or modify an existing file.
- If a file does not format, DSMFMT issues an error message for that file and then continues to format the next file on the list.

Examples

An example of formatting two recovery log volumes each having 9 megabytes of storage follows:

Command: `dsmfmt -log logvol1 9 logvol2 9`

```
ADSTAR Distributed Storage Manager
ADSM for Windows NT Extent/Volume Formatting Program


Allocated space for logvol1: 9437184 bytes
Allocated space for logvol2: 9437184 bytes
```

An example of formatting a database volume having 5 megabytes of storage follows:

Command: `dsmfmt -db dbvol1 5`

```
ADSTAR Distributed Storage Manager
ADSM for Windows NT Extent/Volume Formatting Program


Allocated space for dbvol1: 5242880 bytes
```

An example of formatting storage volumes `backvol` and `archvol` having 21MB and 8MB of storage, respectively, follows:

Command: `dsmfmt -data backvol 21 archvol 8`

```
ADSTAR Distributed Storage Manager
ADSM for Windows NT Extent/Volume Formatting Program


Allocated space for backvol: 22020096 bytes
Allocated space for archvol: 8388608 bytes
```

DSMLABEL (Labeling Volumes)

Use the DSMLABEL utility to write labels to storage volumes in preparation for using them with the ADSM server. The utility works with all tape drives, whether they are stand-alone units or are in libraries. The parameters are not case-sensitive and do not have abbreviations.

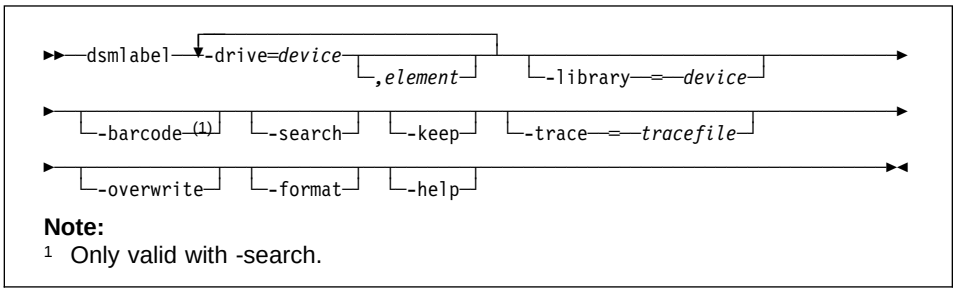
Attention: Remove existing data prior to relabeling a volume; data is lost when relabeling. Before relabeling a volume that has been in use by ADSM, you can either move the data via the MOVE DATA command or delete the contents of the volume via the DELETE VOLUME command with the DISCARDDATA parameter equal to YES.

REMOVABLEFILE volumes are labelled with either the device manufacturer's utilities or the operating system utilities, (the operating system utilities are the label command for the command line and the disk administrator program for the GUI interface).

It is possible to encounter an error when DSMLABEL is processing and the ADSM server is simultaneously accessing drives that DSMLABEL is using. To avoid this error perform either of the following:

- Be sure that the ADSM server is not running during DSMLABEL processing.
- Temporarily delete from ADSM the drive that is being used by DSMLABEL. If the drive is deleted for a long time, decrease the mount limit for the device class associated with this drive, See the UPDATE DEVCLASS command for more information.

Syntax



Note:
1 Only valid with -search.

Parameters

-drive=*device*
Specifies a drive to use. You must specify at least one drive. If the drive is within a multidrive SCSI library, the drive's element address must also be provided. The maximum number of drives you can specify is eight.

element
This parameter is optional and is used only if you specify a drive within a multidrive SCSI library. It must be preceded by a comma, with no spaces between the device name and the element address. For element addresses, see *ADSM Administrator's Guide*.

-library=*device*

Specifies a library to use for volume labeling. This parameter is optional. If it is omitted, you will be prompted to manually load and unload volumes. If specified, it indicates that the drives reside in a library and can be accessed using a robotic device. Only one library can be specified.

The labeling utility only attempts to label volumes that reside in the INSERT category in the library. All other volumes are ignored by the DSMLABEL utility. This precaution prevents the inadvertent destruction of that data on volumes being actively used by other systems connected to the library device.

-barcode

Specifies to utilize the bar code reader in the SCSI device. This parameter is optional.

A barcode scan of all cartridges will be executed. The barcode string for a given cartridge will be used as that cartridge volume-id, and the user will not be prompted for the string. If a barcode label is not found on a cartridge, or it is not readable, then the cartridge will be skipped and processing will continue with the next one. This is so the processing of the entire library's cartridges will not be interupted for a single failure.

-search

Causes the labeling utility program to search the specified library for all usable volumes and to write a label to each one found. This parameter is optional; it has no effect unless the -library parameter is specified. If it is omitted, and the -library parameter is specified, the operator is prompted to manually load and remove volumes from the library's entry/exit port, if available. If the library is not equipped with an entry/exit port, the operator is prompted to load and unload volumes from the drives in the library.

-keep

This option causes the program to keep volumes inside the library after they are labeled. If it is omitted, volumes are returned to the library's entry/exit port after being successfully labeled. If the library is not equipped with an entry/exit port, the operator is prompted to remove volumes from the drive. This option has no effect unless the -library parameter is specified.

-trace=*tracefile*

Creates a trace file for use by IBM service personnel. This parameter is optional and should be used only if there is a problem with the program.

-overwrite

Allows the program to overwrite an existing label. This parameter is optional. If omitted, any volume with a preexisting label is rejected and the next unlabeled volume is requested.

-format

Indicates that you want the media to be formatted. The only device type for which this option has an effect is a 5 1/4-inch optical drive.

DSMLABEL

-help

Displays the online help information. If you enter `dsmlabel` without any parameters, you will automatically receive the help screen information.

Examples

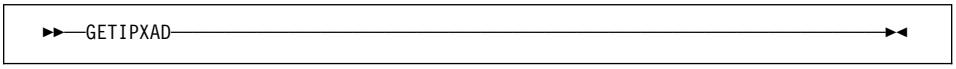
Below are examples of labeling a tape on a drive and labeling various tapes on a drive in a library.

```
dsmlabel -drive=mt3.0.0.0
dsmlabel -drive=mt3.0.0.0 -library=lbl.0.0.0 -keep -overwrite
dsmlabel -drive=mt3.0.0.0 -library=lbl.0.0.0 -search
```

GETIPXAD (Get the IPX/SPX Address)

Use the GETIPXAD command to display the IPX/SPX address of the Windows NT system on which ADSM for Windows NT is running. This address is needed for configuring the IPX/SPX protocol on a Windows NT server. The command is run on the system on which you will install your clients.

Syntax



Examples

The output is an IPX/SPX address similar to the following:

```
00000000000021249336
```

where:

00000000 is the network number

000021249336 is the node address

The information displayed below should be entered in your client options file to allow the client to communicate with the server:

```
COMMMETHOD   IPXSPX
IPXServeraddress  00000000000021249336
IPXSOcket         8522
```

The server is configured by putting the following statement into the server options file:

```
COMMETHOD IPXSPX
```

For example, the default socket number of 8522 can be changed within the server options file by entering:

```
IPXSocket  8510
```

GETIPXAD

Appendix B. Recovery Log Extension Command

The following command is used to extend the size of the recovery log in situations that the server is halted due to an out-of-space (over committed) condition. The command is:

DSMSERV EXTEND LOG

Use to extend the size of the recovery log.

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DSMSERV EXTEND LOG

DSMSERV EXTEND LOG (Emergency Log Extension)

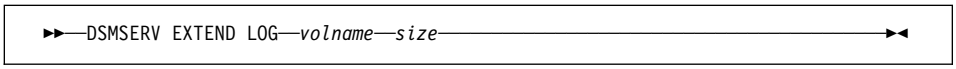
Use the DSMSERV EXTEND LOG command to extend the size of the recovery log when you require additional log space to successfully restart the server.

When using the ADSM server with the logmode set to rollforward, it is possible for the server to run out of recovery log space before database operations can complete successfully. This out-of-space (over-committed) condition can occur when the recovery log is too small or a database backup trigger is set so that the database backup log full percentage is too high. In either of these scenarios, you may either need to halt the server without sufficient recovery log space available for a successful server restart or the server will issue the following message and then halt:

```
ANR9999D LOGSEG(415) Log Space Has Been Over committed.
```

In these situations additional recovery log space is required to restart the server. By using DSMSERV EXTEND LOG, additional space is allocated allowing for a successful server restart. Once the server is running, a database backup can occur, thereby freeing additional recovery log space.

Syntax



Parameters

volname

Specifies the name of a new, formatted volume available for use as the recovery log extension. This parameter is required. Use the DSMFMT utility to format the new volume.

size

Specifies the size, in megabytes, of the recovery log extension. This parameter is required. The specified size should be a multiple of 4 and at least 1 MB less than the actual volume size of the volume specified in the volname parameter. For example, if the volume specified in the volname parameter is 5MB, the entered value for the size parameter is 4.

Usage Notes

- The DSMFMT utility formats new volumes to use with the DSMSERV EXTEND LOG command.
- The server can be restarted after successfully extending the recovery log. At this time, the size of the recovery log, the database backup trigger full percentage, or both need to be adjusted to allow for successful future database backups.

Examples

Task

Assume that the server has used all available recovery log space; therefore, a database backup operation cannot successfully complete. The server has halted and during server restart, insufficient recovery log space is available for the restart. Using the DSMFMT utility, a newly formatted 21MB volume is made available for a recovery log extension. The volume name is reclog.new. The task is to extend the recovery log using this newly formatted volume. Once the recovery log extension completes, the server can be restarted into a production mode.

Command: `dsmserv extend log reclog.new 20`

Output:

```
ANR7800I DSMSERV generated at 11:15:01 on Jun  3 1996.
ANR0200I Recovery log assigned capacity is 8 megabytes.
ANR0201I Database assigned capacity is 4 megabytes.
ANR0306I Recovery log volume mount in progress.
ANR0307I Recovery log extend in progress; 4 megabytes of 20 formatted.
ANR0307I Recovery log extend in progress; 8 megabytes of 20 formatted.
ANR0307I Recovery log extend in progress; 12 megabytes of 20 formatted.
ANR0307I Recovery log extend in progress; 16 megabytes of 20 formatted.
ANR0307I Recovery log extend in progress; 20 megabytes of 20 formatted.
ANR2268I Recovery log assigned capacity has been extended.
ANR7835I The ADSM thread 1 (tid 2) terminated in response to server
 shutdown.
ANR7835I The ADSM thread 4 (tid 5) terminated in response to server
 shutdown.
ANR7835I The ADSM thread 5 (tid 6) terminated in response to server
 shutdown.
ANR0991I ADSM server shutdown complete.
```

DSMSERV EXTEND LOG

Appendix C. Database Recovery Commands

The following commands are used to recover your server database if a catastrophic error occurs, and you have a backup copy of the database available. In alphabetical order, the commands are:

DSMSERV DISPLAY DBBACKUPVOLUME
Use to display information about database backup volumes when volume history information is not available.

DSMSERV DISPLAY DBVOLUMES
Use to display information about all database volumes known to the server.

DSMSERV DISPLAY LOGVOLUMES
Use to display information about all recovery log volumes known to the server.

DSMSERV RESTORE DB
Use to restore a database volume or an entire database, either to its most current state or to a specific point in time. The command uses backup versions of the database created explicitly via the BACKUP DB command or automatically via the database backup trigger.

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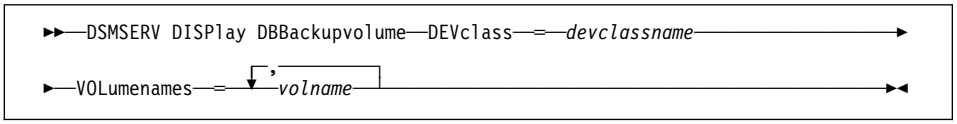
DSMSERV DISPLAY DBBACKUPVOLUME (Display Database Backup Volume Information)

Use the DSMSERV DISPLAY DBBACKUPVOLUME command to display information about database backup volumes when volume history information is not available.

Syntax



Parameters

DEVclass=*devclassname*

Specifies the name of the sequential access device class to use. The server options file that is created during installation includes a DEVCONFIG option that specifies an external file named devcnfg.out. You can specify other device configuration files with additional DEVCONFIG options.

Any device class you specify must be defined in an external file specified with the DEVCONFIG option in the dsmserv.opt file. This parameter is required.

If the device configuration file does not exist or has been lost, you can manually create one. See *ADSM Administrator's Guide*.

VOLumenames=*volname*

Specifies the database backup volumes for which you want to display information. This parameter is required. You can specify more than one database backup volume by separating each volume name with a comma, with no intervening spaces.

Examples

Task

Display information about the full database backup volume, 33778195.dbb and the incremental database backup volume, 33868064.dbb.

Command:
```
dsmserv display dbbackupvolume devclass=dbfile
volumenames=33778195.dbb,33868064.dbb
```

Output:

```
ANR7800I DSMSERV generated at 13:54:04 on Jun  1 1996.
ANR8324I FILE volume L:\DBBACKUP\33778195.DBB is expected to be
mounted (R/O).
ANR8324I FILE volume L:\DBBACKUP\33868064.DBB is expected to be
mounted (R/O).
ANR8340I FILE volume L:\DBBACKUP\33778195.DBB mounted.
ANR1363I Input volume L:\DBBACKUP\33778195.DBB opened (sequence
number 2).
ANR1364I Input volume L:\DBBACKUP\33778195.DBB closed.

       Date/Time: 06/02/1996 22:00:09
     Volume Type: BACKUPFULL
   Backup Series: 2
Backup Operation: 0
      Volume Seq: 2
ANR8340I FILE volume L:\DBBACKUP\33868064.DBB mounted.
    Device Class: DBFILE
     Volume Name: L:\DBBACKUP\33778195.DBB


ANR1363I Input volume L:\DBBACKUP\33868064.DBB opened (sequence number 1).
ANR1364I Input volume L:\DBBACKUP\33868064.DBB closed.

       Date/Time: 06/03/1996 23:01:03
     Volume Type: BACKUPINCR
   Backup Series: 2
Backup Operation: 2
      Volume Seq: 1
    Device Class: DBFILE
     Volume Name: L:\DBBACKUP\33868064.DBB
```

where:

Date/Time
The date and time that backup data was recorded on the volume.

Volume Type
The type of backup data on the volume, that is, whether the backup recorded on the volume is a full or an incremental backup.

Backup Series
The identifying number of the backup series of which this volume is a part. Each backup series consists of a full backup and all incremental backups that apply to that full backup, up to the next full backup of the database.

Backup Operation
The operation number of this backup volume, within the backup series. The full backup within a backup series is operation 0. The first incremental backup for that full backup is operation 1, the second incremental backup is operation 2, and so on.

DSMSERV DISPLAY DBBACKUPVOLUME

Volume Seq
The sequence, or position, of the volume within the backup series. Volume sequence 1 identifies the first volume used for the first operation (a full backup), and so on. For example, if the full backup occupies three volumes, these volumes are identified as volume sequence 1, 2, and 3, respectively. The first volume of the next operation (the first incremental backup) is then volume sequence 4.

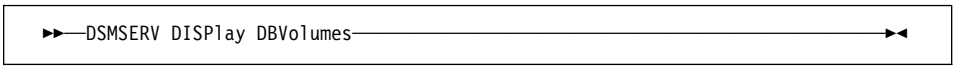
Device Class
The name of the device class that this volume is assigned to.

Volume Name
The name of the volume.

DSMSERV DISPLAY DBVOLUMES (Display Database Volume Information)

Use the DSMSERV DISPLAY DBVOLUMES command to display information about all database volumes known to the ADSM server.

Syntax



Parameters

None.

Examples

Task

Display information about all database volumes.

Command: `dsmserv display dbvolumes`

Output:

```
Volume Name (Copy 1): D:\ADSMSERV\SERVER\DB1.DSM
         Copy Status: Sync'd
Volume Name (Copy 2): D:\ADSMSERV\SERVER\DB3.DSM
         Copy Status: Sync'd
Volume Name (Copy 3):
         Copy Status: Undefined
Available Space (MB): 4
Allocated Space (MB): 4
     Free Space (MB): 0
```

where:

Volume Name (Copy *n*)
Specifies the name of the database volume. The output displays the status of the three possible volume copies (Copy 1, Copy 2, and Copy 3).

Copy Status
Specifies the status of the database volume. Possible values are:

Offline
The volume is varied offline.

Stale
The volume is not synchronized with the other volumes in the database and cannot be used for storage.

Sync'd
The volume is synchronized with the other volumes in the database and can be used for storage.

Undefined
No volume has been defined.

Available Space (MB)
Specifies the total amount of space that is available, both allocated and free, for the database volume, in megabytes.

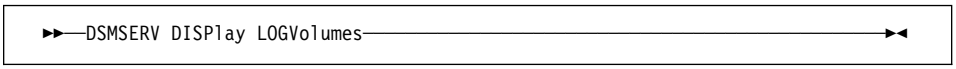
Allocated Space
Specifies the amount of space allocated to the database volume, in megabytes.

Free Space
Specifies the amount of unassigned space for this mirror set that can be allocated for use, in megabytes.

DSMSERV DISPLAY LOGVOLUMES (Display Recovery Log Volume Information)

Use the DSMSERV DISPLAY LOGVOLUMES command to display information about all recovery log volumes known to the ADSM server.

Syntax



Parameters

None.

Examples

Task

Display information about all recovery log volumes.

Command: `dsmserv display logvolumes`

Output:

```
Volume Name (Copy 1): D:\ADSMSERV\SERVER\LOG1.DSM
         Copy Status: Sync'd
Volume Name (Copy 2): D:\ADSMSERV\SERVER\LOG3.DSM
         Copy Status: Sync'd
Volume Name (Copy 3):
         Copy Status: Undefined
Available Space (MB): 8
Allocated Space (MB): 8
     Free Space (MB): 0
```

where:

Volume Name (Copy *n*)
Specifies the name of the recovery log volume. The output displays status of the three possible volume copies (Copy 1, Copy 2, and Copy 3).

Copy Status
Specifies the status of the recovery log volume. Possible values are:

Offline
The volume is varied offline.

Stale
The volume is not synchronized with the other volumes in the recovery log and cannot be used for storage.

Sync'd
The volume is synchronized with the other volumes in the recovery log and can be used for storage.

DSMSERV DISPLAY LOGVOLUMES

Undefined
No volume has been defined.

Available Space (MB)
Specifies the total amount of space that is available, both allocated and free, for the recovery log, in megabytes.

Allocated Space
Specifies the amount of space allocated for the recovery log, in megabytes.

Free Space
Specifies the amount of unassigned space in the recovery log that can be allocated for use, in megabytes.

DSMSERV RESTORE DB (Restore the Database)

Use the DSMSERV RESTORE DB command to:

- Restore an ADSM database to its most current state
- Restore a single ADSM database volume to its most current state
- Restore an ADSM database to a specific point in time when the volume history file is available
- Restore an ADSM database to a specific point in time when the volume history file is not available

Attention: If the original database or recovery log volumes are available, you issue only the DSMSERV RESTORE DB command. However, if those volumes have been lost, you must first issue the DSMSERV INSTALL command to initialize the database and recovery log, then issue the DSMSERV RESTORE DB command.

The DSMSERV RESTORE DB command uses backup versions of the database you create using the BACKUP DB command or backup versions created automatically by ADSM based on the settings you specify with the DEFINE DBBACKUPTRIGGER command. You cannot use the DSMSERV RESTORE DB command to load an offline salvage dump created with the DSMSERV DUMP DB command.

To restore an ADSM database, you can use one of the following:

Roll-forward recovery
: Restores the database or a single database backup volume to its most current state by first loading the most recent database backup series (the last full backup and any incremental backups that apply to that full backup), and then using recovery log records to apply any changes made to the database since the last backup was created

Point-in-time recovery
: Restores the database to the point in time when a specific backup version was created

After you perform a point-in-time recovery, you must use the AUDIT VOLUME command to audit all DISK volumes and to check for and resolve any inconsistencies between database information and storage pool volumes. If you saved a copy of the volume history file before restoring the database, examine that file to find out about sequential access storage pool volumes that were deleted or reused since the point in time to which the database was restored.

The syntax and parameters for the DSMSERV RESTORE DB command vary depending on the type of database recovery you want to perform. The types are:

- Restoring a database to its most current state
- Restoring a single database volume to its most current state
- Restoring a database to a specific point in time—volume history file available
- Restoring a database to a specific point in time—volume history file unavailable

DSMSERV RESTORE DB

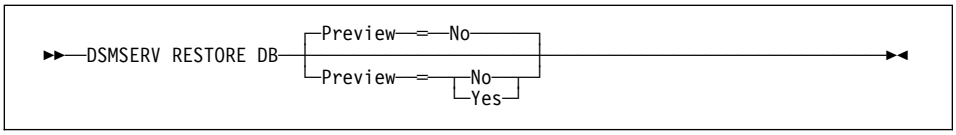
Syntax for Restoring a Database to Its Most Current State

You can perform a roll-forward recovery for an entire database, using the syntax that follows, if the following are true:

- The log mode was set to ROLLFORWARD continuously from the time that the last backup series was created, until the time that the database was damaged or lost.
- The recovery log is available and intact.
- A volume history file is available and intact.

When you enter the DSMSERV RESTORE DB command with no parameters, ADSM restores the database to its most current state as follows:

1. Reads the recovery log to determine which volumes contain the most recent database backup series.
2. Requests volume mounts to load the most recent backup series (the last full backup and any incremental backups that apply to that full backup). The requests for mounts and the loading continue until the entire backup series is loaded.
3. Uses the recovery log to update the database to its most current state.



Parameters for Restoring a Database to Its Most Current State

Preview=*value*

Specifies whether you want ADSM to display a list of the volumes needed to restore the database to its most current state, without performing the restore operation. This parameter is optional. The default value is NO. Possible values are:

No

Specifies that you want to restore the database.

Yes

Specifies that you only want to display the list of database backup volumes, without actually restoring the database.

Syntax for Restoring a Single Database Volume to Its Most Current State

You can perform a roll-forward recovery for a single database volume, using the syntax that follows, if both of the following are true:

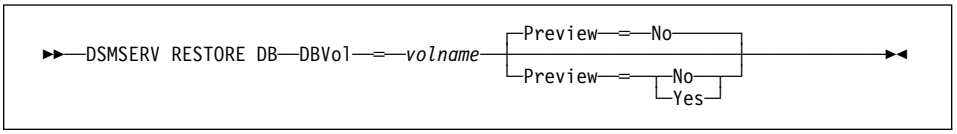
- The log mode was set to ROLLFORWARD continuously from the time that the last backup series was created, until the time that the database volume was damaged or lost.
- The recovery log is available and intact.

DSMSERV RESTORE DB

When you use the DSMSERV RESTORE DB command to restore a single database volume, ADSM performs the same steps as those described in "Syntax for Restoring a Database to Its Most Current State," except that it restores only the pages that correspond to the database volume specified.

When ADSM restores a single database volume that is mirrored, only one copy of the mirrored volumes is restored. You must use the VARY command with the ONLINE parameter to make the mirrored volumes available again. ADSM then synchronizes the mirrored volumes with the restored volume.

The DBVOL option applies to the current database configuration only.



Parameters for Restoring a Single Database Volume to Its Most Current State

DBVol=*volname*

Specifies the name of the database volume to restore. This parameter is required.

If the database volume is mirrored, you can specify the name of any volume that contains a mirrored copy of the volume you want to restore. Use the DSMSERV DISPLAY DBVOLUMES command to find the volume names.

Preview=*value*

Specifies whether you want ADSM to display a list of the database backup volumes needed to restore the database volume you specify, without performing the restore. This parameter is optional. The default value is NO. Possible values are:

No

Specifies that you want to restore the database volume.

Yes

Specifies that you only want to display the list of database backup volumes needed, without actually restoring the database.

Syntax for Restoring a Database to a Specific Point in Time—History File Available

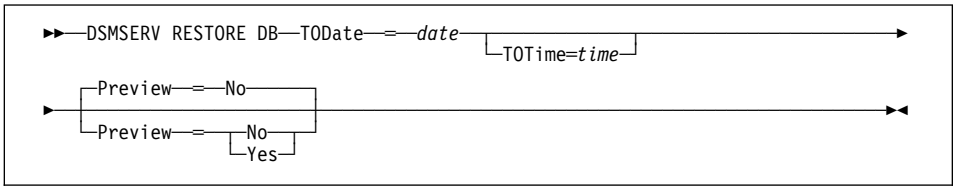
If a backup copy of volume history information is available, you can restore a database to a specific point in time using the syntax defined below. The server options file that is created during installation includes VOLUMEHISTORY and DEVCONFIG options that specify default files named volhist.out and devcnfg.out, respectively. The server program must be able to open and read the files successfully when running the DSMSERV RESTORE DB command.

DSMSERV RESTORE DB

If the volume history file is not available, and you want to perform a point-in-time recovery, you can use the recovery method described in “Syntax for Restoring a Database to a Specific Point in Time—History File Unavailable” on page 729.

If a device configuration file is not available, you can manually create one. See *ADSM Administrator's Guide*.
ADSM restores the database as follows:

1. Uses the volume history file to locate the database backup volumes needed
2. Requests mounts and loads data from database backup volumes as required to restore the database volume to the specified time



Parameters for Restoring a Database to a Specific Point in Time—History File Available

TODate=*date*
Specifies the date to which to restore the database. This parameter is required. Possible values are:

MM/DD/YYYY
Specifies that you want to restore a database using the most recent backup series that was created prior to a specific date.

TODAY
Specifies that you want to restore a database using the most recent backup series that was created prior to the current date.

TODAY–*numdays* **or** –*numdays*
Specifies that you want to restore a database using the most recent backup series that was created prior to a specific number of days before the current date.

For example, to restore a database using the most recent backup series that was created prior to one week ago, you can enter either of the following:

```
dsmserv restore db todate=today-7
dsmserv restore db todate=-7
```

TOTime=*time*
Specifies the time of day to which to restore the database. This parameter is optional. The default is the end of the day (23:59:59). Possible values are:

HH:MM:SS
Specifies that you want to restore the database using the last backup series created on or before a specific time on the specified date.

NOW
Specifies that you want to restore the database using a backup series created on or before the current time on the specified date.

For example, if you issue the DSMSERV RESTORE DB command at 9:00 with TOTIME=NOW, ADSM restores the database using the last backup series created on or prior to 9:00 on the specified date.

NOW–*numhours:numminutes* **or** –*numhours:numminutes*
Specifies that you want to restore the database using a backup series created on or before the current time minus a specified number of hours (and optionally, minutes) on the specified date.

For example, if you issue the DSMSERV RESTORE DB command at 9:00 with TOTIME=NOW–3:30 or TOTIME=–3:30, ADSM restores the database using the last backup series created on or prior to 5:30 on the specified date.

The following are sample commands to perform that task:

```
dsmserv restore db todate=today-7 totime=now-3:30
dsmserv restore db todate=-7 totime=-3:30
```

Preview=*value*
Specifies whether you want ADSM to display a list of the volumes needed to restore the database to the date and time you specify, without actually performing the restore operation. This parameter is optional. The default value is NO. Possible values are:

No
Specifies that you want to perform the restore operation.

Yes
Specifies that you only want ADSM to display the list of volumes needed to restore the database to the date and time you specify, without actually performing the restore operation.

Syntax for Restoring a Database to a Specific Point in Time—History File Unavailable

If the volume history file is unavailable, you can use one or more DSMSERV RESTORE DB commands with the syntax shown below to restore an ADSM database to a specific point in time.

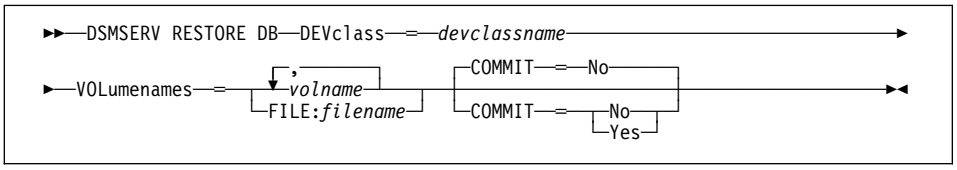
For example, if you need to load a full backup *and* one or more incremental backups, you can issue a DSMSERV RESTORE DB command to restore the full backup, then issue an additional DSMSERV RESTORE DB command for each incremental backup.

DSMSERV RESTORE DB

When you use multiple DSMSERV RESTORE DB commands, you must specify COMMIT=NO for each command except the last one you issue. For the last DSMSERV RESTORE DB command, you must specify COMMIT=YES to place the database in a consistent and usable state.

If you issue a DSMSERV RESTORE DB command with a COMMIT=NO parameter, and you decide not to load additional incremental backups, you must reissue the last DSMSERV RESTORE DB command you issued and specify COMMIT=YES.

If you issue a DSMSERV RESTORE DB command with a COMMIT=YES parameter, and you decide that you need to load one or more additional incremental backups, you must reissue all of the DSMSERV RESTORE DB commands in order, starting with the restore of the full backup and specifying COMMIT=NO for each one. Then, you can enter one or more additional DSMSERV RESTORE DB commands, and specify COMMIT=YES for the last one.



Parameters for Restoring a Database to a Specific Point in Time—History File Unavailable

DEVclass=*devclassname*

Specifies the name of the sequential access device class to use. Any device class you specify for a restore must be defined in an external device configuration file specified with the DEVCONFIG option in the dsmserv.opt file. This parameter is required.

If the device configuration file has been lost, you can manually create one. See *ADSM Administrator's Guide*.

VOLumenames=*volname*

Specifies the backup volumes to use to restore the database. This parameter is required. Possible values are:

volname

Specifies the names of one or more volumes to use to restore the database. You can specify more than one backup volume by separating each volume name with a comma, with no intervening spaces. You must list the volumes in the order in which the backup was stored.

For example, if you want to use the backup volumes TAPE01, TAPE02, and TAPE03, specify the following:

```
VOLUMENAMES=TAPE01,TAPE02,TAPE03
```

FILE:*filename*
Specifies the name of a file that contains a list of the volumes to use to restore the database. The file name can be any valid Windows NT file name. In the file, each volume name must be on a separate line. You must list the volumes in the order in which the backup was stored.

For example, if you want to use the backup volumes TAPE01, TAPE02, and TAPE03, create a file named VOLLIST that contains these lines:

```
TAPE01
TAPE02
TAPE03
```

You can then specify the volumes for the restore command as follows:

```
VOLUMENAMES=FILE:VOLLIST
```

COMMIT=*commitvalue*
Specifies whether this is the last restore command you intend to use to restore the database. This parameter is optional. The default value is NO. Possible values are:

No
Specifies that you intend to issue one or more additional DSMSERV RESTORE DB commands that list additional volumes. The database remains in an inconsistent and unusable state until you issue a DSMSERV RESTORE DB command with a COMMIT=YES parameter.

Specify COMMIT=NO if you plan to load additional backup volumes that contain one or more incremental backups.

Yes
Specifies that this is the last restore command you intend to use to restore the database. With this command, you are specifying the last backup volumes you want to use for the restore operation.

Specify COMMIT=YES only when you want to restore the database to the end of the last volume specified, and you do not plan to restore any additional backup volumes that contain incremental backups.

DSMSERV RESTORE DB

Examples

Task 1

Preview the list of volumes required to restore the database to its most current state.

Command: `dsmserv restore db preview=yes`

Output:

```
ANR7800I DSMSERV generated at 13:52:01 on June 1, 1996
ANR0200I Recovery log assigned capacity is 16 megabytes.
ANR0201I Database assigned capacity is 32 megabytes.
ANR0306I Recovery log volume mount in progress.
ANR4620I Database backup series 7 operation 0 device class DBFILE.
ANR4622I   Volume 1: L:\DBBACKUP\33778195.DBB.
ANR4620I Database backup series 7 operation 1 device class DBFILE.
ANR4622I   Volume 1: L:\DBBACKUP\33868064.DBB.
```

Task 2

Restore the database to its state on June 01, 1996 at 2 pm. The volume history file is available.

Command: `dsmserv restore db todate=06/17/1996 totime=14:30:07 preview=no`

Output:

```
ANR7800I DSMSERV generated at 11:15:01 on Jun  3 1996.
ANR0200I Recovery log assigned capacity is 28 megabytes.
ANR0201I Database assigned capacity is 4 megabytes.
ANR4600I Processing volume history file volhist.
ANR8324I FILE volume L:\DBBACKUP\33778195.DBB is expected to be
mounted (R/O).
ANR8324I FILE volume L:\DBBACKUP\33868064.DBB is expected to be
mounted (R/O).
ANR4620I Database backup series 4 operation 0 device class FILE.
ANR4622I   Volume 1: L:\DBBACKUP\33778195.DBB.
ANR4620I Database backup series 4 operation 1 device class FILE.
ANR4622I   Volume 1: L:\ADSMV2\33868064.DBB.
ANR4634I Starting point-in-time database restore to date 06/17/1996
14:30:07.
ANR8340I FILE volume L:\DBBACKUP\33778195.DBB mounted.
ANR1363I Input volume L:\DBBACKUP\33778195.DBB opened
(sequence number 1).
ANR4646I Database capacity required for restore is 4 megabytes.
ANR4638I Restore of backup series 4 operation 0 in progress.
ANR0300I Recovery log format started; assigned capacity 28 megabytes.
ANR0301I Recovery log format in progress; 4 megabytes of 28.
ANR0301I Recovery log format in progress; 8 megabytes of 28.
ANR0301I Recovery log format in progress; 12 megabytes of 28.
ANR0301I Recovery log format in progress; 16 megabytes of 28.
ANR0301I Recovery log format in progress; 20 megabytes of 28.
ANR0301I Recovery log format in progress; 24 megabytes of 28.
ANR1364I Input volume L:\DBBACKUP\33778195.DBB closed.
ANR4640I Restored 101 pages from backup series 4 operation 0.
ANR8340I FILE volume L:\DBBACKUP\33868064.DBB mounted.
ANR1363I Input volume L:\DBBACKUP\33868064.DBB opened
(sequence number 1).
ANR4638I Restore of backup series 4 operation 1 in progress.
ANR0301I Recovery log format in progress; 28 megabytes of 28.
ANR0302I Recovery log formatting took 21106 milliseconds.
ANR4640I Restored 10 pages from backup series 4 operation 1.
ANR0303I   Format rate:         339.6  pages/second.
ANR0304I   Page service time:     2.9  ms.
ANR0305I Recovery log format complete.
ANR0306I Recovery log volume mount in progress.
ANR4641I Sequential media log redo pass in progress.
ANR4642I Sequential media log undo pass in progress.
ANR1364I Input volume L:\DBBACKUP\33868064.DBB closed.
ANR4644I A full backup will be required for the next database backup
operation.
ANR4635I Point-in-time database restore complete, restore date
06/17/1996 14:30:07.
```

DSMSERV RESTORE DB

Appendix D. Database Salvage Commands

The following commands are used to re-establish your server database if a catastrophic error occurs, and the database cannot be recovered effectively using the DSMSERV RESTORE DB command. These commands are presented in the order in which they must be executed, as follows:

DSMSERV DUMPDB
Use to dump the damaged database onto a new database.

DSMSERV INSTALL
Use to initialize the server's database and recovery log.

DSMSERV LOADDB
Use to reload the database.

DSMSERV AUDITDB
Use to ensure that the database is returned to a consistent state after it is reloaded.

The DSMSERV DUMPDB and DSMSERV LOADDB commands use the device configuration file. The server options file that is created during installation includes a DEVCONFIG option that specifies an external file named devcnfg.out. This file contains a copy of the device class, library, and drive definitions that exist in your database. You can also create the file by using the BACKUP DEVCONFIG command. If no device configuration file has been maintained or created, you must manually create one with an editor. For information on how to create a device configuration file manually, see *ADSM Administrator's Guide*.

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DSMSERV DUMPDB (Dump the Database)

Use the DSMSERV DUMPDB command as the first step in dumping, reinitializing, and reloading the server database if a catastrophic error occurs (recovery log corruption, for example), and the DSMSERV RESTORE DB command cannot be used. No other server activity is allowed during DSMSERV DUMPDB command processing.

After DSMSERV DUMPDB processing is complete, perform the following steps:

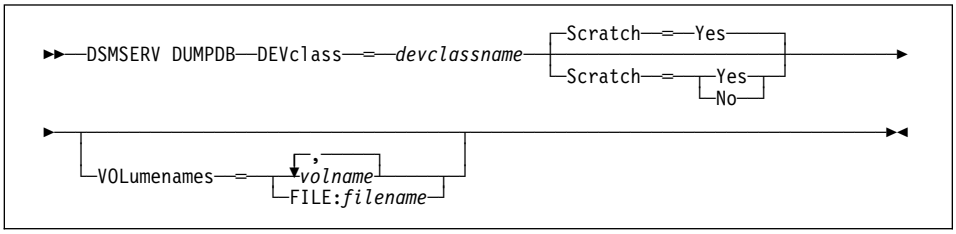
1. Issue the DSMSERV INSTALL command to reinitialize the database and recovery log.
2. Issue the DSMSERV LOADDB command to reload the database.
3. If necessary, issue the DSMSERV AUDITDB command to locate and correct any database inconsistencies.

   Note: A message at the end of the output from the DSMSERV LOADDB command indicates whether a DSMSERV AUDITDB command is required. If the server was quiesced when it was halted, the DSMSERV AUDITDB command is not required.

The DSMSERV DUMPDB command requires a device configuration file. The server options file that is created during installation includes a DEVCONFIG option that specifies a default file named devcnfg.out. You can specify other device configuration files with additional DEVCONFIG options. The device configuration file contains a copy of the device class, library, and drive definitions that exist in your database.

Because the DSMSERV DUMPDB command requires a device configuration file, the file specified with the DEVCONFIG option must be available and must contain at least the device class specified for use with this command, along with any necessary library and drive definitions.

Syntax



Parameters

DEVclass=*devclassname*

Specifies the device class to which the database information is to be written. This parameter is required.

You must have a device configuration file that includes the definition for this device class, and any libraries and drives needed. The server options file that is created during installation includes a DEVCONFIG option that specifies a default

file named devcnfg.out. You can specify other device configuration files with additional DEVCONFIG options.

The device configuration file should be available if you had previously included a DEVCONFIG option in the server options file and then started the server. If the device configuration file has been lost, do one of the following:

- If the server can be restarted, restart the server and issue the BACKUP DEVCONFIG command.
- If the server cannot be restarted, create the device configuration file manually with an editor. For information on how to create a device configuration file manually, see *ADSM Administrator's Guide*.

Scratch=*scratchvalue*

Specifies that scratch volumes can be used for dumping the database. The default value is YES.

Yes

Specifies that scratch volumes can be used for dumping the database.

Note: You cannot specify SCRATCH=YES if the device class you specified with this command is associated with a SCSI library.

To determine the library type of the library, issue the QUERY LIBRARY command and specify FORMAT=DETAILED.

If you include a list of volumes on the VOLUMENAMES parameter, then scratch volumes are used only if there is not enough space to dump the database on the volumes specified. If the device type associated with the specified device class is FILE, file names for the scratch volumes are generated based on a time stamp.

No

Specifies that scratch volumes cannot be used for dumping the database. You must include a list of volumes on the VOLUMENAMES parameter to contain all of the database data.

VOLumenames=*volname*

Specifies one or more volumes to use to dump the database. This parameter is optional, but must be specified if SCRATCH=NO. If you do not specify this parameter and SCRATCH=YES is specified or assumed, scratch volumes are used.

ADSM does not record the use of volumes by the DSMSERV DUMPDB command in the volume history file. Therefore, you must record the volume names used and specify them in the exact same order on a future DSMSERV LOADDB command.

Possible values are:

volname

Specifies the names of one or more volumes to use to dump the database. You can specify more than one volume by separating each volume name

with a comma, with no intervening spaces. You must list the volumes in the order in which you want the volumes to be used.

For example, if you want to use the volumes TAPE01, TAPE02, and TAPE03, specify the following:

```
VOLUMENAMES=TAPE01,TAPE02,TAPE03
```

FILE:*filename*
Specifies the name of a file that contains a list of the volumes to use to dump the database. The file name can be any valid Windows NT file name. In the file, each volume name must be on a separate line. You must list the volumes in the order in which you want the volumes to be used.

For example, if you want to use the volumes TAPE01, TAPE02, and TAPE03, create a file named VOLLIST that contains these lines:

```
TAPE01
TAPE02
TAPE03
```

You can then specify the volumes for the dump command as follows:

```
VOLUMENAMES=FILE:VOLLIST
```

Usage Notes

Consider the following factors before dumping the database:

- When dumping the database data to sequential access media, you need to estimate how much media is required to hold the data. If the server cannot initialize, a reasonable size estimate is equal to the size of your existing database volumes.

  If you can bring the server up, you can estimate the size by following these steps:

  Step 1. Issue the QUERY DB command.

  Step 2. From the output of the QUERY DB command, multiply the number of used pages by the page size (4096 bytes) to determine the number of bytes currently occupied by the database.

  Step 3. Divide the product of step 2 by the capacity of a single medium to determine an estimate of the number of media required.

- Record the order in which the volumes are mounted during dump processing. The volume order is important during recovery processing so that the volumes can be remounted in the same order. To ensure that volumes are mounted in the correct order, prelabel the volumes with information that indicates the order in which they have been mounted. For example, label tapes as DSM001, DSM002, DSM003, and so on to indicate the order by which data is stored on the tape volumes.
- When dumping, you can use scratch volumes to ensure that there is sufficient space to store the database data. If you use scratch volumes, be careful to record the label names and sequence for each volume mounted during the dump process.

The volumes used by the DSMSERV DUMPDB command are *not* recorded in the sequential volume history information.

- The server recovery log is not accessed during the dump process. Therefore, database entries that were not yet written to the database when the dump is performed are not recorded. During recovery from a catastrophic failure, the most recent database updates may not be recoverable.

Examples

Task

Dump the existing ADSM database to an 8mm tape named DB0001.

For this example the following steps are required:

Step 1. Halt the server.

Step 2. Ensure that the DEVCONFIG option has been specified in the server options file. The device configuration file specified with this option must exist and must contain the device class, library, and drive definitions needed for the dump operation.

Step 3. Prelabel the tape using the dsmlabel utility. For example:

```
dsmlabel -drive=mt3.0.0.0
```

Step 4. Issue the DSMSERV DUMPDB command.

Command:

```
dsmserv dumpdb devclass=8mmclass volnames=DB0001
```

DSMSERV DUMPDB

Output:

```
ANR0900I Processing options file dsmserv.opt.

ANR7800I DSMSERV generated at 04:57:37 on June 1, 1996
ANR0990I ADSM server restart-recovery in progress.
ANR0200I Recovery log assigned capacity is 8 megabytes.
ANR0201I Database assigned capacity is 16 megabytes.
ANR4000I DUMPDB: Database dump process started.
ANR8326I 001: Mount 8MM volume DB0001 R/W in drive 8MMDRIVE
(mt3.0.0.0) of library 8MMLIB within 60 minute(s).
ANR8335I 001: Verifying label of 8MM volume DB0001 in drive 8MMDRIVE
(mt3.0.0.0).
ANR8328I 001: 8MM volume DB0001 mounted in drive 8MMDRIVE (mt3.0.0.0).
ANR1360I Output volume DB0001 opened (sequence number 1).
ANR1361I Output volume DB0001 closed.
ANR8336I Verifying label of 8MM volume DB0001 in drive 8MMDRIVE
(mt3.0.0.0).
ANR4031I DUMPDB: Copied 207 database pages.
ANR4033I DUMPDB: Copied 1 bit vectors.
ANR4034I DUMPDB: Encountered 0 bad database pages.
ANR4036I DUMPDB: Copied 4678 database entries.
ANR4037I DUMPDB: 264 Kilobytes copied.
ANR4001I DUMPDB: Database dump process completed.
```

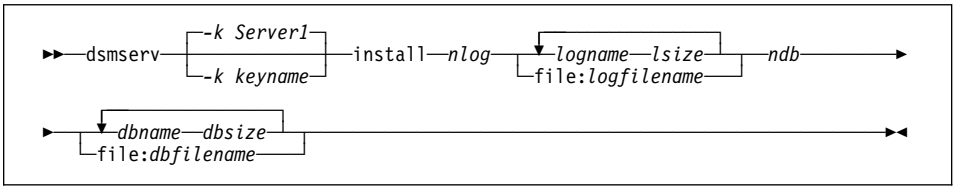
DSMSERV INSTALL (Install the Database and Log)

Use the DSMSERV INSTALL command to run the server's install mode to initialize the server's database and recovery log. No other server activity is allowed during DSMSERV INSTALL command processing.

Note: During installation, the installation program creates a set of registry keys. One of these keys points to the directory where a default server called Server1 is created. When the DSMSERV INSTALL command is issued, another file called dsmserv.dsk is created. This file points to the directory where the server's database and recovery log are located.

To install an additional ADSM server on a system, you must create a new directory for the server, issue the DSMSERV INSTALL command from that directory, with the *k* parameter specified. The directory you issue the DSMSERV INSTALL command from becomes the *location* of the ADSM server. The registry then keeps track of the servers that are installed.

Syntax



Parameters

-k keyname Specifies the name of a Windows NT registry key to use to store information about this server. The only time this parameter should be used is when you want to install additional ADSM servers on the same system. Once a server is installed using this parameter, it must be started using the value you specified for this parameter from then on. The default is Server1.

nlog Specifies the number of files to be used by the recovery log.

logname Specifies the names of the files being used by the recovery log. The files must *not* exist prior to issuing this command or the command will fail and an error message will be generated.

lsize Specifies the size of the recovery log file in megabytes. The minimum size is 9MB.

file:*logfilename*
Specifies the name of a file containing a list of recovery log volume file names and sizes (one name and size per line) used to install the recovery log. The files must *not* exist prior to issuing this command.

ndb Specifies the number of files to be used by the database.

DSMSERV INSTALL

dbname Specifies the names of the files being used by the database. The files must *not* exist prior to issuing this command or the command will fail and an error message will be generated.

dbsize Specifies the database size in megabytes. The minimum size is 5MB.

file:*dbfilename*
Specifies the name of the file containing a list of database database file names and sizes (one name and size per line) used to install the database. The files must *not* exist prior to issuing this command.

Usage Notes

- *lsize* and *dbsize* are positive integers, in MB. Allocated sizes will be in multiples of 4MB, plus 1MB of overhead.
- If you use an asterisk. (*) for the file size, the size will equal the remaining space minus 32K. The minimum requirements for size, which are 9MB for logs and 5MB for databases, must still be met.
- The install command will fail if there is not enough space available.

Examples

Task 1:

To manually install the first ADSM server on a Windows NT system, change to that directory that contains the server executable and issue the DSMSERV INSTALL command. For example, from a Windows NT prompt, issue the following commands:

1. `cd \win32app\ibm\adsm\server`
2. `dsmserv install 1 log1.dsm 9 1 db1.dsm 5`

Since the -k parameter is not specified, ADSM will create an NT registry key of Server1. When this command is run without specifying a -k parameter, it will use information stored in the system registry under the key Server1.

To install an additional ADSM server on a system, you should create a new directory for the server, change to the directory, and then issue the DSMSERV INSTALL command using the -k parameter as follows:

1. `md \win32app\ibm\adsm\server2`
2. `cd \win32app\ibm\adsm\server2`
3. `dsmserv -k server2 install 1 log1.dsm 9 1 db1.dsm 5`

Since the value for the -k parameter is Server2, ADSM will create an registry key of Server2 where the DSMSERV INSTALL command was run from. To run Server2 of the ADSM server, you must start the server using the same -k parameter. For example:

```
dsmserv -k server2
```

Note that the above explanation assumes that the ADSM server executables are in your path. If not, you would have to enter the full path for the dsmserv executable.

Task 2:

Initialize the recovery log and database volumes by specifying files containing the volume names and sizes (in megabytes):

- File c:\win32app\ibm\adsm\server2\log.vols contains the volume names, each with 9 megabytes of storage:
  - log1vol 9
  - log2vol 9
- File c:\win32app\ibm\adsm\server2\db.vols contains the volume name with 5 megabytes of storage:
  - db1vol 5

Command:

```
c:\win32app\ibm\adsm\server2>dsmserv -k server2 install 2
file:log.vols 1 file:db.vols
```

Output:

```
ANR7800I DSMSERV generated at 09:07:40 on Jan 17 1997.
Allocated space for C:\win32app\ibm\adsm\server2\log1vol: 9437184 bytes.
Allocated space for C:\win32app\ibm\adsm\server2\log2vol: 9437184 bytes.
Allocated space for C:\win32app\ibm\adsm\server2\db1vol: 5242880 bytes.
ANR0300I Recovery log format started; assigned capacity 16 megabytes.
ANR0301I Recovery log format in progress; 4 megabytes of 16.
ANR0301I Recovery log format in progress; 8 megabytes of 16.
ANR0301I Recovery log format in progress; 12 megabytes of 16.
ANR0301I Recovery log format in progress; 16 megabytes of 16.
ANR0302I Recovery log formatting took 8000 milliseconds.
ANR0303I   Format rate:         512.0  pages/second.
ANR0304I   Page service time:     2.0  ms.
ANR0305I Recovery log format complete.
ANR0306I Recovery log volume mount in progress.
ANR0353I Recovery log analysis pass in progress.
ANR0354I Recovery log redo pass in progress.
ANR0355I Recovery log undo pass in progress.
ANR0352I Transaction recovery complete.
ANR0992I ADSM server installation complete.
```

DSMSERV LOADDB (Reload the Database)

Use the DSMSERV LOADDB command to reload a dumped ADSM database to a newly installed ADSM server. The database must have been dumped by DSMSERV DUMPDB command. You must reinstall ADSM using the DSMSERV INSTALL command prior to issuing the DSMSERV LOADDB command. No other server activity is allowed during DSMSERV LOADDB command processing.

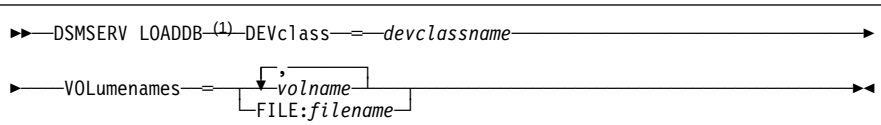
When recovering from a failure, it is recommended that you reinstall your server using a new database and log so that the original database and log volumes remain intact in case the dump and load process needs to be repeated.

A message at the end of the output from the DSMSERV LOADDB indicates whether a DSMSERV AUDITDB command is required. If the server was quiesced when it was halted before the DSMSERV DUMPDB command was issued, the DSMSERV AUDITDB command is not required. Otherwise, you must issue the DSMSERV AUDITDB command to ensure that the database is returned to a synchronized state after it is reloaded.

The DSMSERV LOADDB command requires a device configuration file.
The server options file that is created during installation includes a DEVCONFIG option that specifies a default file named devcnfg.out. You can specify other device configuration files with additional DEVCONFIG options. The device configuration file contains a copy of the device class, library, and drive definitions that exist in your database.

Because the DSMSERV LOADDB command requires a device configuration file, the file specified with the DEVCONFIG option must be available and must contain at least the device class specified for use with this command, along with any necessary library and drive definitions.

Syntax



Note:
1 Before issuing the DSMSERV LOADDB command, you must reinstall the server database by issuing the DSMSERV INSTALL command.

Parameters

DEVclass=*devclassname*

Specifies the device class from which the database information is to be read. This parameter is required.

You must have a device configuration file that includes the definition for this device class, and any libraries and drives needed. The server options file that is created during installation includes a DEVCONFIG option that specifies a default

file named devcnfg.out. You can specify other device configuration files with additional DEVCONFIG options. If the device configuration file has been lost, do one of the following:

- If the server can be restarted, restart the server and issue the BACKUP DEVCONFIG command.
- If the server cannot be restarted, create the device configuration file manually with an editor. For information on how to create a device configuration file manually, see *ADSM Administrator's Guide*.

VOLumenames=*volname*
Specifies one or more volumes from which to load the database. This parameter is required. You must specify the same list of volumes in the same order as that used for the DSMSERV DUMPDB command.

Possible values are:

volname
Specifies the names of one or more volumes from which to load the database. You can specify more than one volume by separating each volume name with a comma, with no intervening spaces. You must list the volumes in the order in which you want the volumes to be loaded (that is, the same order as that used for the DSMSERV DUMPDB command).

For example, if you want to use the volumes TAPE01, TAPE02, and TAPE03, specify the following:

```
VOLUMENAMES=TAPE01,TAPE02,TAPE03
```

FILE:*filename*
Specifies the name of a file that contains a list of the volumes from which to load the database. The file name can be any valid AIX file name. In the file, each volume name must be on a separate line. You must list the volumes in the order in which you want the volumes to be loaded (that is, the same order as that used for the DSMSERV DUMPDB command).

For example, if you want to use the volumes TAPE01, TAPE02, and TAPE03, create a file named VOLLIST that contains these lines:

```
TAPE01
TAPE02
TAPE03
```

You can then specify the volumes for the load command as follows:

```
VOLUMENAMES=FILE:VOLLIST
```

Usage Notes

- Before you issue the DSMSERV LOADDB command, save your current sequential volume history to a file for future reference. The DSMSERV LOADDB process causes the sequential volume history information to be reset.
- If you must issue the DSMSERV AUDITDB command, ensure that it has completed processing before you start the server.

- If, since the dump of the database you are reloading, there have been any activities that involve the storage pool volumes, audit the volumes by using the AUDIT VOLUME command. You should issue the AUDIT VOLUME command for all of your disk volumes. The volume history information that you saved earlier can help you identify which sequential volumes need to be audited. You should audit all volumes that have been reused since the time of the original dump of the database. Any volumes that were deleted from ADSM are also recorded in the sequential volume history information. If these volumes can still be obtained, you can try auditing these volumes. If these volumes cannot be obtained, you should delete references to these volumes in the database using the DELETE VOLUME command with the DISCARDDATA=YES option.

Examples

Task

Load the ADSM database from the previously dumped DB0001 tape.

For this example the following steps are required:

Step 1. Ensure that the DEVCONFIG option has been specified in the server options file. The device configuration file specified with this option must exist and must contain the device class, library, and drive definitions needed for the load operation.

Step 2. Issue the DSMSERV LOADDB command.

Command:
```
dsmserv loaddb devclass=8mmclass volnames=DB0001
```

Output:

```
ANR7800I DSMSERV generated at 03:27:37 on June 1, 1996.
ANR0990I ADSM server restart-recovery in progress.
ANR0200I Recovery log assigned capacity is 8 megabytes.
ANR0201I Database assigned capacity is 16 megabytes.
ANR0306I Recovery log volume mount in progress.
ANR0353I Recovery log analysis pass in progress.
ANR0354I Recovery log redo pass in progress.
ANR0355I Recovery log undo pass in progress.
ANR0352I Transaction recovery complete.
ANR4003I LOADDB: Database load process started.
ANR8326I 001: Mount 8MM volume DB0001 R/O in drive 8MMDRIVE
(mt0.0.0.0) of library 8MMLIB within 60 minute(s).
ANR8335I 001: Verifying label of 8MM volume DB0001 in drive 8MMDRIVE
(mt0.0.0.0).
ANR8328I 001: 8MM volume DB0001 mounted in drive 8MMDRIVE (mt0.0.0.0.).
ANR1363I Input volume DB0001 opened (sequence number 1).
ANR4038I LOADDB: Loading database information dumped on 06/01/1996 at
11:54:10.
ANR1364I Input volume DB0001 closed.
ANR8325I Dismounting volume DB0001 - 0 minute mount retention expired.
ANR4032I LOADDB: Copied 207 database records.
ANR4033I LOADDB: Copied 1 bit vectors.
ANR4035I LOADDB: Encountered 0 bad database records.
ANR4036I LOADDB: Copied 4678 database entries.
ANR4037I LOADDB: 264 Kilobytes   copied.
ANR4004I LOADDB: Database load process completed.
ANR4405I LOADDB: Loaded an inconsistent dump image - a database audit
(AUDITDB) IS REQUIRED.
```

DSMSERV AUDITDB (Verify Database Information)

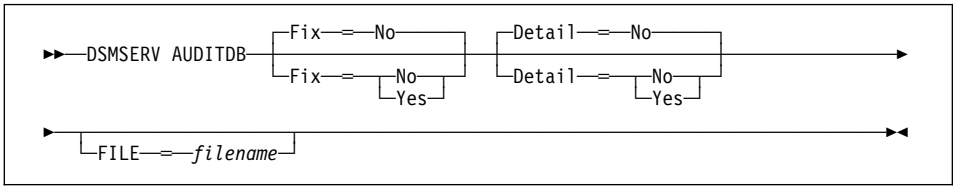
Use the DSMSERV AUDITDB command when required to ensure that the database is returned to a synchronized state after it is reloaded via the DSMSERV LOADDB command. A message at the end of the output from the DSMSERV LOADDB command indicates whether this command is required.

You must issue this command prior to starting the server. To successfully use this command, one of the following conditions must be true:

- The recovery log mode was set to normal before the server was halted (by using the SET LOGMODE command)
- A backup of the database was completed just before the server was halted

No other server activity is allowed during DSMSERV AUDITDB command processing.

Syntax



Parameters

Fix=*fixvalue*

Specifies how ADSM resolves any inconsistencies in the database. This parameter is optional. The default value is NO. Possible values are:

No

Specifies that ADSM reports, but does not fix, any logical inconsistencies found.

If the audit finds inconsistencies when the command is run with FIX=NO specified, before making the server available for production work you must re-issue the command specifying FIX=YES. Because AUDITDB must be run with FIX=YES to recover the database, the recommended usage in a recovery situation is FIX=YES the first time.

Yes

Specifies that ADSM fixes any inconsistencies and issues messages indicating the corrective actions.

Detail=*detailvalue*

Specifies the level of database testing to be performed by ADSM. This parameter is optional. The default value is NO. Possible values are:

No

Specifies that ADSM only tests referential integrity of the database.

Yes
Specifies that ADSM tests referential integrity of the database and the integrity of each individual database entry.

FILE=*filename*
Specifies that this commands output be redirected to the specified file. This parameter is optional. Any valid Windows NT file name is accepted.

Examples

Task 1

Audit the ADSM database for inconsistencies, but do not fix inconsistencies if they exist.

Command: `dsmserv auditdb fix=no`

Output:

DSMSERV AUDITDB

```
ANR0900I Processing options file dsmserv.opt.


ANR7800I DSMSERV generated at 16:44:34 on Jan 25 1994.
ANR0990I ADSM server restart-recovery in progress.
ANR0200I Recovery log assigned capacity is 16 megabytes.
ANR0201I Database assigned capacity is 12 megabytes.
ANR0306I Recovery log volume mount in progress.
ANR0353I Recovery log analysis pass in progress.
ANR0354I Recovery log redo pass in progress.
ANR0355I Recovery log undo pass in progress.
ANR0352I Transaction recovery complete.
ANR4140I AUDITDB: Database audit process started.
ANR4075I AUDITDB: Auditing policy definitions.
ANR4086E AUDITDB: Invalid node 88 found assigned to domain STANDARD.
ANR4095E AUDITDB: An invalid management class identifier (22) was
encountered for management class STANDARD in policy set STANDARD,
domain STANDARD (expected 15).
ANR4090E AUDITDB: Active Policy set for domain STANDARD does not
contain a valid default management class - policy will fail for this
domain.  Please correct the ACTIVE policy set.
ANR4040I AUDITDB: Auditing client node and administrator definitions.
ANR4041I AUDITDB: Node DAVE is assigned to Domain STANDARD, but not
verified by the Policy Manager.
ANR4065E AUDITDB: Administrator 99 not found in the server database.
ANR4135I AUDITDB: Auditing central scheduler definitions.
ANR2833I AUDITDB: Auditing license definitions.
ANR4136I AUDITDB: Auditing server inventory.
ANR4137I AUDITDB: Auditing inventory file spaces.
ANR4307I AUDITDB: Auditing inventory external space-managed objects.
ANR4138I AUDITDB: Auditing inventory backup objects.
ANR4139I AUDITDB: Auditing inventory archive objects.
ANR4310I AUDITDB: Auditing inventory space-managed objects.
ANR4230I AUDITDB: Auditing data storage definitions.
ANR4306I AUDITDB: 25000 Records processed.
ANR4264I AUDITDB: Auditing file information.
ANR4265I AUDITDB: Auditing disk file information.
ANR4266I AUDITDB: Auditing sequential file information.
ANR4256I AUDITDB: Auditing data storage definitions for disk volumes.
ANR4306I AUDITDB: 50000 Records processed.
ANR4263I AUDITDB: Auditing data storage definitions for sequential
volumes.
ANR6646I AUDITDB: Auditing machine and recovery media definitions.
ANR4210I AUDITDB: Auditing physical volume repository definitions.
ANR4141I AUDITDB: Database audit process completed.
```

Task 2

Audit the ADSM database for inconsistencies and fix any inconsistencies if they exist.

Command: `dsmserv auditdb fix=yes`

Output:

```
ANR0900I Processing options file dsmserv.opt.

ANR7800I DSMSERV generated at 16:44:34 on Jan 25 1994.
ANR0990I ADSM server restart-recovery in progress.
ANR0200I Recovery log assigned capacity is 16 megabytes.
ANR0201I Database assigned capacity is 12 megabytes.
ANR0306I Recovery log volume mount in progress.
ANR0353I Recovery log analysis pass in progress.
ANR0354I Recovery log redo pass in progress.
ANR0355I Recovery log undo pass in progress.
ANR0352I Transaction recovery complete.
ANR4140I AUDITDB: Database audit process started.
ANR4075I AUDITDB: Auditing policy definitions.
ANR4087I AUDITDB: Invalid node 88 found assigned to domain STANDARD
reference will be deleted.
ANR4077I AUDITDB: Invalid client node count detected for policy domain
STANDARD count will be corrected.
ANR4096E AUDITDB: An invalid management class identifier (22) was
encountered for management class STANDARD in policy set STANDARD,
domain STANDARD (expected 15) - the correct identifier will be stored.
ANR4090E AUDITDB: Active Policy set for domain STANDARD does not contain
a valid default management class - policy will fail for this domain.
Please correct the ACTIVE policy set.
ANR4040I AUDITDB: Auditing client node and administrator definitions.
ANR4042I AUDITDB: Node DAVE is assigned to Domain STANDARD, but not
verified by the Policy Manager - attempting to assign the node to
domain STANDARD.
ANR4066I AUDITDB: Administrator 99 not found in the server database
- reference will be removed.
ANR4135I AUDITDB: Auditing central scheduler definitions.
ANR2833I AUDITDB: Auditing license definitions.
ANR4136I AUDITDB: Auditing server inventory.
ANR4137I AUDITDB: Auditing inventory file spaces.
ANR4307I AUDITDB: Auditing inventory external space-managed objects.
ANR4138I AUDITDB: Auditing inventory backup objects.
ANR4139I AUDITDB: Auditing inventory archive objects.
ANR4310I AUDITDB: Auditing inventory space-managed objects.
ANR4230I AUDITDB: Auditing data storage definitions.
ANR4264I AUDITDB: Auditing file information.
ANR4265I AUDITDB: Auditing disk file information.
ANR4266I AUDITDB: Auditing sequential file information.
ANR4256I AUDITDB: Auditing data storage definitions for disk volumes.
ANR4306I AUDITDB: 25000 Records processed.
ANR4263I AUDITDB: Auditing data storage definitions for sequential
volumes.
ANR6646I AUDITDB: Auditing machine and recovery media definitions.
ANR4210I AUDITDB: Auditing physical volume repository definitions.
ANR4141I AUDITDB: Database audit process completed.
```

Task 3

The following example is of output where no inconsistencies were found when Fix=No was specified.

Command: `dsmserv auditdb fix=no`

DSMSERV AUDITDB

Output:

```
ANR7800I DSMSERV generated at 13:38:18 on Jan 25 1995.
ANR7801I Subsystem process ID is 999.
ANR0900I Processing options file dsmserv.opt.
ANR0990I ADSM server restart-recovery in progress.
ANR0200I Recovery log assigned capacity is 52 megabytes.
ANR0201I Database assigned capacity is 328 megabytes.
ANR0306I Recovery log volume mount in progress.
ANR0353I Recovery log analysis pass in progress.
ANR0354I Recovery log redo pass in progress.
ANR0355I Recovery log undo pass in progress.
ANR0352I Transaction recovery complete.
ANR4140I AUDITDB: Database audit process started.
ANR4075I AUDITDB: Auditing policy definitions.
ANR4040I AUDITDB: Auditing client node and administrator definitions.
ANR4135I AUDITDB: Auditing central scheduler definitions.
ANR2833I AUDITDB: Auditing license definitions.
ANR4136I AUDITDB: Auditing server inventory.
ANR4137I AUDITDB: Auditing inventory file spaces.
ANR4307I AUDITDB: Auditing inventory external space-managed objects.
ANR4138I AUDITDB: Auditing inventory backup objects.
ANR4139I AUDITDB: Auditing inventory archive objects.
ANR4310I AUDITDB: Auditing inventory space-managed objects.
ANR4230I AUDITDB: Auditing data storage definitions.
ANR4264I AUDITDB: Auditing file information.
ANR4265I AUDITDB: Auditing disk file information.
ANR4266I AUDITDB: Auditing sequential file information.
ANR4256I AUDITDB: Auditing data storage definitions for disk volumes.
ANR4263I AUDITDB: Auditing data storage definitions for sequential
volumes.
ANR6646I AUDITDB: Auditing machine and recovery media definitions.
ANR4210I AUDITDB: Auditing physical volume repository definitions.
ANR4141I AUDITDB: Database audit process completed.
```

Appendix E. Tailoring Server Options

ADSM provides a server options file that allows you to customize the following options:

- Communications
- Client-server operations
- Date, number, time, and language
- Database and recovery log
- Group and transfer data
- Miscellaneous options

Modifying the Server Options File

At installation, ADSM provides a sample server options file named dsmserv.opt with a minimal set of options to start the server. The dsmserv.smp file (also provided at installation) contains the format of the options file as well as all of the default settings. You can change any of the options in the dsmserv.smp file. If you do so, you must rename the file to dsmserv.opt.

To activate an option within the server options file, you must remove the *>>> that appears prior to the option. The server ignores any options preceded by an *>>>.

At server initialization, the server reads the server options file. If you make any changes to the server options file, you must stop and start the server to have the server read the updated server options file.

Setting Communication Options

Communication protocols are available to communicate with clients. Table 209 displays the communication methods supported for an ADSM server on Windows NT.

Table 209 (Page 1 of 2). Supported Communication Methods for an ADSM Server on Windows NT

Communication Method	Options Specified
IPXSPX	• IPXBuffersize, see "IPXBuffersize" on page 761 • IPXSocket, see "IPXSocket" on page 761
NAMED PIPES	• NAMEDpipename, see "NAMEDpipename" on page 766

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Table 209 (Page 2 of 2). Supported Communication Methods for an ADSM Server on Windows NT

Communication Method	Options Specified
NetBIOS	• LANAdapter, see "LANAdapter" on page 762 • NETBIOSBuffersize, see "NETBIOSBuffersize" on page 767 • NETBiosname, see "NETBiosname" on page 767 • NETBIOSSession, see "NETBIOSSession" on page 768
TCPIP	• TCPPort, see "TCPPort" on page 770 • TCPNodelay, see "TCPNodelay" on page 770 • TCPWindowsize, see "TCPWindowsize" on page 770.
NONE	• This communication method does not allow users to connect to the server. This method is specified as COMMMETHOD NONE.

Setting Client-Server Options

Use the options described in Table 210 to control client-server communication processing.

Table 210. Client-Server Options

Command	Description	Reference
COMMTIMEOUT	Specifies the number of seconds the server waits for a response from a client before timing out the client session.	"COMMTimeout" on page 757
IDLETIMEOUT	Specifies the number of minutes the server allows a client session to remain idle before timing out the client session.	"IDLETimeout" on page 760
MAXSESSIONS	Specifies the maximum number of simultaneous client sessions with the server.	"MAXSessions" on page 763

Setting Date, Number, Time, and Language Options

Use the options described in Table 211 on page 755 to specify display formats for the dates, times, numbers, and national language.

Table 211. Date, Number, Time, and Language Options

Command	Description	Reference
DATEFORMAT	Specifies the format by which dates are displayed.	"DATEformat" on page 758
LANGUAGE	Specifies which national language is used to present client messages.	"LANGuage" on page 762
NUMBERFORMAT	Specifies the format by which numbers are displayed.	"NUMberformat" on page 769
TIMEFORMAT	Specifies the format in which times are displayed.	"TIMEformat" on page 771

Setting Database and Recovery Log Options

Use the options described in Table 212 to control some aspects of database and recovery log processing.

Table 212. Database and Recovery Log Options

Command	Description	Reference
BUFPOOLSIZE	Specifies the size of database buffer pool in kilobytes (KB).	"BUFPoolsize" on page 757
LOGPOOLSIZE	Specifies the size of recovery log buffer pool in kilobytes (KB).	"LOGPoolsize" on page 763
MIRRORREAD	Specifies how mirrored volumes are to be accessed when the server reads a recovery log or database page during normal processing.	"MIRRORRead" on page 764
MIRRORWRITE	Specifies how mirrored volumes are to be accessed when the server writes pages to the recovery log or database during normal processing.	"MIRRORWrite" on page 765

Setting Group Options

Use the options described in Table 213 to control how ADSM groups and transfers data.

Table 213 (Page 1 of 2). Grouping Options

Option	Description	Reference
MOVEBATCHSIZE	Specifies the number of files that are to be moved and grouped in a batch, within the same server transaction.	"MOVEBatchsize" on page 766
MOVESIZETHRESH	Specifies, in megabytes, a threshold for the amount of data moved as a batch, within the same server transaction.	"MOVESizethresh" on page 766

Table 213 (Page 2 of 2). Grouping Options

Option	Description	Reference
TXNGROUPMAX	Specifies the number of files that are transferred as a group between a client and the server between transaction commit points.	"TXNGroupmax" on page 771

Setting Miscellaneous Options

Use the following miscellaneous options described in Table 214 to customize information provided to ADSM.

Table 214. Miscellaneous Options

Option	Description	Reference
DEVCONFIG	Specifies a file in which you want ADSM to store backup copies of device configuration information.	"DEVCONFig" on page 758
EXPINTERVAL	Specifies the interval in hours between automatic inventory expiration runs by the ADSM server.	"EXPINterval" on page 759
EXPQUIET	Specifies whether ADSM sends detailed informational messages.	"EXPQUiet" on page 760
MESSAGEFORMAT	Specifies whether or not a message number is displayed in all lines of a multi-line message.	"MESsageformat" on page 764
NOAUDITSTORAGE	Specifies that as part of the license audit operation, the server calculates, by node, the amount of backup, archive, and space management storage in use.	"NOAUDITStorage" on page 768
STATUSMSGCNT	Specifies the number of records (times 1000) that will be processed between messages during DSMSERV DUMPDB and DSMSERV LOADDB commands.	"STAtusmsgcnt" on page 769
VOLUMEHISTORY	Specifies files to be automatically updated whenever server sequential volume history information is changed.	"VOLumeHistory" on page 773

Requesting Information about Server Options

You can display the option settings specified in the server options file.

To query for server options, enter:

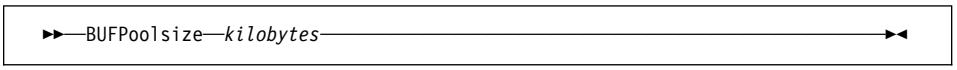
```
Query OPTion
```

For more information, see the QUERY OPTIONS command.

BUFPoolsize

Specifies the size of the database buffer pool in kilobytes (KB). A large buffer pool means that database pages remain longer in memory cache, and ADSM requires fewer input/output operations to data storage. However, a large buffer pool also requires more memory.

Syntax



Parameters

kilobytes
Specifies the size of the database buffer pool. The default value is 512KB. The minimum value is 256KB. The maximum value is limited only by available virtual memory size.

Examples

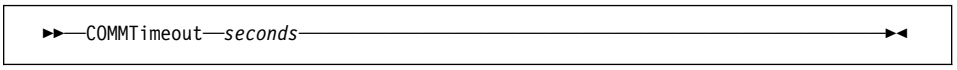
```
BUFPoolsize    512KB
BUFP           256KB
```

COMMTimeout

Specifies the maximum number of seconds the server waits, during a database update transaction, for an expected message from a client, before terminating the session with the client.

The server terminates the session to release communication resources as soon as possible, and to ensure that database locks are not held for undue periods of time.

Syntax



Parameters

seconds

Specifies the maximum number of seconds that a server waits for a client response. The default value is 60 seconds. The minimum value is 1 second.

Examples

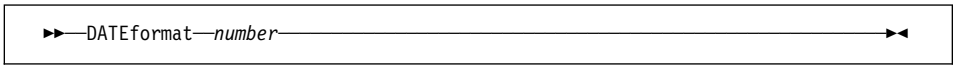
```
COMMTimeout    60
COMMT          120
```

DATEformat

Specifies the format by which dates are displayed by the server.

Note: The DATEFORMAT is overridden by the date formatting definition of the locale if the locale is successfully initialized at server startup. The locale is specified in the LANGUAGE definition.

Syntax



Parameters

number

Select a number from 1 to 5 to identify the date format used by the server. The default value is 1.

1	MM/DD/YYYY
2	DD-MM-YYYY
3	YYYY-MM-DD
4	DD.MM.YYYY
5	YYYY.MM.DD

Examples

```
DATEformat 4
```

DEVCONFig

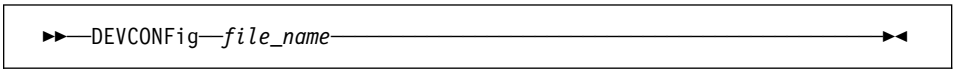
Specifies the name of a file in which ADSM stores a backup copy of device configuration information.

ADSM stores the following information in the device configuration file:

- Device class definitions created by using the DEFINE DEVCLASS command
- Drive definitions created by using the DEFINE DRIVE command
- Drive definitions created by using the DEFINE LIBRARY command

A server options file that is created during installation includes a DEVCONFIG option that specifies a default device configuration file named devcnfg.out. You can include additional DEVCONFIG options. When you use multiple DEVCONFIG options, ADSM automatically updates and stores a backup copy of device configuration information in each file you specify.

Syntax



Parameters

file_name
Specifies the name of a file in which ADSM stores a backup copy of device configuration information.

Examples

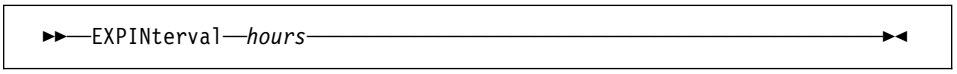
```
DEVCONFig  devices.sav
```

EXPINterval

Specifies the interval, in hours, between automatic inventory expiration runs by the ADSM server. Inventory expiration removes client backup and archive file copies from the server as specified by the management classes to which the client files are bound. By default, the ADSM server automatically runs inventory expiration each hour (the interval is one hour between automatic expiration runs).

You can also use the EXPIRE INVENTORY command to start inventory expiration. Expiration can make space available in your storage pools for additional client backup or archive files. If expiration is not executed periodically, storage pool space is not reclaimed from expired client files, and the ADSM server requires more storage space than required by policy.

Syntax



Parameters

hours
Specifies the number of hours between automatic inventory expiration runs. The minimum value permitted is 0, where automatic expiration will not execute and must be started with the EXPIRE INVENTORY command. The maximum value permitted is 336 hours (14 days).

Examples

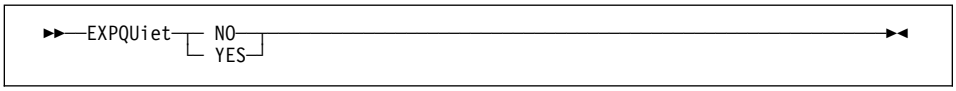
```
EXPINterval  5
EXPIN        0
```

EXPQUiet

Specifies whether to suppress detailed messages during ADSM's expiration processing. Normally, ADSM sends detailed messages when you make policy changes that affect client files, such as deleting a management class or copy group. You can use this option to reduce the number of messages about policy changes that are generated during expiration processing.

When automatic expiration processing is set using the EXPINterval option and the EXPQUiet option is set to YES, ADSM will issue messages about policy changes only when files are deleted and either the default management class or retention grace period for the domain has been used to expire the files.

Syntax



Parameters

NO
Specifies that ADSM sends detailed informational messages. NO is the default.

YES
Specifies that ADSM sends only minimal summary messages and only for files that have expired based on the copy group in the default management class or retention grace period for the domain.

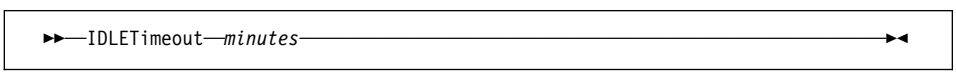
Examples

```
EXPQUiet    NO
```

IDLETimeout

Specifies the amount of time, in minutes, that a server waits for a client to initiate communication. If the client does not initiate communication with the server within the timeframe specified, the client session is terminated.

Syntax



Parameters

minutes
Specifies the maximum number of minutes that a server waits for an idle client. The default value is 15 minutes. The minimum value is 1 minute.

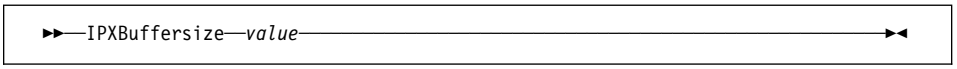
Examples

```
IDLETimeout 15
IDLET       30
```

IPXBuffersize

Specifies the IPX send buffer size.

Syntax



Parameters

value
Specifies the size (in kilobytes) of the IPX/SPX communications buffer. You can specify a value from 1 kilobyte to 32 kilobytes. The default value is 32 kilobytes.

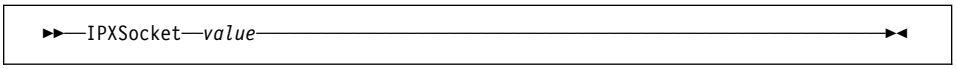
Examples

```
IPXBuffersize  16KB
```

IPXSocket

Specifies the IPX socket of an ADSM server.

Syntax



Parameters

value
Specifies the IPX socket number (hex value). The default is 8522. You can specify a value from 0 to 32767.

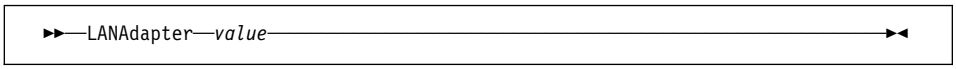
Examples

```
IPXSocket  8522
```

LANAdapter

Specifies a network adapter number on which the server communicates when the NetBIOS communication method is specified.

Syntax



Parameters

value

Specifies the number of the LAN adapter to use with the ADSM server for NetBIOS. The minimum value of the LAN adapter is 0 and the maximum value is 3. Up to 4 LANAdapter statements may be specified. The default is 0.

Examples

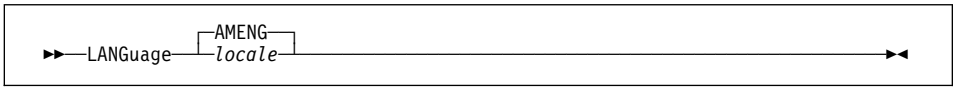
```
LANAdapter    0
```

LANGuage

The LANGUAGE option controls the initialization of locales. A locale includes the language and the date, time, and number formats to be used for the console and server.

Note: If the initialization of the locale fails, the server defaults to American English and uses the date, time, and number formats set by the DATEFORMAT, TIMEFORMAT, and NUMBERFORMAT server options.

Syntax



Parameters

AMENG

Specifies that American English will be used as the default language for the server.

locale

Specifies the name of the locale supported by the server. You can specify either the abbreviated or full name of the locale. The locale names supported include:

Locale	Language
chs or chinese-simplified	Simplified Chinese
cht or chinese-traditional	Traditional Chinese
fra or french	French
deu or german	German
ita or italian	Italian
jpn or japanese	Japanese
ptb or portuguese-brazilian	Brazilian Portuguese
esp or spanish	Spanish

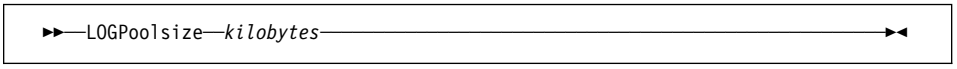
Examples

```
LANG    deu
```

LOGPoolsize

Specifies the size of the recovery log buffer pool size in kilobytes. A large buffer pool may increase the rate by which recovery log transactions are committed to the database, but it also requires more memory.

Syntax



Parameters

kilobytes

Specifies the size of the recovery log buffer pool. The default value is 128KB. The minimum value is 128KB. The maximum value is limited only by available virtual memory size.

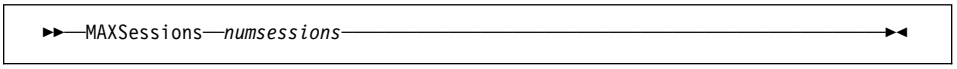
Examples

```
LOGPoolsize     128KB
```

MAXSessions

Specifies the maximum number of simultaneous client sessions that can connect with the server.

Syntax



Parameters

numsessions

Specifies the maximum number of simultaneous client sessions. The default value is 25 client sessions. The minimum value is 2 client sessions. The

maximum value is limited only by available virtual memory size or communication resources.

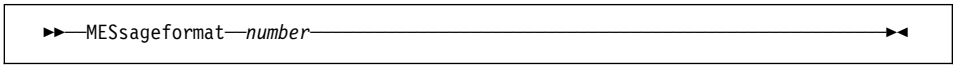
Examples

```
MAXSessions  25
```

MESsageformat

Specifies whether or not a message number is displayed in all lines of a multi-line message.

Syntax



Parameters

number

Select a number to specify if a message number is to be displayed only on the first line of a multi-line message or is to be displayed on all lines. The default value is 1.

1 The message number for a message is displayed only at the first line of the message.

2 The message number for a message is displayed at all lines of a message.

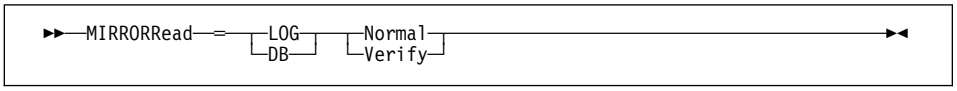
Examples

```
MESsageformat    2
```

MIRRORRead

Specifies how mirrored volumes are to be accessed when the server reads a recovery log or database page during normal processing.

Syntax



Parameters

LOG

Specifies that this is the mode to be used for reading recovery log pages

DB

Specifies that this is the mode to be used for reading database pages

Normal
Specifies only one mirrored volume is read to obtain the desired page. This is the default.

Verify
Specifies that the server read all mirror volumes for a page every time a recovery log or database page is read. If an invalid page is encountered on a mirror volume, it is automatically re-synchronized with valid contents from another mirror volume. This mode decreases server performance since each mirror volume for the page is accessed on every read.

Examples

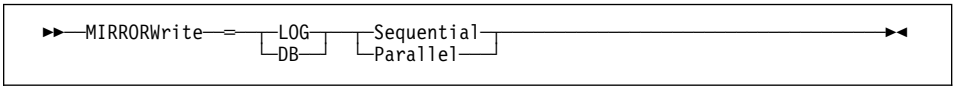
```
MIRRORREAD LOG NORMAL
MIRRORREAD DB  NORMAL
```

These are the default settings.

MIRRORWrite

Specifies how mirrored volumes are accessed when the server writes pages to the recovery log or database during normal processing.

Syntax



Parameters

LOG
Specifies that this is the mode to be used for writing recovery log pages

DB
Specifies that this is the mode to be used for writing database pages

Sequential
Specifies that ADSM must write to one mirrored database volume before writing to another database volume. A decrease in server performance is experienced because a successful I/O must occur before the other mirrored writes can begin. This parameter is the default when *DB* is specified.

Parallel
Specifies that all mirrors are written to in parallel. This mode allows all mirrors to obtain the new page at approximately the same time. This parameter is the default when *LOG* is specified. Note: If a system outage occurs at exactly the instant that each mirror is partially complete in writing its page, a partial write to each mirror could result.

Examples

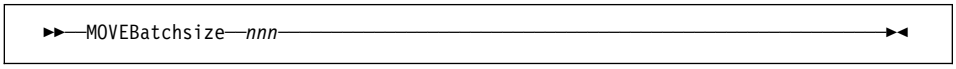
```
MIRRORWRITE LOG PARALLEL
MIRRORWRITE DB  SEQUENTIAL
```

These are the default settings.

MOVEBatchsize

Specifies the number of files that are to be moved and grouped together in a batch, within the same server transaction.

Syntax



Parameters

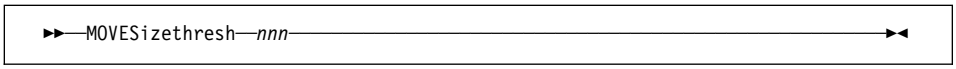
nnn

Specifies a number between 1 and 256. The default value is 40. This option works in conjunction with the MOVESizethresh option.

MOVESizethresh

Specifies, in megabytes, a threshold for the amount of data moved as a batch, within the same server transaction. When this threshold is reached, no more files are added to the current batch, and a new transaction is started after the current batch is moved.

Syntax



Parameters

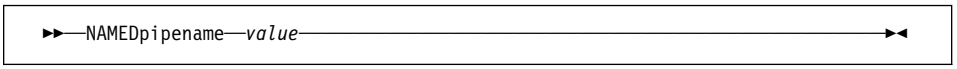
nnn

Specifies a number between 1 and 500 (megabytes). The default value is 500 (megabytes). This option works in conjunction with the MOVEBatchsize option.

NAMEDpipename

Specifies a communication method that allows processes to communicate with one another without having to know where the sender and receiver processes are located. The name acts like an alias, connecting the two processes regardless of whether they are on the same computer or across connected domains.

Syntax



Parameters

value

Specifies the named pipes name for the server to use. Names pipes are ideal for running in an environment where client and server are on the same machine. No communication software is required and no setup is required.

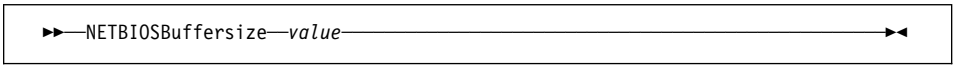
Examples

```
NAMEDpipename    \\.\PIPE\ADSMPIPE
```

NETBIOSBuffersize

Specifies the size of the NetBIOS send and receive buffers.

Syntax



Parameters

value

Specifies the size of NetBIOS send and receive buffers in kilobytes. The default buffer size is 32KB. The minimum size is 1KB and the maximum size is 32KB.

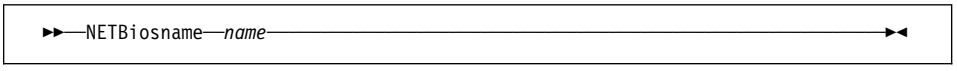
Examples

```
NETBIOSBuffersize    16KB
```

NETBiosname

Specifies the NetBIOS session name of an ADSM server.

Syntax



Parameters

name

Specifies the name to be used for communications on the network. This name must be unique across the network that includes the LAN requestors and other NetBIOS applications. This name can be a maximum of 16 characters and is case-sensitive. The first character cannot be an asterisk (*), and the first three characters cannot be the letters IBM.

The defaults are ADSMSERV1, ADSMSERV2, ADSMSERV3, and ADSMSERV4 (depending on the LANadapter statements you have). For example, if you have LANAdapter 0 and LANAdapter 1, the defaults are ADSMSERV1 and ADSMSERV2.

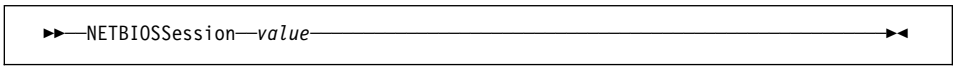
Examples

```
NETBiosname      NTSERVER12
```

NETBIOSSession

Specifies the NetBIOS session available on an ADSM server.

Syntax



Parameters

name

Specifies the number of the NetBIOS sessions that are reserved for this process per adapter. The minimum number of sessions is 1 and the maximum number of sessions is 255.

The default value for the NETBIOSSession option is equal to the value specified in the MAXSESSION server option. The default value for the MAXSESSION option is 25. Unless the MAXSESSION option has been modified, the default for the NETBIOSSession option is 25. The MAXSESSION option always overrides the NETBIOSSession option.

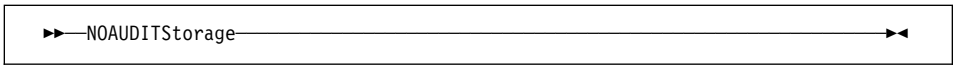
Examples

```
NETBIOSSession     16
```

NOAUDITStorage

As part of a license audit operation, the server calculates, by node, the amount of backup, archive, and space management storage in use. For servers managing large amounts of data, this calculation can take a great deal CPU time and can stall other server activity. You can use the NOAUDITStorage option to specify that storage is not to be calculated as part of a license audit.

Syntax



Parameters

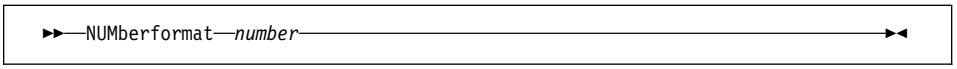
None

NUMberformat

Specifies the format by which numbers are displayed by the server.

Note: The NUMBERFORMAT is overridden by the number formatting definition of the locale if the locale is successfully initialized at server startup. The locale is specified in the LANGUAGE definition.

Syntax



Parameters

number

Select a number from 1 to 6 to identify the number format used by the server. The default is 1.

1	1,000.00
2	1,000,00
3	1 000,00
4	1 000.00
5	1.000,00
6	1'000,00

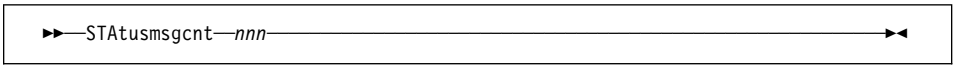
Examples

```
NUMberformat 4
```

STAtusmsgcnt

Specifies the number of records (times 1000) that will be processed between status messages during DSMSERV DUMPDB and DSMSERV LOADDB commands.

Syntax



Parameters

nn

Specifies a number between 1 and 10000 (this number is multiplied by 1000).

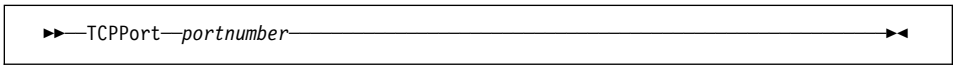
The default value is 10. The minimum value is 1.

TCPPort

Specifies the port number on which the server TCP/IP communication driver is to wait for requests.

Note: TCPPort is used for IBM TCP/IP only. When Interlink TCP/IP (SNS/TCPaccess) is the only TCP/IP being used, TCPPort should be set to *NONE*, and ICSSPORT should be configured appropriately.

Syntax



Parameters

portnumber
Specifies the port address of the server. The default value is 1500.

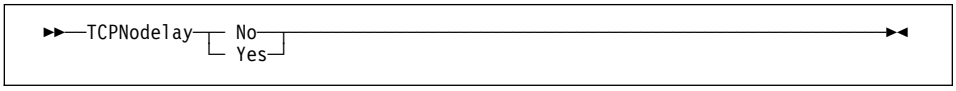
Examples

```
TCPPort        1500
```

TCPNodelay

Specifies whether the server should send small amounts of data or allow TCP/IP to buffer the data. Disallowing buffering may improve throughput but more packets are sent over the network.

Syntax



Parameters

No
Specifies that TCP/IP should buffer small ADSM messages. The default is No.

Yes
Specifies that TCP/IP should not buffer small ADSM messages.

Examples

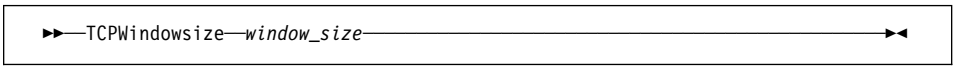
```
TCPNodelay     No
```

TCPWindowsize

Specifies the size you want to use for the TCP/IP sliding window for your client node. This is the size of the buffer used when sending or receiving data.

Larger window sizes may improve performance but uses more memory.

Syntax



Parameters

window_size
Specifies the size you want to use, in kilobytes, for the TCP/IP sliding window for your client node. You can specify a value from 0 to 2048. Values from 1 to 2048 indicate that the window size is in the range of 1KB to 2MB.

Examples

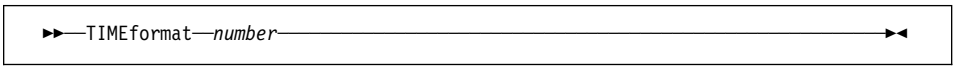
```
TCPWindowsize   8KB
```

TIMEformat

Specifies the format in which time is displayed by the server.

Note: The TIMEFORMAT is overridden by the time formatting definition of the locale if the locale is successfully initialized at server startup. The locale is specified in the LANGUAGE definition.

Syntax



Parameters

number
Select a number from 1 to 4 to identify the time format used by the server. The default is 1.

1	23:00:00
2	23,00,00
3	23.00.00
4	12:00:00A/P

Examples

```
TIMEformat 4
```

TXNGroupmax

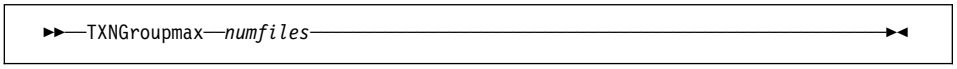
Specifies the number of files that are transferred as a group between a client and the server between transaction commit points. You can improve the performance of the

backup-archive client BACKUP, ARCHIVE, RESTORE, and RETRIEVE commands by using a larger value for this option.

The minimum value is 4 files and the maximum value is 256 files. The default value is 16 files. The files transferred for the above commands are either actual files, directories, or both. ADSM counts each file and each directory as one file.

This option is related to the TXNBYTELIMIT option in the client options file. TXNBYTELIMIT controls the number of bytes, as opposed to files, that are transferred in a group of files between transaction commit points. At the completion of transferring a file, the client commits the transaction if the number of bytes transferred during the transaction reaches or exceeds the value of TXNBYTELIMIT, regardless of the number of files transferred.

Syntax



Parameters

numfiles
Specifies a number from 4 to 256 for the maximum number of files per transaction. The default is 16.

Examples

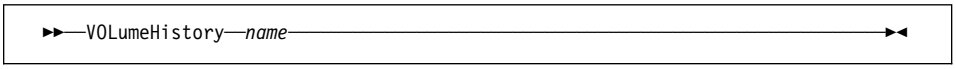
```
TXNGroupmax  50
```

VOLumeHistory

Specifies files to be automatically updated whenever server sequential volume history information is changed.

A server options file that is created during installation includes a VOLumeHistory option that specifies a default volume history file named volhist.out.

Syntax



Parameters

name

Specifies the name of the files in which you want ADSM to store a backup copy of the volume history information collected by the server.

Examples

```
VOLumeHistory   volume.hist
```

Glossary

The terms in this glossary are defined as they pertain to the ADSM library. If you do not find the term you are looking for, refer to the *IBM Dictionary of Computing*, New York: McGraw-Hill, 1994.

This glossary may include terms and definitions from:

- The *American National Standard Dictionary for Information Systems*, ANSI X3.172-1990, copyright (ANSI). Copies may be purchased from the American National Standards Institute, 11 West 42nd Street, New York 10036.
- The *Information Technology Vocabulary*, developed by Subcommittee 1, Joint Technical Committee 1, of the International Organization for Standardization and the International Electrotechnical Commission (ISO/IEC JTC2/SC1).

A

absolute. A backup copy group mode value indicating that a file is considered for incremental backup even if the file has not changed since the last backup. See also *mode*. Contrast with *modified*.

access mode. A storage pool and storage volume attribute that specifies whether data can be written to or read from storage pools or storage volumes. The access mode can be read/write, read-only, or unavailable. Volumes in primary storage pools can also have an access mode of destroyed. Volumes in copy storage pools can also have an access mode of offsite.

accounting facility. A facility that records statistics about client session activity.

accounting records. Files that record session resource usage at the end of each client session.

activate. The process of validating the contents of a policy set and copying the policy set to the ACTIVE policy set.

active policy set. The policy set within a policy domain that contains the most recently activated policy currently in use by all client nodes assigned to that policy domain. See *policy set*.

active version. The most recent backup copy of a file stored by ADSM. Such a file is exempt from deletion until a backup detects that the user has either replaced the file with a newer version, or has explicitly deleted the file from the workstation. Contrast with *inactive version*.

activity log. A log that records normal activity messages generated by the server. These messages include information about server and client operations, such as the start time of sessions or device I/O errors. Each message includes a message ID, date and time stamp, and a text description. The number of days to retain messages in the activity log can be specified.

administrative client. A program that runs on a file server, workstation, or mainframe that allows administrators to control and monitor the server through administrator commands. Contrast with *backup-archive client*.

administrative command schedule. A database record that describes the planned processing of an administrative command during a specific time period. See also *client schedule*.

administrative privilege class. A permission granted to an administrator that controls the commands that the administrator can issue. See *system privilege class, analyst privilege class, operator privilege class, policy privilege class or storage privilege class*.

administrative session. A period of time in which an administrator user ID can communicate with a server to perform administrative tasks. Contrast with *client node session*.

administrator. A user who has been registered to the server. Administrators can be authorized to one or more of the following administrative privilege classes: system, policy, storage, operator, or analyst. Administrators can use the administrative client to enter server commands and queries in accordance with their privileges.

administrator definition. Server control information that includes the administrator's name, password, contact information, administrative privilege classes, policy domains and storage pools assigned to an administrator, and whether the administrative ID is locked from the server. An administrator definition can be exported from a source server and imported to a target server at a later date.

ADSM. ADSTAR Distributed Storage Manager.

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ADSM application program interface (API). A set of functions that applications running on a client platform can call to store, query, and retrieve objects from ADSM storage.

ADSTAR Distributed Storage Manager (ADSM). A client/server program that provides storage management to customers in a multivendor computer environment.

Advanced Interactive Executive (AIX). An operating system used in the RISC System/6000 computers. The AIX operating system is IBM's implementation of the UNIX operating system.

Advanced Peer-to-Peer Networking (APPN). An extension to the LU6.2 peer orientation for end-user services. See *SNA LU6.2* and *Systems Network Architecture*.

Advanced Program-to-Program Communication (APPC). An implementation of the SNA/SDLC LU6.2 protocol that allows interconnected systems to communicate and share the processing of programs. See *SNA LU6.2*, *Systems Network Architecture*, and *Common Programming Interface Communications*.

AFS. Andrew file system.

AIX. Advanced Interactive Executive.

analyst privilege class. An administrative privilege class that allows an administrator to reset statistics.

Andrew file system (AFS). A distributed file system developed for UNIX operating systems.

API. Application program interface.

APPC. Advanced Program-to-Program Communication.

APPN. Advanced Peer-to-Peer Networking.

archive. A function that allows users to copy one or more files to a storage pool for long-term storage. Archive copies may be accompanied by descriptive information and may be retrieved by archive date, by file name, or by description. Contrast with *retrieve*.

archive copy. A user file that has been archived to an ADSM storage pool.

archive copy group. A policy object containing attributes that control the generation, destination, and expiration of archive files. An archive copy group belongs to a management class.

ARCHIVEPOOL. A disk storage pool defined by ADSM at installation. It can be the destination for client files that are archived to the server. See *storage pool*.

archive retention grace period. The number of days ADSM retains an archive copy when the server is unable to rebind the file to an appropriate management class.

AS/400. Application System/400.

assigned capacity. The portion of available space that can be used to store database or recovery log information. See also *available space*.

association. The relationship between a client node and a client schedule. An association identifies the name of a schedule, the name of the policy domain to which the schedule belongs, and the name of a client node that performs scheduled operations.

audit. The process of checking for logical inconsistencies between information that the server has and the actual condition of the system. ADSM has processes for auditing volumes, the database, libraries, and licenses. For example, in auditing a volume ADSM checks for inconsistencies between information about backed up or archived files stored in the database and actual data associated with each backup version or archive copy in server storage.

authentication. The process of checking a user's password before allowing that user access to the server. Authentication can be turned on or off by an administrator with system privilege.

autochanger. A small multislot tape device that has a mechanism that automatically puts tape cartridges into the tape drive or drives. Also called *medium* or *media changer*, or a *library*.

availability management. Managing recovery from relatively common computer system outages such as a disk drive head crash. Recovery is often accomplished by using disk mirroring and other forms of RAID technology, or by maintaining onsite backup copies of data.

available space. The amount of space, in megabytes, that is available to the database and recovery log. This space can be used to extend the capacity of the database or recovery log, or to provide sufficient free space before a volume is deleted from the database or recovery log.

awk. In AIX, a pattern-matching program for processing text files. With the DRM feature, you can use an awk script to break up the disaster recovery plan file into usable parts.

B

background process. A server process that runs in the background, allowing the administrative client to be used for other work.

backup. The process of copying information for safekeeping. ADSM has processes for backing up user files, the database, and storage pools. For example, users can back up one or more files to a storage pool to ensure against loss of data. Contrast with *restore*. See also *database backup series* and *incremental backup*.

backup-archive client. A program that runs on a workstation or file server and provides a means for users to back up, archive, restore, and retrieve files. Contrast with *administrative client*.

backup copy. A user file that has been backed up to an ADSM storage pool.

backup copy group. A policy object containing attributes that control the generation, destination, and expiration of backup files. A backup copy group belongs to a management class.

BACKUPPOOL. A disk storage pool defined by ADSM at installation. It can be the destination for client files that are backed up to the server. See *storage pool*.

backup retention grace period. The number of days ADSM retains a backup version after the server is unable to rebind the file to an appropriate management class.

backup series. See *database backup series*.

backup version. A file, directory, or file space that a user has backed up, which resides in ADSM server storage. There may be more than one backup version of a file in the storage pool, but at most only one is an active backup version. See *active version* and *inactive version*.

binding. The process of associating a file with a management class name. See *rebinding*.

boot media. Media that contains operating system and other files essential to running a workstation or server.

buffer. Storage used to compensate for differences in the data rate flow, when transferring data from one device to another.

buffer pool. Temporary space used by the server to hold database or recovery log pages. See *database buffer pool* and *recovery log buffer pool*.

buffer pool size. The size of an area in memory used to store database or recovery log pages.

C

cache. The process of leaving a duplicate copy on random access media when the server migrates a file to another storage pool in the hierarchy.

CARTRIDGE. On ADSM servers that support it, a device class that is used to categorize tape devices that support tape cartridges, such as the 3495 Tape Library Dataserver.

cartridge system tape (CST). The base tape cartridge media used with 3480 or 3490 Magnetic Tape Subsystems. When specified as a media type in ADSM, CST identifies standard length tape. Contrast with *enhanced capacity cartridge system tape*.

central scheduler. A function that allows an administrator to schedule client operations and administrative commands. The operations can be scheduled to occur periodically or on an explicit date. See *client schedule* and *administrative command schedule*.

CID. Configuration Installation and Distribution.

client. A program running on a PC, workstation, file server, LAN server, or mainframe that requests services of another program, called the server. There are three types of ADSM clients: administrative, backup-archive, and space management. See *administrative client*, *backup-archive client*, and *space management client*.

Client Access/400. A software product that supports advanced program-to-program communications (APPC) in the DOS, OS/2, and Microsoft Windows environments and provides a set of end user services.

client domain. The set of drives, file systems, or volumes selected by a backup-archive client user during a backup or archive operation.

client migration. The process of copying a file from a client node to ADSM storage and replacing the file with a stub file on the client node. The process is controlled by the user and by space management attributes in the management class. See also *space management*.

client node. A file server or workstation on which the backup-archive client program has been installed, which has been registered to the server.

client node definition. Server control information that includes the client's user ID, password, contact information, policy domain, file compression status, deletion authority, and whether the user ID is locked from the server. A client node definition can be exported from a source server so that it can be imported to a target server at a later date.

client node session. A period of time in which a user can communicate with a server to perform backup, archive, restore, or retrieval requests. Contrast with *administrative session*.

client options file. A file that a client can edit, containing a default set of processing options that identify the server, communication method, backup and archive options, space management options, and scheduling options. Also called the *dsm.opt* file.

client polling scheduling mode. A client/server communication technique where the client queries the server for work.

client schedule. A database record that describes the planned processing of a client operation during a specific time period. The client operation can be a backup, archive, restore, or retrieve operation, a client operating system command, or a macro. See also *administrative command schedule*.

client/server. A system architecture in which one or more programs (clients) request computing or data services from another program (server).

client system options file. A file, used on UNIX clients, containing a default set of processing options that identify the ADSM servers to be contacted for services. This file also specifies communication methods and options for backup, archive, space management, and scheduling. Also called the *dsm.sys* file. See also *client user options file*.

client user options file. A user-created file, used on UNIX clients, containing a default set of processing options that identify the server, communication method, backup and archive options, space management options, and scheduling options. Also called the *dsm.opt* file. See also *client system options file*.

closed registration. A registration process in which an administrator must register workstations as client nodes with the server. Contrast with *open registration*.

collocation. A process that attempts to keep all data belonging to a single client node or a single client file space on a minimal number of sequential access media volumes within a storage pool. The purpose of collocation is to minimize the number of volumes that must be accessed when a large amount of data must be restored.

commit. To make changes permanent in the database files. Changes made to the database files are not permanent until they are committed.

Common Programming Interface Communications (CPI-C). A programming interface that allows program-to-program communication using SNA LU6.2. See also *Systems Network Architecture*.

Common User Access (CUA). Guidelines for the dialog between a human and a workstation or terminal. One of the three Systems Application Architecture areas.

communication manager. A component of OS/2 that allows a workstation to connect to a host computer and use the host resources as well as the resources of other personal computers to which the workstation is attached, either directly or through a host.

communication method. The method used by a client and server for exchanging information.

communication protocol. A set of defined interfaces that allow computers to communicate with each other.

compression. The process of saving storage space by eliminating empty fields or unnecessary data to shorten the length of the file. In ADSM, compression can occur at a workstation before files are backed up or archived to server storage. On some types of tape drives, hardware compression can be used.

Configuration Installation and Distribution (CID). IBM's term for capabilities to automate installation. CID-enabled products are capable of unattended, remote installation.

conversion. On VM servers, the process of changing from WDSF/VM to ADSM.

copy group. A policy object that contains attributes that control the generation, destination, and expiration of backup and archive files. There are two kinds of copy groups: backup and archive. Copy groups belong to management classes. See also *frequency*, *destination*, *mode*, *serialization*, *retention*, and *version*.

copy status. The status of volume copies defined to the database or recovery log. The copy status can be synchronized, stale, off-line, or undefined.

copy storage pool. A named set of volumes that contains copies of files that reside in primary storage pools. Copy storage pools are used to back up the data stored in primary storage pools. A copy storage pool cannot be a destination for a backup copy group, an archive copy group, or a management class (for space-managed files). See *primary storage pool* and *destination*.

CPI-C. Common Programming Interface Communications.

CST. Cartridge system tape.

CUA. Common User Access.

D

daemon. In the AIX operating system, a program that runs unattended to perform a standard service. Some daemons are triggered automatically to perform their tasks; others operate periodically.

daemon process. In the AIX operating system, a process begun by the root user or by the root shell that can be stopped only by the root user. Daemon processes generally provide services that must be available at all times, such as sending data to a printer.

damaged file. A file for which ADSM has detected data-integrity errors.

DASD. Direct access storage device.

database. A collection of information about all objects managed by the server, including policy management objects, users and administrators, and client nodes.

database audit. A utility that checks for and optionally corrects inconsistent database references.

database backup series. One full backup of the database, plus up to 32 incremental backups made since that full backup. Each full backup that is run starts a new database backup series. A backup series is identified with a number.

database backup trigger. A set of criteria that defines when and how database backups are run automatically. The criteria determine how often the backup is run, whether the backup is a full or incremental backup, and where the backup is stored.

database buffer pool. Storage that is used as a cache to allow database pages to remain in memory for long periods of time, so that the server can make continuous updates to pages without requiring input or output (I/O) operations from external storage.

database dump. The action performed by the DSMSERV DUMPDB utility (DMPADSM command on AS/400), which copies ADSM database entries to media for later reload in case a catastrophic error occurs.

database load. The action performed by the DSMSERV LOADDB utility (LODADSM command on AS/400), which copies ADSM database entries from media to a newly installed database.

database volume. A volume that has been assigned to the database.

dataserver. See *Tape Library Dataserver*.

data set. See *linear data set*.

DDM. Distributed Data Management.

default management class. A management class assigned to a policy set, which is used to govern backed up or archived files when a user does not explicitly bind a file to a specific management class.

deletion exit. An installation-wide exit that informs a tape management system or operator that the server has deleted a sequential access media volume from its database.

delimiter. (1) A character used to indicate the beginning and end of a character string. (2) A character that groups or separates words or values in a line of input.

density. On MVS and VM servers, a device class attribute that identifies the bits per inch that can be stored on tape reels. ADSM supports 1600 and 6250 bits per inch (bpi).

desktop client. The group of clients supported by ADSM that include clients on OS/2, DOS, Windows, Apple, and Novell NetWare operating systems.

destination. A copy group or management class attribute that specifies the primary storage pool to which a client file will be backed up, archived, or migrated. At installation, ADSM provides storage destinations named BACKUPPOOL, ARCHIVEPOOL, and SPACEMGPOOL.

device class. A named group of storage devices. Each device class has a unique name and represents a device type of disk, file, optical disk, or tape.

device configuration file. A file that contains information about defined device classes, and, on some ADSM servers, defined libraries and drives. The file can be created by using an ADSM command or by using an option in the server options file. The information is a copy of the device configuration information in the ADSM database.

device driver. A collection of subroutines that control the interface between I/O device adapters and the processor.

device type. A category of storage device. Each device class must be categorized with one of the supported device types, for example, DISK or CARTRIDGE.

direct access storage device (DASD). A device in which access time is effectively independent of the location of the data.

disaster recovery. Recovery from catastrophic interruptions of computer systems, such as loss of the system location because of natural events. Backup data is kept offsite to protect against such catastrophes.

Disaster Recovery Manager (DRM). An ADSM feature that assists in preparing and later using a disaster recovery plan for the ADSM server.

disaster recovery plan. A document that contains information about how to recover computer systems if a disaster occurs. With DRM, the plan is a file that contains information about the software and hardware used by the ADSM server, and the location of recovery media.

DISK. A device class that is defined by ADSM at installation. It is used to categorize disk drives, such as 3390 DASD or 3380 DASD.

disk operating system (DOS). An operating system used in IBM PC, PS/2, and compatible computers.

Distributed Data Management (DDM). A feature of the System Support Program Product that allows an application program (client) to use server program functions to work on files that reside in a remote system.

DLL. Dynamic link library.

DLT. Digital linear tape.

domain. See *policy domain* or *client domain*.

DOS. Disk operating system.

drive. A device used to read and write data on a medium such as a disk, diskette, or tape.

DRM. Disaster Recovery Manager.

dsm.opt file. See *client options file* and *client user options file*.

dsmserv.opt. See *server options file*.

dsm.sys file. See *client system options file*.

dynamic. A copy group serialization value that specifies that ADSM accepts the first attempt to back up or archive a file regardless of whether the file is modified during the backup or archive process. See also *serialization*. Contrast with *shared dynamic*, *shared static*, and *static*.

dynamic link library. A file containing executable code and data bound to a program at load time or run time, rather than during linking. The code and data in a dynamic link library can be shared by several applications simultaneously.

E

ECCST. Enhanced capacity cartridge system tape.

enhanced capacity cartridge system tape (ECCST). Cartridge system tape with increased capacity that can only be used with 3490E tape subsystems. Contrast with *cartridge system tape*.

error log. A character file written on random access media that contains information about errors detected by the server or client.

estimated capacity. The available space, in megabytes, of a storage pool.

Ethernet. A data link protocol and LAN that interconnects personal computers and workstations via coaxial cable.

event. Administrative commands or client operations that are scheduled to be executed at a particular time.

event record. A database record that describes actual status and results for events.

exclude. The process of identifying files or directories in an include-exclude list to prevent these objects from being backed up whenever a user or schedule issues an incremental or selective backup operation, or to prevent these objects from being migrated off the client node via ADSM space management.

exclude-include list. See *include-exclude list*.

exit. To execute an instruction within a portion of a computer program in order to terminate the execution of that portion.

exit machine. On a VM server, a virtual machine that runs the mount and deletion installation-wide exits on VM systems.

expiration. The process by which files are identified for deletion because their expiration date or retention period has passed. Backed up or archived files are marked expired by ADSM based on the criteria defined in the backup or archive copy group.

expiration date. On MVS, VM, and VSE servers, a device class attribute used to notify tape management systems of the date when ADSM no longer needs a tape volume. The date is placed in the tape label so that the tape management system does not overwrite the information on the tape volume before the expiration date.

export. The process of copying administrator definitions, client node definitions, policy definitions, server control information or file data to external media.

export/import facility. See *import/export facility*.

extend. The process of increasing the portion of available space that can be used to store database or recovery log information. Contrast with *reduce*.

F

file data. File space definitions, authorization rules, backed up files, archive copies, and space-managed files. File data can be exported from a source server to external media so that it can be imported to a target server at a later date.

file record extent. The extent of the file enumerated in number of records.

file space. A logical space in a client's storage that can contain a group of files. For clients on systems such as OS/2, a file space is a logical partition and is identified by a volume label. For clients on systems such as AIX and UNIX, a file space can consist of any subset of directories and subdirectories stemming from a virtual mount point. Clients can restore, retrieve, or delete their file spaces from ADSM server storage. ADSM does not necessarily store all the files from a single file space together, but can identify all the files in server storage that came from a single file space.

File Transfer Protocol (FTP). In TCP/IP, the protocol that makes it possible to transfer data among hosts and to use foreign hosts indirectly.

format. A device class attribute that specifies the recording format used to read or write to sequential access media, for example to cartridge tape.

frequency. A copy group attribute that specifies the minimum interval, in days, between incremental backups.

FTP. File Transfer Protocol.

full backup. An ADSM function that copies the entire database. A full backup begins a new database backup series. Contrast with *incremental backup*. See *database backup series*.

fuzzy copy. A backup version or archive copy of a file that might not accurately reflect what is currently in the file because ADSM backed up or archived the file while the file was being modified.

G

GUI. Graphical user interface.

H

HDA. Head-disk assembly.

head-disk assembly (HDA). A field replaceable unit in a direct access storage device containing the disks and actuators.

hierarchical storage management (HSM) client. A program that runs on workstations to allow users to maintain free space on their workstations by migrating and recalling files to and from ADSM storage. The HSM client allows use of ADSM space management functions. Synonymous with *space management client*.

high migration threshold. A percentage of the storage pool capacity that identifies when ADSM can start migrating files to the next available storage pool in the hierarchy. Contrast with *low migration threshold*. See *server migration*.

HP-UX. Hewlett-Packard UNIX operating system. HP-UX is one of the operating systems that ADSM supports as a client environment and a server environment.

HSM client. Hierarchical storage management client.

I

import. The process of copying administrator definitions, client node definitions, policy definitions, server control information or file data from external media to a target server.

import/export facility. The facility that allows system administrators to copy definitions and file data from a source server to external media to move or copy information between servers. Any subset of information can be imported to a target server from the external media.

inactive version. A backup version of a file for which a more recently backed up version exists. Inactive backup versions are eligible for expiration processing according to the management class assigned to the file. Contrast with *active version*.

include-exclude file. On UNIX clients, a file containing statements that ADSM uses to determine whether to back up or migrate certain files, and to determine the associated management classes to use for backup, archive, and space management. See *include-exclude list*.

include-exclude list. A group of include and exclude option statements in a file. ADSM uses the statements to determine whether to back up or migrate certain files, and to determine the associated management classes to use for backup, archive, and space management. The exclude options identify files that should not be backed up or migrated off the client node. The include options identify files that are exempt from the exclusion rules, or assign a management class to a file or group of files for backup, archive, or space management services. The include-exclude list is defined either in the include-exclude file (for UNIX clients) or in the client options file (for other clients).

incremental backup. (1) A function that allows users to back up files or directories that are new or have changed since the last incremental backup. With this function, users can back up files or directories from a client domain that are not excluded in the include-exclude list and that meet the requirements for frequency, mode, and serialization as defined in the backup copy group of the management class assigned to the files. Contrast with *selective backup*. (2) An ADSM function that copies only the pages in the database that are new or changed since the last full or incremental backup. Contrast with *full backup*. See *database backup series*.

internal mounting facility. On a VM server, a VM facility that allows the server to request tape mounts by sending a message to a mount operator. The message is repeated until the tape is mounted or until the mount wait time is exceeded.

inter-user communication vehicle (IUCV) facility. On a VM server, a VM communication method used to pass data between virtual machines and VM components.

IPX/SPX. Internetwork Packet Exchange/Sequenced Packet Exchange. IPX/SPX is Novell NetWare's communication protocol.

IUCV. Inter-user communication vehicle.

K

KB. Kilobyte.

kernel. The part of an operating system that performs basic functions such as allocating hardware resources.

kernel extension. A program that modifies parts of the

kernel that can be customized to provide additional services and calls. See *kernel*.

kilobyte (KB). 1024 bytes.

L

LAN. Local area network.

length. A device class attribute that specifies the length of cartridge tape by specifying one of the following media types: CST for standard length tape or ECCST for double length tape.

library. (1) A repository for demountable recorded media, such as magnetic tapes. (2) In ADSM, a collection of one or more drives, and possibly robotic devices (depending on the library type), which can be used to access storage volumes. (3) In the AS/400 system, a system object that serves as a directory to other objects. A library groups related objects, and allows the user to find objects by name.

linear data set. A type of MVS data set that ADSM uses for the database, the recovery log, and storage pools. The data set must be preallocated using VSAM IDCAMS and formatted by ADSM for its use. See *minidisk*.

load. See *mount*.

local area network (LAN). A network in which a set of devices are connected to one another for communication and that can be connected to a larger network.

log pool size. The size of an area in memory used to store recovery log pages.

logical volume. The combined space from all volumes defined to either the database or the recovery log. In ADSM, the database is one logical volume and the recovery log is one logical volume.

low migration threshold. A percentage of the storage pool capacity that specifies when ADSM can stop the migration of files to the next storage pool. Contrast with *high migration threshold*. See *server migration*.

M

machine information. Details about the machine on which a client node resides.

macro file. An optional file that contains one or more administrative commands and is invoked from an administrative client.

management class. A policy object that users can bind to each file to specify how the server manages the file. The management class can contain a backup copy group, an archive copy group, and space management attributes. The copy groups determine how the ADSM server manages backup versions or archive copies of files. The space management attributes determine whether files are eligible for migration from client nodes to ADSM storage, and under what conditions. See also *copy group*, *binding* and *rebinding*.

mask. A pattern of characters that controls the keeping, deleting, or testing of positions of another pattern of characters or bits.

maximum extension. Specifies the maximum amount of storage space, in megabytes, that you can extend the database or recovery log.

maximum reduction. Specifies the maximum amount of storage space, in megabytes, that you can reduce the database or recovery log.

maximum utilization. The highest percentage of assigned capacity used by the database or recovery log.

MB. Megabyte.

megabyte (MB). (1) For processor storage and real and virtual memory, 2^{20} or 1 048 576 bytes. (2) For disk storage capacity and transmission rates, 1 000 000 bytes.

migrate. (1) To move data from one storage pool to the storage pool specified as the next pool in the hierarchy. The process is controlled by the high and low migration thresholds for the first storage pool. See *high migration threshold* and *low migration threshold*. (2) To copy a file from a client node to ADSM storage. ADSM replaces the file with a stub file on the client node. The process is controlled by the include-exclude list and by space management attributes in management classes.

migration. The process of moving data from one storage location to another. See *client migration* and *server migration*.

minidisk. A logical subdivision of a VM physical disk that provides storage on contiguous cylinders of DASD. On a VM server, a minidisk can be defined as a disk volume that can be used by the database, recovery log, or a storage pool. See also *linear data set*.

mirroring. A feature that protects against data loss within the database or recovery log by writing the same data to multiple disks at the same time. Mirroring supports up to three exact copies of each database or recovery log volume.

mm. Millimeter.

mode. A copy group attribute that specifies whether to back up a file that has not been modified since the last time the file was backed up. See *modified* and *absolute*.

modified. A backup copy group mode value indicating that a file is considered for incremental backup only if it has changed since the last backup. A file is considered changed if the date, size, owner, or permissions have changed. See *mode*. Contrast with *absolute*.

Motif. A graphical user interface that performs window management and contains a high level toolkit for application program development. It provides an icon view of the UNIX file system. Also known as X-Windows/Motif or Motif X—Toolkit.

mount. To place a data medium (such as a tape cartridge) on a drive in a position to operate.

mount exit. On a VM server, an installation-wide exit (DSMMOUNT EXEC) that requests tape mounts on behalf of the server on VM systems.

mount limit. A device class attribute specifying the maximum number of volumes that can be simultaneously accessed from the same device class, that is, the maximum number of mount points. See *mount point*.

mount operator. On a VM server, a VM user ID that can receive tape mount messages from the server.

mount point. A logical drive through which ADSM accesses volumes in a sequential access device class. For a device class with a removable media device type (for example, CARTRIDGE), a mount point is a logical drive associated with a physical drive. For a device class with the device type of FILE, a mount point is a logical drive associated with an I/O stream. The number of mount points for a device class is determined by the mount limit for that class. See *mount limit*.

mount request. A server request to mount a sequential access media volume so that data can be read from or written to the sequential access media.

mount retention period. A device class attribute that specifies the maximum amount of time, in minutes, that the server retains a mounted sequential access media volume that is not being used before it dismounts the sequential access media volume.

mount wait period. A device class attribute that specifies the maximum amount of time, in minutes, that the server waits for a sequential access volume mount request to be satisfied before canceling the request.

Multiple Virtual Storage (MVS). One of the family of IBM operating systems for the System/370 or System/390 processor, such as MVS/ESA. MVS is one of the supported server environments.

MVS. Multiple Virtual Storage.

N

Named Pipes. A communication protocol that is built into the OS/2 operating system. It can be used to establish communications between an ADSM/2 server and OS/2 clients. The client and ADSM/2 server must reside on the same system.

NetBIOS. Network Basic Input/Output System.

network adapter. A physical device, and its associated software, that enables a processor or controller to be connected to a network.

Network Basic Input/Output System (NetBIOS). An operating system interface for application programs used on IBM personal computers that are attached to the IBM Token-Ring Network.

Network File System (NFS). A protocol defined by Sun Microsystems that extends TCP/IP network file services. NFS permits remote node files to appear as though they are stored on a local workstation.

Networking Services/DOS (NS/DOS). A software product that supports advanced program-to-program communications (APPC) in the DOS and Microsoft Windows 3.1 environments. With NS/DOS, communications applications on your workstation “talk

to" partner applications on other systems that support APPC.

NFS. Network File System.

node. A unique name used to identify a workstation to the server. See also *client node.*

notify operator. A VM user ID that specifies an operator who receives messages about severe errors and abnormal conditions.

O

object. A collection of data managed as a single entity.

offsite recovery media. Media that is kept at a different location to ensure its safety if a disaster occurs at the primary location of the computer system. The media contains data necessary to recover the ADSM server and clients. The offsite recovery media manager, which is part of DRM, identifies recovery media to be moved offsite and back onsite, and tracks media status.

offsite volume. A removable media volume that is at a location where it cannot be mounted for use.

OpenEdition MVS. MVS/ESA services that support an environment within which operating systems, servers, distributed systems, and workstations share common interfaces. OpenEdition MVS supports standard application development across multivendor systems and is required to create and use applications that conform to the POSIX standard.

open registration. A registration process in which users can register their own workstations as client nodes with the server. Contrast with *closed registration.*

Operating System/2 (OS/2). An operating system used in IBM PC AT, PS/2, and compatible computers. OS/2 is one of the supported client environments and one of the supported server environments.

operator privilege class. An administrative privilege class that allows an administrator to issue commands that control the operation of the server. This privilege class allows disabling or halting the server to perform maintenance, enabling the server, canceling server processes, and managing tape.

optical library. A disk storage device that houses optical disk drives and optical disks, and contains a mechanism for moving optical disks between a storage area and optical disk drives.

OS/2. Operating System/2.

OS/400. Operating System/400.

owner. The owner of backup-archive files sent from a multiuser client node, such as AIX.

P

page. (1) A block of instructions, data, or both. (2) In ADSM, a unit of space allocation within database volumes. (3) In a virtual storage system, a fixed block that has a virtual address and is transferred as a unit between real storage and auxiliary storage.

paging. (1) The action of transferring instructions, data, or both, between real storage and external page storage. (2) Moving data between memory and a mass storage device as the data is needed.

pattern-matching expression. A string expression that uses wildcard characters to specify one or more ADSM objects. See also *wildcard character.*

PC Support/400. A software product that supports advanced program-to-program communications (APPC) in the DOS, OS/2, and Microsoft Windows environments and provides a set of end user services.

platform. The operating system environment in which a program runs.

policy definition. Server control information that includes information about policy domains, policy sets (including the ACTIVE policy set), management classes (including the default management class), copy groups, schedules, and associations between client nodes and schedules. A policy definition can be exported from a source server so that it can be imported to a target server at a later date.

policy domain. A policy object that contains policy sets, management classes, and copy groups that is used by a group of client nodes. See *policy set*, *management class*, and *copy group.*

policy privilege class. An administrative privilege class that allows an administrator to manage policy objects, register client nodes, and schedule client operations (such as backup services) for client nodes. Administrators can be authorized with unrestricted or

restricted policy privilege. See *unrestricted policy privilege* or *restricted policy privilege*.

policy set. A policy object that contains a group of management class definitions that exist for a policy domain. At any one time there can be many policy sets within a policy domain but only one policy set can be active. See *management class* and *active policy set*.

premigration. For an HSM client, the process of copying files that are eligible for migration to ADSM storage, but leaving the original file intact on the local system.

primary storage pool. A named set of volumes that ADSM uses to store backup versions of files, archive copies of files, and files migrated from client nodes via ADSM space management. A primary storage pool may be backed up to a copy storage pool either automatically or by command. See *destination* and *copy storage pool*.

privilege class. A level of authority granted to an ADSM administrator. ADSM has five privilege classes: system, policy, storage, operator, and analyst. The privilege class determines which ADSM administrative tasks the administrator can perform. For example, an administrator with system privilege class can perform any administrative task.

protection status. A device class attribute that specifies whether to update the RACF profile to identify which users have access to cartridge tapes associated with this device class on MVS servers.

Q

QIC. Quarter-inch cartridge (a type of magnetic tape media).

R

random access media. Any volume accessed in a nonsequential manner. In ADSM, volumes are accessed in a nonsequential manner if they reside in the DISK device class.

randomization. The percentage of the startup window that the server can use to randomize start times for different client nodes associated with a schedule.

rebinding. The process of associating a file with a new management class name. For example, rebinding occurs when the management class associated with a file is deleted. See *binding*.

recall. A function that allows users to access files that have been migrated from their workstations to ADSM storage via ADSM space management. Contrast with *migrate*.

reclamation. A process of consolidating the remaining data from many sequential access media onto a single new sequential access media.

reclamation threshold. A value that specifies a percentage of space on sequential access media volumes that can be occupied by reclaimable space. The remainder of the space is for active data. (Space becomes reclaimable when files are expired.)

recovery log. A log of updates that are about to be written to the database. The log can be used to recover from system and media failures.

recovery log buffer pool. Used to hold new transactions records until they can be written to the recovery log.

recovery media. Media that contains data necessary to recover the ADSM server and clients.

reduce. The process of freeing up enough space to allow you to delete a volume from the database or recovery log. Contrast with *extend*.

REEL. On ADSM servers that support it, a device class that is used to categorize tape devices that support tape reels, such as the 3420 9-track tape device.

register. (1) Define a client node or administrator who can access the server. See *registration*. (2) Specify licenses that have been purchased for the server.

registration. The process of identifying a client node or administrator to the server.

reply operator. On a VM server, a VM user ID that specifies an operator who will reply to tape mount requests by the server.

restore. The process of returning a backup copy to an active storage location for use. ADSM has processes for restoring its database, storage pools, storage pool volumes, and users' backed-up files. For example, users can copy a backup version of a file from the storage pool to the workstation. The backup version in the storage pool is not affected. Contrast with *backup*.

restricted policy privilege. An administrative privilege class that enables an administrator to manage policy objects only for the policy domains for which the administrator has been authorized.

restricted storage privilege. An administrative privilege class that enables an administrator to control the allocation and use of storage resources only for the storage pools for which the administrator has been authorized.

retention. The amount of time, in days, that inactive backed up or archived files will be retained in the storage pool before they are deleted. The following copy group attributes define retention: retain extra versions, retain only version, retain version.

retention period. On an MVS server, a device class attribute that specifies how long files are retained on sequential access media. When used, ADSM passes this information to the MVS operating system to ensure that other tape management systems do not overwrite tape volumes that contain retained data.

retrieve. A function that allows users to copy an archive copy from the storage pool to the workstation. The archive copy in the storage pool is not affected. Contrast with *archive*.

rollback. To remove changes that were made to database files since the last commit point.

root. In the AIX and UNIX environments, the user name for the system user with the most authority.

root user. In the AIX and UNIX environments, an expert user who can log in and execute restricted commands, shut down the system, and edit or delete protected files. Also called the *superuser*.

S

schedule. A database record that describes scheduled client operations or administrative commands. See *administrative command schedule* and *client schedule*.

scheduling mode. The type of scheduling operation set for the server and client. ADSM supports two scheduling modes for client operations: client-polling and server-prompted.

scratch volume. A volume that is available for ADSM use. The volume is labeled, is either blank or contains no valid data, and is not defined to ADSM.

SCSI. Small computer system interface.

selective backup. A function that allows users to back up specific files or directories from a client domain. With this function, users can back up files or directories that are not excluded in the include-exclude list and that meet the requirement for serialization as defined in the backup copy group of the management class assigned to the files. Contrast with *incremental backup*.

sequential access media. Any volume that is accessed in a sequential manner, as opposed to a random manner. In ADSM, volumes are accessed sequentially if they reside in a device class other than DISK.

serialization. A copy group attribute that specifies what ADSM does if files are modified during back up or archive processing. The value of this attribute determines whether processing continues, is retried, or is stopped. See *static*, *dynamic*, *shared static*, and *shared dynamic*.

server. The program that provides backup, archive, space management, and administrative services to clients. The server program must be at the necessary level to provide all of these services.

server migration. The process of moving data from one storage pool to the next storage pool as controlled by the high and low migration thresholds. See *high migration threshold* and *low migration threshold*.

server options file. A file that specifies processing options for communication methods, tape handling, pool sizes, language, and date, time, and number formats.

server-prompted scheduling mode. A client/server communication technique where the server contacts the client when work needs to be done.

server storage. The primary and copy storage pools used by the server to store users' files: backup versions, archive copies, and files migrated from client nodes (space-managed files). See *primary storage pool*, *copy storage pool*, *storage pool volume*, and *volume*.

session resource usage. The amount of wait time, CPU time, and space used or retrieved during a client session.

shared dynamic. A copy group serialization value that specifies that a file must not be modified during a backup or archive operation. ADSM attempts to retry

the backup or archive operation a number of times; if the file is in use during each attempt, ADSM will back up or archive the file on its last try even though the file is in use. See also *serialization*. Contrast with *dynamic*, *shared static*, and *static*.

shared static. A copy group serialization value that specifies that the file must not be modified during backup or archive. ADSM will retry the backup or archive operation a number of times; if the file is in use during each attempt, ADSM will not back up or archive the file. See also *serialization*. Contrast with *dynamic*, *shared dynamic*, and *static*.

shell. In the AIX and UNIX environments, a software interface between a user and the operating system of a computer. Shell programs interpret commands and user interactions on devices such as keyboards, pointing devices, and touch-sensitive screens and communicate them to the operating system.

SMIT. System Management Interface Tool.

SNA LU6.2. Systems Network Architecture Logical Unit 6.2.

socket. (1) An endpoint for communication between processes or applications. (2) A pair consisting of TCP port and IP address, or UDP port and IP address.

space-managed file. A file that is migrated from and recalled to a client node via ADSM space management.

space management. The process of keeping sufficient free storage space available on a client node by migrating files to ADSM storage. The files are migrated based on criteria defined in management classes to which files are bound, and the include-exclude list. Synonymous with *hierarchical storage management*. See also *migration*.

space management client. A program that runs on workstations to allow users to maintain free space on their workstations by migrating and recalling files to and from ADSM storage. Synonymous with *hierarchical storage management client*.

SPACEMGPOOL. A disk storage pool defined by ADSM at installation. It can be the destination for files that are migrated from client nodes via ADSM space management. See *storage pool*.

stale copy status. Specifies that a volume copy is not available to the database or recovery log.

STANDARD copy group. A backup or archive copy group that is defined by ADSM at installation. See *copy group*.

STANDARD management class. A management class that is defined by ADSM at installation. See *management class*.

STANDARD policy domain. A policy domain that is defined by ADSM at installation. See *policy domain*.

STANDARD policy set. A policy set that is defined by ADSM at installation. See *policy set*.

stanza. A group of lines in a file that together have a common function or define a part of the system. Stanzas are usually separated by blank lines or colons, and each stanza has a name.

startup window. A time period during which a schedule must be initiated.

static. A copy group serialization value that specifies that the file must not be modified during backup or archive. If the file is modified during the attempt, ADSM will not back up or archive the file. See also *serialization*. Contrast with *dynamic*, *shared dynamic*, and *shared static*.

storage hierarchy. A logical ordering of primary storage pools, as defined by an administrator with system privilege. Generally, the ordering is based on the speed and capacity of the devices that the storage pools use. In ADSM, the storage hierarchy is defined by identifying the *next* storage pool in a storage pool definition. See *storage pool*.

storage management services. A component that allows a central system to act as a file backup and archive server for local area network file servers and workstations.

storage pool. A named set of storage volumes that ADSM uses to store client data. A storage pool is either a primary storage pool or a copy storage pool. See *primary storage pool* and *copy storage pool*.

storage pool volume. A volume that has been assigned to an ADSM storage pool. See *volume*, *copy storage pool*, and *primary storage pool*.

storage privilege class. An administrative privilege class that allows an administrator to control the allocation and use of storage resources for the server, such as monitoring the database, recovery log, and

server storage. Administrators can be authorized with unrestricted or restricted storage privilege. See *restricted storage privilege* or *unrestricted storage privilege*.

stub file. A file that replaces the original file on a client node when the file is migrated from the client node to ADSM storage.

superuser. See *root user*.

synchronized copy status. Specifies that the volume is the only volume copy or is synchronized with other volume copies in the database or recovery log. When synchronized, mirroring has started.

system privilege class. An administrative privilege class that allows an administrator to issue all server commands.

Systems Application Architecture (SAA). Software interfaces, conventions, and protocols that provide a framework for designing and developing applications that are consistent across systems.

Systems Network Architecture (SNA). A set of rules for data to be transmitted in a network. Application programs communicate with each other using a layer of SNA called advanced program-to-program communications (APPC).

T

tape library. (1) A term used to refer to a collection of tape cartridges. (2) An automated device that performs tape cartridge mounts and demounts without operator intervention.

Tape Library Dataserver. An automated tape library consisting of mechanical components, cartridge storage frames, IBM tape subsystems, and controlling hardware and software. The tape library dataserver performs tape cartridge mounts and demounts without operator intervention.

tape volume prefix. A device class attribute that is the high-level-qualifier of the file name or the data set name in the standard tape label.

TCP/IP. Transmission Control Protocol/Internet Protocol.

Telnet. In TCP/IP, the protocol that opens the connection to the system.

Transmission Control Protocol/Internet Protocol (TCP/IP). A set of communication protocols that support peer-to-peer connectivity functions for both local and wide area networks.

trusted communication agent. A program that performs communication tasks on behalf of the client or server, and ensures the security of the communications.

U

unit name. On an MVS server, a device class attribute that specifies a group of tape devices used with the MVS server. A unit name can be a generic device type, an esoteric unit name, or a physical device.

unrestricted policy privilege. An administrative privilege class that enables an administrator to manage policy objects for any policy domain.

unrestricted storage privilege. An administrative privilege class that enables an administrator to control the database, recovery log, and all storage pools.

utilization. The percent of assigned capacity used by the database or recovery log at a specific point of time.

V

validate. The process of ensuring that the active policy set contains a default management class and reporting on copy group definition errors.

version. The maximum number of backup copies retained for files and directories. The following copy group attributes define version criteria: versions data exists and versions data deleted.

Virtual Machine (VM). One of the family of IBM operating systems for the System/370 or System/390 processor, including VM/ESA, VM/XA, VM/SP, and VM/HPO. VM is one of the supported server environments.

Virtual Storage Extended (VSE). One of the family of IBM operating systems for the System/370 or System/390 processor, including VSE/ESA. VSE is one of the supported server environments.

VM. Virtual Machine.

volume. The basic unit of storage for the database, recovery log, or a storage pool. A volume can be an

LVM logical volume, a standard file system file, a tape cartridge, or an optical cartridge. Each volume is identified by a unique volume identifier. See *database volume*, *scratch volume*, and *storage pool volume*.

volume history file. A file that contains information about: volumes used for database backups and database dumps; volumes used for export of administrator, node, policy, or server data; and sequential access storage pool volumes that have been added, reused, or deleted. The information is a copy of the same types of volume information in the ADSM database.

volume set. An entire image of the database or recovery log, as displayed on the administrative graphical user interface.

VSE. Virtual Storage Extended.

W

WDSF/VM. Workstation Data Save Facility/Virtual Machine.

wildcard character. A character or set of characters used to specify an unknown number or set of characters in a search string. Also called *pattern-matching character*.

Workstation Data Save Facility/Virtual Machine (WDSF/VM). The predecessor product to ADSTAR Distributed Storage Manager.

WORM. A type of optical media that can only be written to and cannot be erased.

X

X Windows. A network transparent windowing system developed by MIT. It is the basis for other products, such as Enhanced X Windows which runs on the AIX operating system.

Index

Numerics

4MM device type 112
8MM device type 116

A

ACCESS parameter
  See the DEFINE and UPDATE VOLUME commands
account record, setting 549
ACTIVATE POLICYSET command 38
activating policy sets 38
activity log
  querying 338
  setting retention period 551
address
  example of 711
  get IPX/SPX 711
administrative client
  batch mode 13, 15
  console mode 13, 14
  continuation characters 18
  interactive mode 13, 16
  macros 21
  mount mode 13, 15
  options 17
  privilege classes 25
  using 13
administrative client options
  -consolemode 17
  -id 17
  -itemcommit 17, 24
  -mountmode 17
  -noconfirm 17
  -outfile 14, 15, 17
  -password 17
  -quiet 17
administrative command
  components 5
  entering 5
  entry rules 6
  formatting terminal output 8
  help 286
  issued by all administrators 34
  issued with analyst privilege 34
  issued with operator privilege 33
administrative command *(continued)*
  issued with policy privilege 29
  issued with storage privilege 31
  issued with system privilege 25
  issuing multiple 21
  keyword parameters
    optional 5
    required 5
  naming conventions 10
  positional parameters
    optional 5
    required 5
  privilege class for 25
  processing
    background 7
    foreground 7
  scheduling 173
  using 37
  using wildcard characters 8
administrative session, canceling 69
administrator
  exporting 256
  importing 289
  locking 308
  querying 344
  registering 509
  removing 517
  renaming 521
  updating 604
appending
  output to a file in batch mode 19
  output to a file in interactive mode 19
application programming interface xvii
ARCHDELETE parameter
  See the REGISTER and UPDATE NODE commands
archive
  defining 99
  description of 99
  frequency 99
archive copy group
  attributes of 94
  defining 94
  serialization 94
archive file deletion via a client, allowing
  See the REGISTER and UPDATE NODE commands
ASSIGN DEFMGMTCLASS command 40

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assigning, default management class 40
association of client with schedule
  defining 91
  deleting 199
  querying 348
AUDIT LIBRARY command 43
AUDIT LICENSES command 46
audit occupancy
  displaying storage pool utilization 351
  querying 351
AUDIT VOLUME command 48
auditing
  library 43
  licenses 46
  storage pool volume 48
authentication
  information about 14
  setting 553
authority
  for command use 25
  granting 278
  revoking 543
  unlocking 602
AUTOMIGNONUSE parameter
  See the DEFINE and UPDATE MGMTCLASS commands

B

BACKDELETE parameter
  See the REGISTER and UPDATE NODE commands
backup
  database 53
  database volume information 718
  device information 57
  primary storage pool 59
  scheduling for client 166
  trigger for database 103
backup copy group
  attributes of 94
  defining 94
  description of 94
  frequency 96
  serialization 94
BACKUP DB command 53
BACKUP DEVCONFIG command 57
backup file deletion via a client, allowing
  See the REGISTER and UPDATE NODE commands
BACKUP STGPOOL command 59
batch mode
  restrictions 16
  starting and ending 15
  using 15
BEGINDATE parameter
  See the QUERY ACTLOG and QUERY EVENT commands
BEGINTIME parameter
  See the QUERY ACTLOG and QUERY EVENT commands
buffer pool statistic, resetting 528
BUFPOOLSIZE option 757

C

CACHE parameter
  See the DEFINE and UPDATE STGPOOL commands
CANCEL PROCESS command 65
CANCEL REQUEST command 67
CANCEL SESSION command 69
canceling
  administrative session 69
  background process 8
  client node session 69
  mount requests 67
  process 65
CHECKIN LIBVOLUME command 71
checking in libvolumes 71
checking out libvolumes 76
CHECKLABEL parameter
  See the CHECKIN, CHECKOUT LIBVOLUME and AUDIT LIBRARY commands
CHECKOUT LIBVOLUME command 76
CLASSES parameter
  See the GRANT and REVOKE AUTHORITY commands
client node session
  canceling 69
  scheduling 166
client-server options, setting 754
COLLOCATE parameter
  See the DEFINE and UPDATE STGPOOL commands
collocation 188, 191
command line interface
  administrative client 13
  server console 13
  using 13

commands
ACTIVATE POLICYSET 38
ASSIGN DEFMGMTCLASS 40
AUDIT LIBRARY 43
AUDIT LICENSES 46
AUDIT VOLUME 48
BACKUP DB 53
BACKUP DEVCONFIG 57
BACKUP STGPOOL 59
CANCEL PROCESS 65
CANCEL REQUEST 67
CANCEL SESSION 69
CHECKIN LIBVOLUME 71
CHECKOUT LIBVOLUME 76
COMMIT 79
COPY DOMAIN 81
COPY MGMTCLASS 83
COPY POLICYSET 85
COPY SCHEDULE 87
DEFINE ASSOCIATION 91
DEFINE COPYGROUP 94
DEFINE DBBACKUPTRIGGER 103
DEFINE DBCOPY 107
DEFINE DBVOLUME 109
DEFINE DEVCLASS 111
DEFINE DOMAIN 136
DEFINE DRIVE 139
DEFINE LIBRARY 142
DEFINE LOGCOPY 145
DEFINE LOGVOLUME 147
DEFINE MACHINE 149
DEFINE MACHNODEASSOCIATION 152
DEFINE MGMTCLASS 154
DEFINE POLICYSET 158
DEFINE RECMEDMACHASSOCIATION 161
DEFINE RECOVERYMEDIA 163
DEFINE SCHEDULE 166
DEFINE STGPOOL 182
DEFINE VOLUME 196
DELETE ASSOCIATION 199
DELETE COPYGROUP 201
DELETE DBBACKUPTRIGGER 204
DELETE DBVOLUME 206
DELETE DEVCLASS 208
DELETE DOMAIN 210
DELETE DRIVE 212
DELETE EVENT 214
DELETE FILESPACE 218
DELETE LIBRARY 222
DELETE LOGVOLUME 224

commands *(continued)*
DELETE MACHINE 226
DELETE MACHNODEASSOCIATION 228
DELETE MGMTCLASS 230
DELETE POLICYSET 232
DELETE RECMEDMACHASSOCIATION 234
DELETE RECOVERYMEDIA 236
DELETE SCHEDULE 237
DELETE STGPOOL 240
DELETE VOLHISTORY 242
DELETE VOLUME 246
DISABLE 249
DISMOUNT VOLUME 251
DSMFMT 706
DSMLABEL 708
DSMSERV AUDITDB 748
DSMSERV DISPLAY DBBACKUPVOLUME 718
DSMSERV DISPLAY DBVOLUMES 721
DSMSERV DISPLAY LOGVOLUMES 723
DSMSERV DUMPDB 736
DSMSERV EXTEND LOG 714
DSMSERV INSTALL 741
DSMSERV LOADDB 744
DSMSERV RESTORE DB 725
ENABLE 252
EXPIRE INVENTORY 254
EXPORT ADMIN 256
EXPORT NODE 260
EXPORT POLICY 265
EXPORT SERVER 269
EXTEND DB 274
EXTEND LOG 276
GETIPXAD 711
GRANT AUTHORITY 278
HALT 282
HELP 286
IMPORT ADMIN 289
IMPORT NODE 292
IMPORT POLICY 298
IMPORT SERVER 301
INSERT MACHINE 306
LOCK ADMIN 308
LOCK NODE 309
MACRO 311
MOVE DATA 314
MOVE DRMEDIA 316
PREPARE 331
QUERY ACTLOG 338
QUERY ADMIN 344
QUERY ASSOCIATION 348

commands *(continued)*
QUERY AUDITOCCUPANCY 351
QUERY CONTENT 354
QUERY COPYGROUP 360
QUERY DB 365
QUERY DBBACKUPTRIGGER 370
QUERY DBVOLUME 372
QUERY DEVCLASS 376
QUERY DOMAIN 380
QUERY DRIVE 384
QUERY DRMEDIA 387
QUERY DRMSTATUS 396
QUERY EVENT 400
QUERY FILESPACE 415
QUERY LIBRARY 419
QUERY LIBVOLUME 422
QUERY LICENSE 424
QUERY LOG 428
QUERY LOGVOLUME 433
QUERY MACHINE 437
QUERY MGMTCLASS 442
QUERY MOUNT 446
QUERY NODE 448
QUERY OCCUPANCY 453
QUERY OPTION 457
QUERY POLICYSET 460
QUERY PROCESS 464
QUERY RECOVERYMEDIA 466
QUERY REQUEST 470
QUERY SCHEDULE 471
QUERY SESSION 476
QUERY STATUS 480
QUERY STGPOOL 485
QUERY VOLHISTORY 492
QUERY VOLUME 498
QUIT 504
REDUCE DB 505
REDUCE LOG 507
REGISTER ADMIN 509
REGISTER LICENSE 511
REGISTER NODE 514
REMOVE ADMIN 517
REMOVE NODE 519
RENAME ADMIN 521
RENAME FILESPACE 523
RENAME NODE 525
RESET BUFPOOL 528
RESET DBMAXUTILIZATION 530
RESET LOGCONSUMPTION 531
RESET LOGMAXUTILIZATION 532

commands *(continued)*
RESTORE STGPOOL 533
RESTORE VOLUME 538
REVOKE AUTHORITY 543
ROLLBACK 547
SET ACCOUNTING 549
SET ACTLOGRETENTION 551
SET AUTHENTICATION 553
SET DRMCHECKLABEL 554
SET DRMCMDFILENAME 556
SET DRMCOPYSTGPOOL 558
SET DRMCOURIERNAME 560
SET DRMDBBACKUPEXPIREDAYS 561
SET DRMFILEPROCESS 563
SET DRMINSTRPREFIX 565
SET DRMNOTMOUNTABLENAME 568
SET DRMPLANPREFIX 570
SET DRMPLANVPOSTFIX 573
SET DRMPRIMSTGPOOL 575
SET DRMVAULTNAME 577
SET EVENTRETENTION 578
SET LICENSEAUDITPERIOD 580
SET LOGMODE 582
SET MAXCMDRETRIES 585
SET MAXSCHEDSESSIONS 587
SET PASSEXP 589
SET QUERYSCHEDPERIOD 591
SET RANDOMIZE 593
SET REGISTRATION 595
SET RETRYPERIOD 597
SET SCHEDMODES 599
SET SERVERNAME 601
UNLOCK ADMIN 602
UNLOCK NODE 603
UPDATE ADMIN 604
UPDATE COPYGROUP 606
UPDATE DBBACKUPTRIGGER 614
UPDATE DEVCLASS 617
UPDATE DOMAIN 639
UPDATE DRIVE 641
UPDATE LIBRARY 643
UPDATE LIBVOLUME 645
UPDATE MACHINE 647
UPDATE MGMTCLASS 650
UPDATE NODE 654
UPDATE POLICYSET 657
UPDATE RECOVERYMEDIA 659
UPDATE SCHEDULE 662
UPDATE STGPOOL 677
UPDATE VOLHISTORY 690

commands *(continued)*
UPDATE VOLUME 692
VALIDATE POLICYSET 698
VARY 701
commands in a macro
committing 79
rolling back 547
when to use 21
COMMIT command 79
committing
commands in a macro 23, 79
COMMTIMEOUT option 757
console mode
ending 14
restrictions 14
starting 14
using 14
continuation characters
for a list of values 18
for a quoted list of values 18
using 18
COPIED parameter
See the QUERY CONTENT command
COPY DOMAIN command 81
copy group
defining archive 94
defining backup 94
deleting 201
description of 94
querying 360
restriction 94
updating archive 606
updating backup 606
COPY MGMTCLASS command 83
COPY POLICYSET command 85
COPY SCHEDULE command 87
copying
management class 83
policy domain 81
policy set 85
schedule 87
COUNT parameter
See the QUERY CONTENT command

D

DAMAGED parameter
See the QUERY CONTENT command
data
exporting types of 265, 269
data *(continued)*
importing types of 292
moving 314
database
auditing 748
backup 53
backup trigger 103
backup volume information 718
dumping 736
extending 274
installing 741
querying 365
reducing 505
reloading 744
resetting maximum utilization statistic 530
restoring 725
setting options 755
verifying 748
volume information 372, 721
database maximum utilization statistic
resetting 530
database recovery
back up volume history 63
delete volume history 242
query volume history 492
database volume
defining 109
deleting 206
displaying information 721
querying 372
date format 754
DATEFORMAT option 758
DAYOFWEEK parameter
See the DEFINE and UPDATE SCHEDULE commands
default management class
assigning 40
description of 154
DEFINE ASSOCIATION command 91
DEFINE COPYGROUP command 94
DEFINE DBBACKUPTRIGGER command 103
DEFINE DBCOPY command 107
DEFINE DBVOLUME command 109
DEFINE DEVCLASS command 111
DEFINE DOMAIN command 136
DEFINE DRIVE command 139
DEFINE LIBRARY command 142
DEFINE LOGCOPY command 145
DEFINE LOGVOLUME command 147

DEFINE MACHINE command 149
DEFINE MACHNODEASSOCIATION command 152
DEFINE MGMTCLASS command 154
DEFINE POLICYSET command 158
DEFINE RECMEDMACHASSOCIATION command 161
DEFINE RECOVERYMEDIA command 163
DEFINE SCHEDULE command 166
DEFINE STGPOOL command 182
DEFINE VOLUME command 196
defining
  association 91
  copy group 94
  database backup trigger 103
  database volume 109
  device class 111
  domain 136
  drive 139
  library 142
  management class 154
  mirrored database volume 107
  mirrored log volume 145
  number of processes for migrating files 186
  policy set 158
  recovery log volume 147
  schedule 166
  storage pool 182
  storage pool volume 196
DELETE ASSOCIATION command 199
DELETE COPYGROUP command 201
DELETE DBBACKUPTRIGGER command 204
DELETE DBVOLUME command 206
DELETE DEVCLASS command 208
DELETE DOMAIN command 210
DELETE DRIVE command 212
DELETE EVENT command 214
DELETE FILESPACE command 218
DELETE LIBRARY command 222
DELETE LOGVOLUME command 224
DELETE MACHINE command 226
DELETE MACHNODEASSOCIATION command 228
DELETE MGMTCLASS command 230
DELETE POLICYSET command 232
DELETE RECMEDMACHASSOCIATION
  command 234, 556
DELETE RECOVERYMEDIA command 236
DELETE SCHEDULE command 237
DELETE STGPOOL command 240
DELETE VOLHISTORY command 242
DELETE VOLUME command 246
deleting
  archive file deletion via a client, allowing
    See the REGISTER and UPDATE NODE
      commands
  backup file deletion via a client, allowing
    See the REGISTER and UPDATE NODE
      commands
  copy group 201
  database backup trigger 204
  database volume 206
  device class 208
  domain 210
  drive 212
  event record 214
  file space 218
  library 222
  management class 230
  policy set 232
  recovery log volume 224
  schedule 237
  storage pool 240
  storage pool volume 246
  volume history 242
determining
  retention periods for policy domains 380
device class
  defining 111
  deleting 208
  querying 376
  updating 617
device configuration file 57
device type
  3590 127, 630
  4MM 112, 618
  8MM 116, 621
  DLT 119, 624
  FILE 123, 627
  GENERICTAPE 125, 628
  QIC 130, 633
  REMOVABLEFILE 133, 636
DISABLE command 249
disabling the server 249
DISCARDDATA parameter
  See the DELETE VOLUME command
DISMOUNT VOLUME command 251
dismounting volumes 251
displaying
  database volume information 721
  recovery log volume information 723
  scheduled and completed events 400

DLT device type 119
documentation, user xv
domain
  copy 81
  defining 136
  deleting 210
  querying 380
  updating 639
drive
  defining 139, 384
  deleting 212
  updating 641
DSMFMT command 706
DSMLABEL command 708
DSMSERV AUDITDB command 748
DSMSERV DISPLAY DBBACKUPVOLUME command 718
DSMSERV DISPLAY DBVOLUMES command 721
DSMSERV DISPLAY LOGVOLUMES command 723
DSMSERV DUMPDB command 736
DSMSERV EXTEND LOG command 714
DSMSERV INSTALL command 741
DSMSERV LOADDB command 744
DSMSERV RESTORE DB command 725
dumping
  database 736
DURATION parameter
  See the DEFINE and UPDATE SCHEDULE commands

E

ENABLE command 252
enabling the server 252
ENDDATE parameter
  See the QUERY ACTLOG and QUERY EVENT commands
ending
  batch mode 15
  console mode 14
  interactive mode 17
  mount mode 15
ENDTIME parameter
  See the QUERY ACTLOG and QUERY EVENT commands
entering administrative commands 5
ESTCAPACITY parameter
  See the DEFINE and UPDATE DEVCLASS commands
event record, deleting 214
event, querying 400
EXCEPTIONSONLY parameter
  See the QUERY EVENT command
EXPINTERVAL option 759
EXPIRATION parameter
  See the DEFINE and UPDATE SCHEDULE commands
EXPIRE INVENTORY command 254
expiring inventory 254
export
  administrator 256
  node 260
  policy information 265
  server 269
EXPORT ADMIN command 256
EXPORT NODE command 260
EXPORT POLICY command 265
EXPORT SERVER command 269
EXPQUIET option 760
EXTEND DB command 274
EXTEND LOG command 276
extending
  database 274
  recovery log 276

F

FILE device type 123
FILEDATA parameter
  See the EXPORT and IMPORT NODE commands
FILENAMES parameter
  See the BACKUP VOLHISTORY and BACKUP DEVCONFIG commands
files
  collocating by client 182
  formatting for server use 706
  moving 314
  removing expired files 254
filespace
  deleting 218
  querying 415
  renaming 523
FILESPACE parameter
  See the EXPORT and IMPORT NODE commands
FORCE parameter
  See the CHECKOUT LIBVOLUME command
FORMAT parameter
  See the DEFINE and UPDATE DEVCLASS commands

formatting files for the server 706
FREQUENCY parameter
See the DEFINE and UPDATE COPYGROUP commands

G

GENERICTAPE device type 125, 628
GETIPXAD command 711
GRANT AUTHORITY command 278
granting
authority 278
types of privilege classes 278
GUI-based utility programs 705

H

HALT command 282
halting the server 282
help
administrative commands 286
HELP command 286
hierarchical storage management
DEFINE MGMTCLASS 154
description of 154
UPDATE MGMTCLASS 650
hierarchy of storage pools
considerations for backup 59
defining 182
HIGHMIG parameter
See the DEFINE and UPDATE STGPOOL commands
history information
backing up 63
deleting 242
querying 492
HSM
See hierarchical storage management

I

IDLETIMEOUT option 760
IMPORT ADMIN command 289
IMPORT NODE command 292
IMPORT POLICY command 298
IMPORT SERVER command 301
importing
administrator 289
node 292
policy information 298
importing *(continued)*
server 301
INCRDEVCLASS parameter
See the DEFINE AND UPDATE DBBACKUPTRIGGER commands
incremental backup of database 53
INSERT MACHINE command 306
installing
database 741
recovery log 741
interactive mode
continuation characters 18
ending 17
quitting 504
restrictions 16
starting 16
using 16
inventory
expiring 254
process 254
IPX/SPX
get address 711
information about 711
IPXBUFFERSIZE option 761
IPXSocket option 761

L

Labeler utility 705
labels
for REMOVABLEFILE device type 140
storage volumes 708
LANADAPTER option 762
language format 754
LANGUAGE option 762
library
auditing 43
defining 142
deleting 222
querying 419
updating 643
libvolume
checking in 71
checking out 76
querying 422
updating 645
license
auditing 46
querying 424
registering 511

license *(continued)*
setting audit period 580
listing of GUI-based utility programs 705
LOCK ADMIN command 308
LOCK NODE command 309
locking
administrator 308
node 309
log mode, setting 582
LOGFULLPCT parameter
See the DEFINE AND UPDATE DBBACKUPTRIGGER commands
LOGPOOLSIZE option 763
LOWMIG parameter
See the DEFINE and UPDATE STGPOOL commands

M

MACRO command 311
macros
commit individual commands 23, 24
continuation characters 18
controlling command processing 23
running 23
substitution variables 22
testing 24
using 21, 311
writing commands 21
writing comments 22
management class
copying 83
defining the default 40
deleting 230
querying 442
updating 650
maximum retries, setting 585
MAXPROCESS parameter
See the BACKUP and RESTORE STGPOOL commands
MAXSCRATCH parameter
See the DEFINE and UPDATE STGPOOL commands
MAXSESSIONS option 763
MAXSIZE parameter
See the DEFINE and UPDATE STGPOOL commands
MIGDESTINATION parameter
See the DEFINE and UPDATE MGMTCLASS commands
MIGPROCESS parameter
See the DEFINE and UPDATE STGPOOL commands
migration
files from client node 154
storage pool 182
MIGREQUIRESBKUP parameter
See the DEFINE and UPDATE MGMTCLASS commands
MIRRORREAD option 764
MIRRORWRITE option 765
MODE parameter
See the DEFINE and UPDATE COPYGROUP commands
monitoring
ADSM activities 14, 15
mount mode
ending 15
using 15
mount request
canceling 67
querying 470
mounted sequential access volumes 446
dismounting 251
querying 446
MOUNTLIMIT parameter
See the DEFINE and UPDATE DEVCLASS commands
MOUNTRETENTION parameter
See the DEFINE and UPDATE DEVCLASS commands
MOUNTWAIT parameter
See the CHECKIN LIBVOLUME command
MOVE DATA command 314
MOVE DRMEDIA command 316
MOVEBatchsize 766
MOVESizethresh 766
moving
files 314
MSGNO parameter
See the QUERY ACTLOG command

N

NAMEDPIPENAME option 766
naming conventions
case-sensitivity 10
introduction 10
naming volumes 10
restrictions 11

NETBIOSBUFFERSIZE option 767
NETBIOSNAME option 767
NETBIOSSESSION option 768
NEXTSTGPOOL parameter
See the DEFINE and UPDATE STGPOOL commands
NOAUDITSTORAGE option 768
node
associating with a schedule 91
exporting 260
importing 292
locking 309
querying 448
registering 514
removing 519
renaming 525
unlocking 603
updating 654
normal recovery log mode 53, 582
number format 754
NUMBERFORMAT option 769
NUMINCREMENTAL parameter
See the DEFINE AND UPDATE DBBACKUPTRIGGER commands

O

OBJECTS parameter
See the DEFINE and UPDATE SCHEDULE commands
occupancy
displaying filespace information 453
querying 453
OPTIONS parameter
See the DEFINE and UPDATE SCHEDULE commands
options, server
importance for recovery 53
querying 457
OWNER parameter
See the DELETE FILESPACE command

P

password
setting expiration interval 589
UPDATE ADMIN command 604
pattern-matching expression
creating 8
PERUNITS parameter
See the DEFINE and UPDATE SCHEDULE commands
policy privilege class
administrative commands 29
restricted 29
unrestricted 29
policy set
activating 38
copying 85
defining 158
deleting 232
querying 460
updating 657
validating 698
polling
information about 591
setting frequency 591
PREFIX parameter
See the DEFINE and UPDATE DEVCLASS commands
PREPARE command 331
PREVIEW parameter
See the EXPORT and IMPORT commands
printing redirected output 19
privilege class
administrative commands 31, 33
administrator issued 34
analyst 25, 34
none 34
operator 25
policy 25, 29
restricted 31
storage 25, 31
system 25
unrestricted 31
process
canceling 65
querying 464
program directory xv
publications xv

Q

QIC device type 130
QUERY ACTLOG command 338
QUERY ADMIN command 344
QUERY ASSOCIATION command 348
QUERY AUDITOCCUPANCY command 351

QUERY CONTENT command 354
QUERY COPYGROUP command 360
QUERY DB command 365
QUERY DBBACKUPTRIGGER command 370
QUERY DBVOLUME command 372
QUERY DEVCLASS command 376
QUERY DOMAIN command 380
QUERY DRIVE command 384
QUERY DRMEDIA command 387
QUERY DRMSTATUS command 396
QUERY EVENT command 400
QUERY FILESPACE command 415
QUERY LIBRARY command 419
QUERY LIBVOLUME command 422
QUERY LICENSE command 424
QUERY LOG command 428
QUERY LOGVOLUME command 433
QUERY MACHINE command 437
QUERY MGMTCLASS command 442
QUERY MOUNT command 446
QUERY NODE command 448
QUERY OCCUPANCY command 453
QUERY OPTION command 457
QUERY OPTIONS command 757
QUERY POLICYSET command 460
QUERY PROCESS command 464
QUERY RECOVERYMEDIA command 466
QUERY REQUEST command 470
QUERY SCHEDULE command 471
QUERY SESSION command 476
QUERY STATUS command 480
QUERY STGPOOL command 485
QUERY VOLHISTORY command 492
QUERY VOLUME command 498
querying
  activity log 338
  administrator 344
  audit occupancy 351
  background process 8
  clients with schedules 348
  completed events 400
  contents of a volume 354
  copy group 360
  database 365
  database backup trigger 370
  database volume 372
  device class 376
  domain 380
  drive 384
  file space 415
querying *(continued)*
  library 419
  libvolume 422
  license 424
  management class 442
  mount requests 470
  node 448
  occupancy 453
  option 457
  policy set 460
  process 464
  recovery log 428
  recovery log volume 433
  scheduled events 400
  schedules 471
  session 476
  status 480
  storage pool 485
  storage pool volume 498
  volume history file 492
QUIT command 504
quitting
  batch mode 15
  interactive mode 17, 504
  mount mode 15

R

RECLAIM parameter
  See the DEFINE and UPDATE STGPOOL commands
reclamation of volumes 189, 192
recovery log
  backup trigger 103
  consumption statistic, resetting 531
  extending 276
  installing 741
  maximum utilization statistic, resetting 532
  reducing 507
  setting mode 582
  setting options 755
  volume information 723
recovery log volume
  defining 147
  deleting 224
  querying 433
redbook publications xvii
redirection
  appending output 19
  command output 18

redirection *(continued)*
writing output 19
redirection characters
types of 18
using 18
REDUCE DB command 505
REDUCE LOG command 507
reducing
database 505
recovery log 507
REGISTER ADMIN command 509
REGISTER LICENSE command 511
REGISTER NODE command 514
registering
administrator 509
license 511
node 514
registration
closed 595
description of 595
open 595
setting 595
reloading the database 744
REMOVABLEFILE device type 133, 636
REMOVE ADMIN command 517
REMOVE NODE command 519
REMOVE parameter
See the CHECKOUT LIBVOLUME command
removing
administrator 517
client association 199
node 519
RENAME ADMIN command 521
RENAME FILESPACE command 523
RENAME NODE command 525
renaming
administrator 521
filespace 523
node 525
REPLACEDEFS parameter
See the IMPORT ADMIN and IMPORT POLICY commands
REPLY command 527
request
See mount request
RESET BUFPOOL command 528
RESET DBMAXUTILIZATION command 530
RESET LOGCONSUMPTION command 531
RESET LOGMAXUTILIZATION command 532
resetting
buffer pool statistic 528
maximum utilization statistic (recovery log) 532
recovery log consumption statistic 531
RESTORE STGPOOL command 533
RESTORE VOLUME command 538
retention period
description of 578
setting 578
RETONLY parameter
See the DEFINE and UPDATE COPYGROUP commands
retry period
description of 597
setting 597
RETVER parameter
See the DEFINE and UPDATE COPYGROUP commands
REUSEDELAY parameter
See the DEFINE and UPDATE STGPOOL commands
REVOKE AUTHORITY command 543
revoking
authority 543
types of privilege classes 543
roll-forward recovery log mode 53, 582
ROLLBACK command 547
rolling back commands in a macro 547

S

schedule
administrative command 173
associating with a client node 91
client 167
copying 87
defining 154, 166
deleting 237
description of 173
querying 471
querying results of (events) 400
restrictions of 166
startup window 169
types of 166
updating 662
schedule event
querying 400
setting start date for displaying 402
setting start time for displaying 402
types of 400

schedule event *(continued)*
viewing information about 400
scheduling mode
information about 599
setting 599
scratch volumes in storage pool 189, 192
sequential volume history
backing up 63
deleting 242
querying 492
SERIALIZATION parameter
See the DEFINE and UPDATE COPYGROUP commands
server
disabling 249
enabling 252
exporting 269
importing 301
setting name for 601
server console
restrictions 13
using 13
server name
setting 601
server options
modifying the file 753
querying 757
setting the date format 754
setting the language format 754
setting the number format 754
setting the time format 754
tailoring 753
server options, list of
BUFPOOLSIZE
COMMMETHOD
COMMTIMEOUT
DATEFORMAT
DEVCONFIG
EXPINTERVAL
EXPQUIET
IDLETIMEOUT
LANGUAGE
LOGPOOLSIZE
MAXSESSIONS
MESSAGEFORMAT
MIRRORREAD
MIRRORWRITE
MOVEBATCHSIZE
MOVESIZETHRESH
NOAUDITSTORAGE
server options, list of *(continued)*
NUMBERFORMAT
TCPPORT
TCPWINDOWSIZE
TIMEFORMAT
TXNGROUPMAX
VOLUMEHISTORY
session
maximum number scheduled 587
querying 476
SET ACCOUNTING command 549
SET ACTLOGRETENTION command 551
SET AUTHENTICATION command 553
SET DRMCHECKLABEL command 554
SET DRMCMDFILENAME command 556
SET DRMCOPYSTGPOOL command 558
SET DRMCOURIERNAME command 560
SET DRMDBBACKUPEXPIREDAYS command 561
SET DRMFILEPROCESS command 563
SET DRMINSTRPREFIX command 565
SET DRMNOTMOUNTABLENAME command 568
SET DRMPLANPREFIX command 570
SET DRMPLANVPOSTFIX command 573
SET DRMPRIMSTGPOOL command 575
SET DRMVAULTNAME command 577
SET EVENTRETENTION 578
SET LICENSEAUDITPERIOD command 580
SET LOGMODE command 582
SET MAXCMDRETRIES command 585
SET MAXSCHEDSESSIONS command 587
SET PASSEXP command 589
SET QUERYSCHEDPERIOD 591
SET RANDOMIZE command 593
SET REGISTRATION command 595
SET RETRYPERIOD command 597
SET SCHEDMODES 599
SET SERVERNAME 601
setting
accounting record 549
authentication 553
frequency for client-polling 591
license audit period 580
maximum retries of a command 585
maximum scheduled sessions 587
number of processes for migrating files 186, 680
password 589
randomization of start times 593
recovery log mode 582
registration 595
retention period 551

setting *(continued)*
retention period for event records 578
retry period 597
scheduling mode 599
server name 601
setting communication options 753
SKIPPARTIAL parameter
See the AUDIT VOLUME command
SPACEMGTECHNIQUE parameter
See the DEFINE and UPDATE MGMTCLASS commands
start time
information about 166
setting 593
STARTDATE parameter
See the DEFINE and UPDATE SCHEDULE commands
starting
batch mode 15
console mode 14
interactive mode 16
mount mode 15
STARTTIME parameter
See the DEFINE and UPDATE SCHEDULE commands
status
information about 480
querying 480
STAtusmsgcnt 769
STGPOOL parameter
See the MOVE DATA command
STGPOOLS parameter
See the GRANT and REVOKE AUTHORITY commands
storage management services xv
storage pool
defining 182
deleting 240
querying 485
restoring 533
updating 677
storage pool volume
auditing 48
defining 196
deleting 246
querying 354, 498
scratch volumes in storage pool 189, 192
updating 692
varying 701
storage volumes
labeling 708
naming 10
SWAP parameter
See the CHECKIN LIBVOLUME command
syntax diagram
abbreviations 1
default value 2
fragments 3
optional choice 2
repeatable choice 2
repeating values 2
required choices 2
symbols 1
using 1
variables 1
system privilege class
administrative commands 25

T

TCPNODELAY option 770
TCPPORT option 770
TCPWINDOWSIZE option 770
terminal output, formatting 8
time format 754
TIMEFORMAT option 771
trigger, for database backup 103, 370
type, device
3590 127, 630
4MM 112, 618
8MM 116, 621
DLT 119, 624
FILE 123, 627
GENERICTAPE 125, 628
QIC 130, 633
REMOVABLEFILE 133, 636

U

UNLOCK ADMIN command 602
UNLOCK NODE command 603
unlocking
administrator 602
node 603
UPDATE ADMIN command 604
UPDATE COPYGROUP command 606
UPDATE DBBACKUPTRIGGER command 614
UPDATE DEVCLASS command 617

UPDATE DOMAIN command 639
UPDATE DRIVE command 641
UPDATE LIBRARY command 643
UPDATE LIBVOLUME command 645
UPDATE MACHINE command 647
UPDATE MGMTCLASS command 650
UPDATE NODE command 654
UPDATE POLICYSET command 657
UPDATE RECOVERYMEDIA command 659
UPDATE SCHEDULE command 662
UPDATE STGPOOL command 677
UPDATE VOLHISTORY 690
UPDATE VOLUME command 692
updating
  administrator 604
  copy group 606
  database backup trigger 614
  device class 617
  domain 639
  drive 641
  library 643
  libvolume 645
  management class 650
  node 654
  number of processes for migrating files 680
  policy set 657
  schedule 662
  storage pool 677
  storage pool volume 692
  volume history 690
updating a backup copy group 606
updating an archive copy group 606
user documentation xv
using
  administrative client options 17
  administrative privilege classes 25
  command line interface 13
  commands by administrative privilege 25
  continuation characters 18
  macros 311
  redirection 18
  redirection characters 18
  syntax diagram 1

V

VALIDATE POLICYSET command 698
validating
  policy set 698
VARY command 701
varying
  volume 701
VERDELETED parameter
  See the DEFINE and UPDATE COPYGROUP commands
VEREXISTS parameter
  See the DEFINE and UPDATE COPYGROUP commands
verifying the database 748
volume history
  deleting 242
  querying 492
VOLUMEHISTORY option 773
volumes, storage
  defining 196
  labeling 708
  naming 10
  reclaiming 189, 192
  restoring 538
  scratch, maximum in storage pool 189, 192

W

WHEREACCESS parameter
  See the UPDATE VOLUME command
WHERESTATUS parameter
  See the UPDATE VOLUME command
WHERESTGPOOL parameter
  See the UPDATE VOLUME command
wildcard
  match-any examples 9
  match-exactly-one examples 10
  using 8
writing
  command output to a file 19

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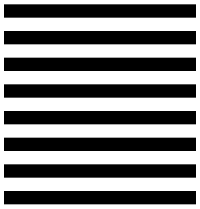

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