Storage Library System for OpenVMS

Command Reference Guide

Abstract

This document describes the STORAGE command syntax of the Storage Library System for OpenVMS software.

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Preface

Purpose of This Document

This document contains information about Storage Library System for OpenVMS ™ Version 2.9J software STORAGE command syntax.

Intended Audience

This manual is intended for users of SLS software, including storage administrators, operators, and users.

Related Documents

The following documents are related to this documentation set or are mentioned in this manual:

- *Storage Library System for OpenVMS Installation Guide*
- *Storage Library System for OpenVMS Guide to Backup and Restore Operations*

Conventions

The following conventions are used in this document:

Convention	Description
{}	In format command descriptions, braces indicate required elements. You must include one of the elements.
[ ]	Square brackets show optional elements in command syntax. You can omit these elements if you wish to use the default response.
. . .	Horizontal ellipsis points indicate the omission of information from a sentence or paragraph that is not important to the topic being discussed.
. . .	Vertical ellipsis points indicate the omission of information from an example or command format. The information has been omitted because it is not important to the topic being discussed.
boldface type	Boldface type in text indicates the first instance of a term defined in the Glossary or defined in text.

Convention	Description
italic type	Italic type emphasizes important information, indicates variables, indicates complete titles of manuals, and indicates parameters for system information.
`Starting test ...`	This type font denotes system response, user input, and examples.
Ctrl/*x*	Hold down the key labeled Ctrl (Control) and the specified key simultaneously (such as Ctrl/Z).
PF1 *x*	The key sequence PF1 *x* instructs you to press and release the PF1 key, and then press and release another key (indicated here by *x*).
n	A lowercase *n* denotes the generic use of a number. For example, 19*nn* indicates a four-digit number in which the last two digits are unknown.
x	A lowercase *x* denotes the generic use of a letter. For example, *xxx* indicates any combination of three alphabetic characters.

Related Products

The following related products may be mentioned in this document:

Product	Description
ABS	ABS refers to Archive Backup System for OpenVMS™ software.
ABS OMT	ABS OMT refers to Archive/Backup System for OpenVMS Management Tools™ software.
HSM	HSM refers to Hierarchical Storage Management for OpenVMS software.
MDMS	MDMS refers to Media and Device Management Services for OpenVMS software.
OpenVMS	OpenVMS refers to OpenVMS operating system.
SMF	SMF refers to Sequential Media Filesystem for OpenVMS software.
SLS	SLS refers to Storage Library System for OpenVMS software.

Determining and Reporting Problems

If you encounter a problem while using SLS, report it to HP through your usual support channels.

Review the Software Product Description (SPD) and Warranty Addendum for an explanation of warranty. If you encounter a problem during the warranty period, report the problem as indicated above or follow alternate instructions provided by HP for reporting SPD non-conformance problems.

1

DCL STORAGE Commands

SLS STORAGE commands control backup and restore behavior, and for media and device management behavior.

STORAGE ADD DRIVE

The STORAGE ADD DRIVE command returns a drive to the pool of available drives for use by the MDMS software if the drive has been removed with the STORAGE REMOVE command.

Format

```
$ STORAGE ADD DRIVE drive-name
```

Description

The STORAGE ADD DRIVE and STORAGE REMOVE DRIVE commands only work with drives specified in the ALLDEV parameter in the file TAPESTART.COM for use by MDMS software.

Note

This command is not used to add additional drives, but instead to return a drive to the pool after it is removed with the STORAGE REMOVE DRIVE command. After a drive is returned, it becomes available for any STORAGE SELECT request.

Restrictions

- You must have the OPER privilege.
- Valid only after a STORAGE REMOVE DRIVE command has been entered.
- Is not entered when a new drive is installed.

Parameters

drive-name

Specifies the name of the drive that is to be set available for use by MDMS software. Use a physical device name or logical name to identify the drive.

Qualifiers

None

Examples

The following examples illustrate the STORAGE ADD DRIVE command. It is assumed that these drives were made unavailable with the STORAGE REMOVE DRIVE command.

1. `$ STORAGE ADD DRIVE WRITE1`

   Adds the drive WRITE1 to the pool of drives currently available. WRITE1 is the logical name of the drive.

2. `$ STORAGE ADD DRIVE MUA0:`

   Adds the drive MUA0: to the pool of drives currently available. MUA0: is the physical device name of the drive.

STORAGE ADD MAGAZINE

The STORAGE ADD MAGAZINE command adds a magazine name to the MDMS magazine database.

Format

```
$ STORAGE ADD MAGAZINE magazine_name
```

Parameters

magazine_name
The ASCII character name associated with the magazine. The name can be up to 8 characters in length.

Restrictions

The command requires the OPER privilege.

Qualifiers

/SLOTS=number
Specifies the number of slots in the magazine. The user must know what this value is. Valid range is 1-40. The /SLOTS qualifier is required.

Examples

```
$ STORAGE ADD MAGAZINE MYMAGA01/SLOTS=11
```

Adds the 11-slot magazine named MYMAGA01 to the MDMS magazine database.

STORAGE ADD VOLUME

The STORAGE ADD VOLUME command places a new volume record with the specified attributes into the MDMS volume database. To ensure the volume refers to the appropriate media type, use the /MEDIA_TYPE qualifier. This command allows you to add two volumes per media for double-sided media.

Formats

```
$ STORAGE ADD VOLUME volume_id

$ STORAGE ADD VOLUME/SIDE=A volume-id

$ STORAGE ADD VOLUME/SIDE=DOUBLE volume-id-a volume-id-b

$ STORAGE ADD VOLUME/SIDE=B volume-id-a volume-id-b
```

Deciding Which Format to Use

Use the STORAGE ADD VOLUME command to add both single-sided and double-sided volumes to the MDMS volume database.

IF you want to add . . .	THEN . . .
a single-sided use volume	use Format 1.
Side A of a double-sided volume	use Format 1 or Format 2.
both sides of a double-sided volume at the same time media when	use Format 3. The /SIDE=DOUBLE qualifier is required when adding both sides of a double-sided volume and it must precede the parameters.
Side B of double-sided Side A already exists	use Format 4. The /SIDE=B qualifier is required when adding only Side B and must precede the parameters.

Restrictions

- You must have the OPER privilege.
- You must have the privilege assigned to PRIV_MODANY in the TAPESTART.COM file.
- Volume names cannot exceed 6 characters.

Parameters

volume-id

Specifies the Volume ID for single-sided media, such as magnetic tape. Specifies the Volume ID for Side A of double-sided media.

This parameter is required.

volume-id-b

Specifies the Volume ID of Side B for double-sided media. If this parameter is specified, then it must be preceded by the Volume ID of Side A of the same volume.

Qualifiers

/ACCOUNT=string
Specifies the string to be used as the account name of a volume. Use 1 to 8 characters.

/ALLOCATED=date
Specifies the date when the volume was allocated for use by the user, system backup, or archive. Use the format for absolute time: [dd-mmm-yyyy[:][hh:mm:ss.cc].

/BLOCK_FACTOR=number
Specifies the number of records in each physical block on the volume.

This qualifier is valid only for volumes formatted with the /FORMAT=EBCDIC qualifier.

/BRAND=text
Specifies the volume manufacturer, such as Digital. Use 1 to 16 characters.

/CLEANED=date
Specifies the date the volume was last cleaned. Use the format for absolute time: [dd-mmm-yyyy[:][hh:mm:ss.cc]. The default is the current date and time.

/DENSITY=value
Specifies either the density (in bpi) for tape volumes or the data compaction and record blocking option for TK90K cartridges. The meaning of this parameter depends upon the type of drive being used.

IMPORTANT: Note that the /DENSITY qualifier should be used when you have to specify a change in the kind of media. You should NOT specify /DENSITY as a selection criterion.

IF the volume is being loaded onto . . .	THEN use this qualifier . . .
a TA90 or TA90E cartridge system	/MEDIA_TYPE=keyword
all other devices	/DENSITY=keyword

Examples:

1600 bpi, 6250 bpi, COMP, NOCOMP

Do not use this qualifier if the recording density does not apply to media at your site.

/FORMAT=keyword
Specifies in what format to write the volume. The allowed values are:

- ASCII
- BACKUP (default)
- EBCDIC
- RMUBACKUP

/FREED=date
Specifies the date on which an allocated volume entered the Transition state. Use the format for absolute time: [dd-mmm-yyyy[:][hh:mm:ss.cc]. The default is the current date and time. The MDMS software automatically updates this field when the volume changes state.

/INITIALIZED=date
Specifies the initialization date of a volume. Use the format for absolute time: [dd-mmm-yyyy[:][hh:mm:ss.cc]. The default is the current date and time.

/IO_ERROR=number
Specifies the error count on a volume. The default is zero. The MDMS software automatically updates this field when I/O errors occur for the drives on which the volume is mounted.

/JOB_NAME=name
Specifies the job name in which this volume is to be used. Use 1 to 10 characters. Normally, the MDMS software loads this field.

/LAST_ACCESS=date
Specifies the date a volume was last accessed. Use the format for absolute time: [dd-mmm-yyyy[:][hh:mm:ss.cc]. The MDMS software automatically updates this field when the volume is accessed.

/LENGTH=number
/NOLENGTH
Specifies the volume length for a 9-track tape media.

WHEN the media is . . .	THEN . . .	ELSE . . .
a 9-track tape	specify the /LENGTH qualifier and enter the length of the tape	the length defaults to zero.
optical, TK50K, TK52K, TK85K, and so forth	specify the /NOLENGTH qualifier	

It is recommended that you specify the length qualifier when you add a 9-track tape to ensure correct estimated tape capacity.

/LOCATION=text
Specifies the location of a volume, such as HEADQUARTERS. Use 1 to 16 characters. The MDMS software automatically updates this field if the volume is moved to or from an off-site vault. The default location is site-specific.

/MEDIA_TYPE=type
Specifies the type of media; valid media type values are defined as media triplets in the file SYS$MANAGER:TAPESTART.COM.

Examples:

9TRACK, TK50, RV02K.

/MOUNT_COUNT=number
Specifies the mount count on a volume. The MDMS software automatically updates this field each time a volume is mounted. The default is zero (0).

/NOTES=text
Specifies the notes field of a volume. Use 1 to 64 characters.

If spaces are desired in this field, the text must be enclosed within quotation marks.

/OFFSITE=date
Specifies the date a volume is to be sent off site. Use the absolute time format: [dd-mmm-yyyy][:][hh:mm:ss.cc].

/ONSITE=date
Specifies the date a volume is to return on site. Use the absolute time format: [dd-mmm-yyyy[:][hh:mm:ss.cc].

/POOL=poolname
Specifies the volume pool name to which the volume is to be added. Use 1 to 12 characters. Spaces are not allowed in the pool name.

/PROTECTION=code
Specifies the protection code of the volume record. Use the standard OpenVMS protection code format. The default protection code is site-specific.

/PURCHASED=date
Specifies the purchase date of a volume. Use the format for absolute time: [dd-mmm-yyyy[:][hh:mm:ss.cc]. The default is the current date and time.

/RECLENGTH=number
Specifies the record length in bytes. The record length is important for EBCDIC formatted volumes. This qualifier is valid only when used with /FORMAT=EBCDIC. The default is zero (0) and cannot be less than zero (0).

/SCRATCH_DATE=date
Specifies the date that the volume is deallocated and placed into either the transition or free state. The MDMS software automatically updates this field when the volume is allocated.

The default scratch date is site-specific.

/SIDE=keyword
Indicates whether one or both volumes of a double-sided media are being added. The /SIDE qualifier is used in combination with the command parameters as indicated by the syntax format. Note the following restrictions:

- /SIDE=A (default)-Indicates that the volume added is Side A of a double-sided media. When Side A is added alone, SLS assumes that the volume has only one side until Side B is added with the /SIDE=B qualifier. /SIDE=A is the default. Only one volume ID can be specified.
- /SIDE=B-Indicates that the volume added is Side B of a double-sided media. To add Side B, the volume on the opposite side of the media, Side A, must already be added to the database. The /SIDE=B qualifier requires that the volume IDs for Side A (volume-id-a) and for Side B (volume-id-b) be present. The /SIDE=B qualifier must precede both parameters in the command line, followed next by the volume ID for Side A and then the volume ID for Side B.
- /SIDE=DOUBLE-Indicates that the two volumes being added are contained on a double-sided media. The /SIDE=DOUBLE qualifier is used when both Sides A and B are being added at the same time. The /SIDE=DOUBLE qualifier requires that the volume IDs for Side A (volume- id-a) and for Side B (volume-id-b) be present. The /SIDE=DOUBLE qualifier must precede both parameters in the command line.

/SLOT=text
Specifies the slot where a volume is stored. The storage slot location must be defined in the slot database. Use 1 to 8 characters. This is not a jukebox slot number.

/TIMES_CLEANED=number
Specifies the number of times the volume has been cleaned. The default is zero (0).

/USER_NAME=user-name
Specifies the user to whom the volume is allocated or was last allocated. The MDMS software automatically updates this field when a volume is allocated. The user's name and UIC must exist on the system where the command is entered.

Examples

1. `$ STORAGE ADD VOLUME TEST01/MEDIA_TYPE=9TRACK /LENGTH=2400`
   Adds the volume TEST01 to the MDMS database, and specifies that the volume is 9-track media with a length of 2400. All other fields in the MDMS database are given the default values.
2. `$ STORAGE ADD VOLUME LAB001/BRAND=DIGITAL /LOCATION=HEADQUARTERS/NOLENGTH`
   Adds the volume LAB001 to the MDMS database and specifies that the volume is:

a. A Digital volume
b. Located at the site designated as HEADQUARTERS

3. `$ STORAGE ADD VOLUME/SIDE=DOUBLE VOL01 VOL02/MEDIA_ TYPE=RV02K/NOLENGTH`
   Adds both Side A (VOL01) and Side B (VOL02) of a double- sided media at the same time.

4. `$ STORAGE ADD VOLUME/SIDE=A VOL01/MEDIA_TYPE=RV02K /NOLENGTH $ STORAGE ADD VOLUME/SIDE=B VOL01 VOL02`
   Adds both Side A and Side B of a double-sided volume. The first command line:

   – Adds Side A
   – Assigns VOL01 as the volume ID
   – Specifies optical media
   – Specifies no length is needed

   The second command line:

   – Adds Side B of the same volume
   – Assigns VOL02 as the volume ID

STORAGE ALLOCATE

The STORAGE ALLOCATE command assigns volumes to the user name of the requesting process.

The ALLOCATE command assigns volumes that are available for use in the SLS database to the user name of the requesting process. These volumes may or may not have been previously freed before they are allocated for use. This command automatically performs a STORAGE SHOW VOLUME command and displays information about the allocated volume when it completes.

The /VOLUME qualifier allocates a specified volume if it is in the free state. If the /VOLUME qualifier is not specified, a volume is selected in the free state based on the following selection criteria and in the following order:

- Location
- Pool
- Density
- Freed date
- Length

If these attributes are not defined, the associated qualifier's default value, which is site-specific, is used.

Format

```
$ STORAGE ALLOCATE media-type
```

Description

The STORAGE ALLOCATE command:

- Assigns one or more volumes in the free state to a user
- Displays the allocated volume attributes by automatically performing the STORAGE SHOW VOLUME command when the volume is allocated

Parameters

media-type
Specifies the type of media to allocate (for example, a 9- track or TK50). Valid media-type values are site-dependent.

Qualifiers

/APPEND=volume-id
Allocates and appends a volume to the end of an allocated volume or volume set. With this qualifier, a volume set is specified by naming any of the members of the volume set.

/BLOCK_FACTOR=number
Specifies the number of records in each physical block on the volume. The MDMS software automatically updates the volume record.

This qualifier is valid only for volumes formatted with the /FORMAT=EBCDIC qualifier.

/DENSITY=value

Specifies either the density (in bpi) for tape volumes or the data compaction and record blocking option for TK90K cartridges. The meaning of this parameter depends upon the type of drive being used.

IMPORTANT: Note that the /DENSITY qualifier should be used when you have to specify a change in the kind of media. You should NOT specify /DENSITY as a selection criterion.

IF the volume is being loaded onto . . .	THEN use this qualifier . . .
a TA90 or TA90E cartridge system	/MEDIA_TYPE=keyword
all other devices	/DENSITY=keyword

Examples:

1600 bpi, 6250 bpi, COMP, NOCOMP

Use this qualifier when the density (or data compaction) of the volume is going to be changed.

Do not use this qualifier if the recording density does not apply to media at your site.

/FORMAT=keyword
Specifies in what format to write the volume. The allowed values are:

- ASCII
- BACKUP (default)
- EBCDIC
- RMUBACKUP

/LABEL (default)
/NOLABEL
Generates a printable label for the volume when it is allocated. /NOLABEL specifies not to generate a printable label.

/LENGTH=number
/NOLENGTH
Specifies to allocate a volume with a tape length greater than or equal to the designated number. By default, a volume is selected for allocation with a tape length of 2400 or greater. Allowed values are site-specific.

The /LENGTH qualifier has the same function as the /SIZE qualifier.

WHEN the media is . . .	THEN . . .	ELSE . . .
a 9-track tape	specify the /LENGTH qualifier and enter the length of the tape	the length defaults to zero.
optical, TK50K,TK52K, TK85K,and so forth	specify the /NOLENGTH qualifier.	-

It is recommended that you specify the length qualifier when you allocate a 9-track tape to ensure correct estimated tape capacity.

/LOCATION=text
Specifies the location in which to look for the volume, such as HEADQUARTERS. The default is the current site.

/LOG (default)

/NOLOG

Automatically performs a STORAGE SHOW VOLUME command of the allocated volume to display the volume information on the terminal screen. The /NOLOG qualifier is used to suppress the display.

/NOTES=text

Specifies the Notes field of a volume. Use 1 to 64 characters.

If spaces are desired in this field, the text must be enclosed within quotation marks.

/POOL=poolname

Specifies the volume pool from which the volume is to be allocated. Use 1 to 12 characters. Spaces are not allowed in the pool name.

WHEN the volume poolname . . .	THEN . . .
is not specified	the volume is allocated from either one of: • The user's default pool • The system default pool
is specified	• IF the user is authorized to access the volume pool, • THEN the volume is allocated from the specified pool, • ELSE an error occurs.

/QUANTITY=number

Specifies the number of volumes to allocate. Use this qualifier to allocate a group of volumes as a volume set. If you do not allocate volumes as a volume set, then you must perform a separate STORAGE ALLOCATE command for each volume. The default number is 1.

/RECLENGTH=number

Sets the record length for volumes. This qualifier is valid only when used with /FORMAT=EBCDIC. The default is zero (0) and cannot be less than zero (0).

/SCRATCH_DATE=date

Specifies the time the volume is deallocated and placed into either the transition or the free state. The MDMS software automatically updates this field when the volume is allocated.

The values allowed for this qualifier are site-specific. The default scratch date is one year from the current date. The default retention period for a volume in transition is two weeks. Allowed retention periods are also site- specific.

This requires the privilege assigned to PRIV_MAXSCR in the TAPESTART.COM file to override the default scratch date.

/USER_NAME=user-name

Specifies the user to whom the volume is being allocated. The MDMS software automatically updates this field when a volume is allocated. The user's name and UIC must exist on the system where the command is entered.

Requirements:

- You must have the OPER privilege to allocate volumes for another user.
- You must have the privilege assigned to PRIV_MODANY in the TAPESTART.COM file.

/VOLUME=volume-id

Specifies a volume to allocate. The volume must be in the free state. Using the /VOLUME qualifier ignores the following selection qualifiers and parameter:

- /LENGTH=number
- /LOCATION=text
- /POOL=pool-name
- /QUANTITY=number
- Media-type

Examples

1.
```
$ STORAGE ALLOCATE/QUANTITY=3 9TRACK/DENSITY=1600
 Volume:           TEST3                  Owner:       VENUS::SMITH
    .
    .
    .
Volume:            TEST4                  Owner:       VENUS::SMITH
    .
    .
    .
Volume:            TEST5                  Owner:       VENUS::SMITH
```

   Allocates three 9-track tapes to the user as a volume set with the density of 1600 bpi or greater. Information on the volume set is displayed after the volumes are allocated.

2.
```
$ STORAGE ALLOCATE TK50/FORMAT=ASCII/APPEND=TEST01 /NOLABEL
```

   This command:
   a. Allocates a TK50 cartridge
   b. Specifies ASCII format
   c. Appends the allocated volume to the end of TEST01, where TEST01 is already allocated and is the same format type
   d. Does not generate a printable label

3.
```
$ STORAGE ALLOCATE/VOLUME=USER30 TK40/NOTES=MAY-REPORTS /LABEL
```

   This command:
   a. Allocates a TK50 cartridge called USER30
   b. Specifies the note test as MAY-REPORTS
   c. Generates a printable label for the volume

STORAGE APPEND

The STORAGE APPEND command:

- Creates a volume set from two single volumes
- Expands an existing volume set with a single volume or with a second volume set

Formats

```
$ STORAGE APPEND volume-id
$ STORAGE APPEND volume-id-a/VOLUME=volume-id-b
```

Description

The first format is used to create a volume set or to expand an existing volume set with a single volume that is selected by the MDMS software.

The MDMS software selects a volume from the set of free volumes that match the media type, density, length, location, and pool name of the volume specified by the volume-id parameter. In the new or expanded volume set, the selected volume follows the volume specified by the volume- id parameter. The state of the selected volume changes to allocated.

The second format is used to create a volume set from two single allocated volumes (volume-id-a and volume-id-b), or to expand an existing volume set following volume-id-a with a single volume or volume set volume-id-b.

In the new or expanded volume set, the single volume or volume set volume-id-b follows the volume volume-id-a:

```
$ STORAGE APPEND volume-id !volume id-a
$ STORAGE APPEND first volume-id/VOLUME=volume-id !volume id-b
```

Use the following guidelines to determine which format to use with the STORAGE APPEND command:

IF you want to . . .	AND you want . . .	THEN use . . .
append two volumes into a volume set	MDMS to allocate and append a free volume	Format 1: `$ STORAGE APPEND volume- - id (first volume)`

	to select an allocated volume to append	Format 2:
		`$ STORAGE APPEND volume- id (first volume)-`
		`_$/VOLUME=volume-id (second volume)`

append a volume to the end of an existing volume set	MDMS to allocate and append a free volume	Format 1:
		`$ STORAGE APPEND volume-id`
		`(last volume of the volume set)`

	to select an allocated volume to append	Format 2:
		`$ STORAGE APPEND volume-id`
		`(last volume of the volume set)`

insert a volume within an existing volume set	MDMS to allocate and insert a free volume	Format 1: `$ STORAGE APPEND volume-id (volume to be followed)`
	to select an allocated volume to append	Format 2: `$ STORAGE APPEND volume-id- (volume to be followed) _$/VOLUME=volume- id (volume to insert)`
append a volume set to the end of another volume	-	Format 2: `$ STORAGE APPEND volume-id- (last volume of the volume set) _$/VOLUME=volume- id (first volume of the second volume set)`
insert a volume set wihin another volume set	-	Format 2: `$ STORAGE APPEND volume-id- !volume in the set to be followed _$/VOLUME=volume-id !first volume of the second volume set`

All volumes must be allocated to the requester.

IF the volume-id parameter is . . .	THEN the . . .
a single volume or the last volume in a set	volume or volume set that is specified by /VOLUME=appending volume-id qualifier is appended to the volume specified by the first volume ID.
any volume in a volume set (except the last volume)	volume or volume set that is specified by the /VOLUME=appending volume-id qualifier is appended to the volume specified by the first volume-id. This effectively inserts the volume or volume set specified in the appending volume-id into the volume set, after the volume specified in the first volume-id.

Restrictions

- You must have the OPER privilege.
- You must have the privilege assigned to PRIV_MODANY in the TAPESTART.COM file.

Parameters

volume-id

Specifies a single volume or member of a volume set that will be followed by the appended volume or volume set.

The specified volume or volume set must be in the allocated state.

Qualifiers

/USER_NAME=user-name

Specifies the OpenVMS user name. Performs a STORAGE APPEND command on behalf of a user and allocates the volumes to the specified user.

/VOLUME=volume-id
Specifies the name of an allocated volume or the first member of a volume set to be appended to the volume or volume set specified by the volume-id parameter.

To determine the volume ID of the first member of a volume set:

If a volume is a member of a volume set, the STORAGE SHOW VOLUME command displays all the members of the volume set in sequence. Use the following format to enter the first volume ID shown in the report:

```
$ STORAGE SHOW VOLUME volume-id
```

Examples

1.
```
$ STORAGE APPEND TEST5/VOLUME=TEST6
```
Allocates and appends volume TEST6 to TEST5. The volume set consists of TEST5 and TEST6 with TEST5 being the first volume in the set.

2.
```
$ STORAGE ALLOCATE 9TRACK/VOLUME=PLAN1 (1)
$ STORAGE ALLOCATE 9TRACK/VOLUME=PLAN2
$ STORAGE ALLOCATE 9TRACK/VOLUME=PLAN3
$ STORAGE ALLOCATE 9TRACK/VOLUME=PLAN4
$
$ STORAGE APPEND PLAN1/VOLUME=PLAN2 (2)
$ STORAGE APPEND PLAN3/VOLUME=PLAN4 (3)
$
$ STORAGE APPEND PLAN2/VOLUME=PLAN3 (4)
$
$ STORAGE SHOW VOLUME PLAN1 (5)
  PLAN1
   .
   .
   .
  PLAN2
   .
   .
   .
 PLAN3
  .
  .
  .
 PLAN4
  .
  .
  .
```
This set of commands performs the following functions:
(1) The STORAGE ALLOCATE commands allocate four 9-track tapes.

(2) The first STORAGE APPEND command appends the volume PLAN2 to the volume PLAN1. This creates a volume set PLAN1 with the volume PLAN1 as the first volume in the set.

(3) The second STORAGE APPEND command appends the volume PLAN4 to the volume PLAN3. This creates a volume set PLAN3 with the volume PLAN3 as the first volume in the volume set.

(4) The third STORAGE APPEND command appends the volume set PLAN3 to the end of the volume set PLAN1 by using the name of the last volume (PLAN2) in volume set

PLAN1. This produces a single new volume set called PLAN1, consisting of all four members.

(4) The SHOW VOLUME command lists the volumes for volume set PLAN1 in their revised order. It is recommended you use the SHOW VOLUME command prior to appending one volume or volume set to another in order to verify the name of the last volume in the set.

STORAGE BIND

The STORAGE BIND command binds a volume to a slot in the specified magazine.

Format

```
$ STORAGE BIND volume_id magazine_name
```

Parameters

volume_id
The volume ID (must exist in the MDMS volume database) that is bound to the specified magazine.

magazine_name
The magazine name (which must exist in the MDMS magazine database) in which the specified volume is bound.

Restrictions

Note that you cannot bind a volume to an imported magazine.

Qualifiers

/SLOT=number
The required position-dependent qualifier specifying the slot in the magazine where the volume is located.

Example

```
$ STORAGE BIND BCKVOL MYMAGA01 /SLOT=4
```

This example binds the volume BCKVOL into slot number 4 of the magazine MYMAGA01.

STORAGE CREATE LABEL

The STORAGE CREATE LABEL command closes the current label file and opens a new one. The logical name SLS$LABEL stores the value defined in the LBL parameter in the TAPE-START.COM file.

Format

```
$ STORAGE CREATE LABEL
```

Restrictions

Requires the OPER privilege.

Parameters

None.

Qualifiers

None.

Examples

1. `$ SHOW LOGICAL SLS$LABEL`
   The software displays LABEL_TEST.TXT as the logical name for SLS$LABEL and a message similar to the following:

   ```
   "SLS$LABEL"= USER$1:[SMITH]LABEL_TEST.TXT (LNM$SYTEM_TABLE)
   ```

2. `$ DIRECTORY USER$1:[SMITH]LABEL*.*`
   The DCL DIRECTORY command shows only one file name, LABEL.TXT. The software displays a message similar to the following:

   ```
   DIRECTORY USER$1:[SMITH]
   LABEL.TXT;3
   Total of 1 file.
   ```

3. `$ STORAGE CREATE LABEL $ DIRECTORY USER$1:[SMITH]LABEL*.*`
   The CREATE LABEL command closes the current label file (SLS$LABEL) and opens a new one. The DCL DIRECTORY command displays a message similar to the following:

   ```
   DIRECTORY USER$1:[SMITH]
   LABEL.TXT;4 LABEL.TXT;3
   Total of 2 files.
   ```

STORAGE DEALLOCATE

The STORAGE DEALLOCATE command frees a volume or volume set that is currently allocated.

Format

```
$ STORAGE DEALLOCATE volume-id
```

Restrictions

The following restrictions apply to the STORAGE DEALLOCATE command.

WHEN you are deallocating . . .	THE use the . . .
a volume set	volume ID of the first volume in the set.
individual volumes from a volume set	/VOLUME qualifier.

Parameters

volume-id

Specifies the volume ID of the volume to be freed. To free a volume set, specify the volume_set_id (the volume ID of the first volume in the volume set).

Description

A deallocated volume is placed in the transition or free state, depending upon the value assigned to the FRESTA parameter in the TAPESTART.COM file.

Note

When a volume changes to the free state, the following fields are updated in the MDMS volume database record:
- Notes -This field is cleared.
- Scratch Date-This field is reset to zero.

/USER_NAME=user-name

Specifies the user's name and deallocates a volume or volume set on behalf of that user.

Using this qualifier requires that:

- You must have the OPER privilege.
- You must have the privilege assigned to PRIV_MODANY in the TAPESTART.COM file.

/VOLUME

Frees only the specified volume from a volume set. Any volumes that are separated as a result of the DEALLOCATE /VOLUME command become independent volumes. For example:

WHEN . . .	THEN . . .
the specified volume is the fourth volume in a four- volume set	this volume is separated from the set.
the specified volume is the third volume in a four-volume set	the third volume is separated from the set and the second volume is set to point to the fourth volume. This becomes a three-volume set.

Examples

1. `$ STORAGE DEALLOCATE/VOLUME VOL8`
   Deallocates volume VOL8 from a multivolume set. All other volumes in the set remain allocated.

2. `$ STORAGE DEALLOCATE VOL22`
   Deallocates the entire volume set, VOL22. VOL22 is the first volume in the set and all volumes in the set are deallocated and become available to other users.

STORAGE EXPORT ACS

The STORAGE EXPORT ACS command moves a volume or a list of volumes in an ACS to the cartridge access port. Once the STORAGE EXPORT ACS command completes, the status of the volume becomes “outside the jukebox.”

Format

```
$ STORAGE EXPORT ACS volume-id-1 [volume-id-2] [volume-id-3] [volume-id-4] .
. . [volume-id-6]
```

Restrictions

- You must have the OPER privilege.
- The specified volume(s) must already exist in the MDMS volume database.
- You must physically remove the cartridge from the cartridge access port.

Description

The EXPORT command directs a volume or list of volumes in a jukebox to the access door where it waits to be physically removed. When exporting a list of volumes from the StorageTek ACS, the first ACS library ID found applies to all volumes. For this reason, the volume list should contain volumes only from the same ACS library. A log file is created in SLS$MAINTENANCE_LOGS, on the server, that contains information about the export operation for the StorageTek ACS. The name of the file is pid_EXPORT.LOG, where pid is the process ID of the user requesting the export operation. When a known volume is exported from the jukebox, the following database fields for the volume are updated:

- Jukebox: cleared
- Volume location: set to “outside the jukebox”

Parameters

volume-id-n

Specifies the standard SLS volume ID. You can supply up to six (6) volume specifications on the command line. These can be either individual volumes or a range of volumes of the form AAA001-AAA040 separated by a hyphen (-) or a combination of both.

For example: $ STORAGE EXPORT/ACS=1 AAA001 AAA019-AAA024 AAA123

The volume labels must be 6 characters each, and the nonnumeric portion of both volume labels must match. For example, the range AAA001-BBB001 is invalid. The maximum total number of volumes allowed is 40. This means that the total number of volumes in each range plus any individual volumes cannot exceed 40 all together.

/ACS=n

Specifies the ACS-id that holds the Cartridge Access Port (CAP) into which the volume is physically injected. ACS-id defaults to zero (0).

/CAP=n

Specifies the cartridge access port-id (CAP) to which the volume is physically injected. Valid values range from zero (0) to two (2). The CAP-id default value is zero (0).

/LSM=n

Specifies the LSM-id that holds the CAP into which the volume is physically injected. The LSM-id default value is zero (0).

Examples

1. `$ STORAGE EXPORT /ACS=1 /CAP=1 /LSM=1 FY1996`
   Volume FY1996 is exported to CAP number 1 located in ACS number 1, on LSM number 1.
2. `$ STORAGE EXPORT /ACS=1 /CAP=1 /LSM=1 AAA001-AAA005`
   Volumes AAA001, AAA002, AAA003, AAA004 and AAA005 are exported to CAP number 1 located in ACS number 1 on LSM number 1.
3. `$ STORAGE EXPORT /ACS=1 /CAP=1 /LSM=1 AAA001 AAA010- AAA015 AAA045`
   Volumes AAA001, AAA010, AAA011, AAA012, AAA013, AAA014, AAA015 and AAA045 are exported to CAP number 1 located in ACS number 1 on LSM number 1.

STORAGE EXPORT CARTRIDGE

The STORAGE EXPORT CARTRIDGE command exports one tape cartridge to the out port of a tape jukebox. The tape jukebox, such as a TL820, must physically have an out port.

Format

```
$ STORAGE EXPORT CARTRIDGE volume-id
```

Parameters

volume-id
Specifies the volume ID of the volume being exported.

Description

When the cartridge is exported, the MDMS volume database is updated to mark the volume as outside the jukebox. If the cartridge was also bound to an imported magazine, it will be unbound.

When a cartridge is exported, an OPCOM message is displayed reminding the user to remove the exported cartridge from the out port. No response is required to the system. If the out port is full, the export fails with an error, but the volume remains in its slot.

Qualifiers

None.

Examples

1.
```
$ STORAGE EXPORT CARTRIDGE DEC002
%SLS-S-MAGVOLEXPBND, volume DEC002 exported from tape jukebox and unbound
from magazine
```
This example exports a cartridge that is currently bound to a magazine.

2.
```
$ STORAGE EXPORT CARTRIDGE DEC015
%SLS-S-VOLEXP, volume DEC015 exported from tape jukebox
```
This example exports a cartridge that is not currently bound to a magazine.

STORAGE EXPORT MAGAZINE

The STORAGE EXPORT MAGAZINE command requests that a specific magazine be removed from a tape jukebox.

Format

```
$ STORAGE EXPORT MAGAZINE magazine_name
```

Parameters

magazine_name
Specifies the name of the magazine being exported.

Description

After a magazine is exported, the correspondence between the tape cartridges in the magazine and the jukebox slots is removed. As a result, the cartridges in the magazine no longer can be loaded under robotic control.

The command displays an OPCOM message requesting that the specific magazine be removed from the jukebox. It also displays a list of all cartridges in the magazine whose location is no longer listed as in the jukebox.

- You must have the OPER privilege.
- All cartridges must be in their magazine slots; none should be loaded in drives.

Restrictions

None.

Examples

1.
```
$ STORAGE EXPORT MAGAZINE MAG1
%SLS-S-MAGVOLEXP, magazine volume DEC022 exported from tape jukebox
%SLS-S-MAGVOLEXP, magazine volume DEC002 exported from tape jukebox
%SLS-S-MAGVOLEXP, magazine volume DEC023 exported from tape jukebox
%SLS-S-MAGVOLEXP, magazine volume DEC011 exported from tape jukebox
%SLS-S-MAGVOLEXP, magazine volume DEC004 exported from tape jukebox
%SLS-S-MAGVOLEXP, magazine volume DEC026 exported from tape jukebox
%SLS-S-MAGVOLEXP, magazine volume DEC017 exported from tape jukebox
%SLS-S-MAGVOLEXP, magazine volume DEC027 exported from tape jukebox
%SLS-S-MAGVOLEXP, magazine volume DEC020 exported from tape jukebox
%SLS-S-MAGVOLEXP, magazine volume DEC008 exported from tape jukebox
%SLS-S-MAGVOLEXP, magazine volume DEC028 exported from tape jukebox
```
   This is an example of the command issued to a magazine that contains volumes.

2.
```
$ STORAGE EXPORT MAGAZINE MAG2
%SLS-W-NOVOLSEXPO, no volumes exported
```
   This is an example for a magazine that contains no volumes.

STORAGE IMPORT ACS

Note

DCSC is not supported on systems running OpenVMS Version 7.1.

The STORAGE IMPORT ACS command directs the volumes currently in the cartridge access port to a slot inside the silo. Upon completion of the import, MDMS updates the volume database.

The volume is automatically added to the MDMS database with use of the /ADD qualifier. If the volume already exists, MDMS updates the following information:

- Media-type: set to DCSC_n
- Jukebox: set to DCSC_n
- The volume status becomes “in a jukebox slot”

Format

```
$ STORAGE IMPORT ACS
```

Parameters

None.

Qualifiers

/ACS=n

Specifies the ACS-id that holds the Cartridge Access Port (CAP) into which the volume is physically injected. ACS-id defaults to 0.

/ADD
/NOADD

/NOADD is the default. Specifies that when volumes are imported, they should automatically be added to the MDMS volume database if they do not already exist. When a volume is automatically added to the MDMS volume database, certain fields are set to default values. These fields are listed below:

- Volume Owner: set to current node
- Allocated Date: set to current date/time
- Purchased Date: set to current date/time
- Cleaned Date: set to current date/time
- Initialized Date: set to current date/time
- Scratch Date: set to 31-DEC-9999 23:59
- Length: set to indicate no length
- Location: set to HEADQUARTERS
- Protection: set to S:RW,O:RW,G:R,W:
- Number IO Errors: set to 0
- Flag: set to FREE

- Record Length: set to 0
- Block Factor: set to 0
- Jukebox: set to DCSC_n
- Volume location: set to “in a jukebox slot.”

/CAP=n
Specifies the cartridge access port-id (CAP) to which the volume is physically injected. Valid values range from zero (0) to two (2). The CAP-id default value is zero (0).

/LIBRARY=n
Specifies the identifier number of the library to access. If omitted, the library used is defined by the logical name DCSC$ACSLIB_DEFAULT. The valid range for /LIBRARY is one (1) to four (4).

/LSM=n
Specifies the LSM-id that holds the CAP into which the volume is physically injected. The LSM-id default value is zero (0).

Examples

```
$ STORAGE IMPORT ACS /ACS=1 /LSM=1 /CAP=1
```

Imports volumes placed in CAP number 1, located in ACS number 1, on LSM number 1.

STORAGE IMPORT CARTRIDGE

The STORAGE IMPORT CARTRIDGE command imports a single cartridge from the in port of a tape jukebox to a slot inside the tape jukebox. The tape jukebox, such as a TL820, must physically have an in port.

Format

```
$ STORAGE IMPORT CARTRIDGE volume_id tape_jukebox_name
```

Parameters

volume_id
The name of the volume you are importing

tape_jukebox_name
The name of the tape jukebox into which you are importing the volume.

Description

On tape jukeboxes with VISION systems, the volume name you specify in the volume_id field is checked with the external bar-code label. Be sure you specify this parameter correctly. If the volume name you specify does not match the bar code label, the volume is ejected from the tape jukebox through the out port.

If the specified volume is currently bound to a magazine, the system returns an error. Individual volumes bound to magazines cannot be imported using STORAGE IMPORT CARTRIDGE, only the entire magazine can be imported. Use STORAGE IMPORT MAGAZINE to import an entire magazine.

If the volume is placed in a slot that is covered by an imported magazine, the volume is also bound to the magazine.

The jukebox and slot fields in the MDMS volume database are updated for every cartridge that is imported.

If the volume to be imported does not exist in the volume database and you do not use the /ADD qualifier, the STORAGE IMPORT CARTRIDGE command fails.

Qualifiers

/ADD
/NOADD
/NOADD is the default. Adds the specified volume ID to the media database. Defaults are applied to the volume_id fields depending on the type of drives under the control of the specified jukebox. If you use this qualifier, you must also provide the media type by using the /MEDIA_TYPE qualifier. This qualifier must be used if the volume does not exist; otherwise, the system returns an error.

/MEDIA_TYPE=media_type
If you add a volume to the MDMS volume database with the /ADD qualifier, you must use this qualifier to supply the media type to the MDMS volume database.

/SLOT=number
Specifies the slot into which the cartridge is to be loaded. If the slot is in use, the system returns an error. If no slot is specified, the first available slot is used.

/VISION

If your robot has a VISION system, you can use this qualifier. If /VISION is used, the volume_id parameter is not allowed. In this case, the robot vision system reads the external bar code label. The other qualifiers, /ADD, /MEDIA_TYPE, and /SLOT, are valid.

Examples

1. `$ STORAGE IMPORT CARTRIDGE DEC022 %SLS-S-MAGVOLIMPBND, volume DEC022 imported into tape jukebox and bound to magazine`
   This example imports a cartridge that is already in the MDMS volume database and the destination slot is covered by an imported magazine.
2. `$ STORAGE IMPORT CARTRIDGE DEC023 %SLS-E-NOADDVOL, IMPORT CART /NOADD performed on a non- existant volume`
   This example is an import on a cartridge that is not in the MDMS volume database, and the user didn’t specify /ADD.
3. `$ STORAGE IMPORT CARTRIDGE DEC023/ADD /MEDIA_TYPE=TK85K /SLOT=128 %SLS-S-MAGVOLIMPBND, volume DEC022 imported into tape jukebox and bound to magazine`
   This example imports a cartridge that is not in the MDMS volume database and the destination slot is covered by an imported magazine; also, the slot is specified instead of generated.

STORAGE IMPORT MAGAZINE

The STORAGE IMPORT MAGAZINE imports the specified magazine into the specified jukebox.

Format

```
$ STORAGE IMPORT MAGAZINE magazine_name tape_jukebox_name
```

Restrictions

On a TL820-type device, if any of the slots into which the magazine is to be imported (as identified by the /LOCATION qualifier) contain tapes already imported through the STORAGE IMPORT CARTRIDGE command, the STORAGE IMPORT MAGAZINE command fails.

Parameters

magazine_name
The name of the magazine you are importing.

tape_jukebox_name
The name of the jukebox into which you are importing the magazine.

Qualifiers

/ASSIST
/NOASSIST
Requests (or rejects) an OPCOM message to prompt the operator to load the magazine into the robot identified by the tape_jukebox_name. /ASSIST is the default.

/LOCATION=(L1,L2,...)
The /LOCATION qualifier identifies the position where the operator should place a magazine in tape jukeboxes. You must use this qualifier only if you are importing a magazine into a tape jukebox where magazines can occupy more than one position, such as the TL820 or the TL826. If the magazine contains volumes, the jukebox and slot fields in the MDMS volume database are updated.

- L1 is the face position in the tape jukebox.
  For the TL820, L1 ranges from zero (0) to seven (7) and L2 is A, B, or C.
- L2 is the position of the magazine on that face.
  For the TL826, L1 ranges from zero (0) to seven (7) and L2 is A or B.
  Example:
  To locate the magazine in the vertical middle of the front face of a TL820 device, specify /LOCATION=(0,B).

Example

```
$ STORAGE IMPORT MAGAZINE MAG1 TESTJUKE/LOCATION=(3,B) /NOASSIST

%SLS-S-MAGVOLIMP, magazine volume DEC031 imported into tape jukebox
%SLS-S-MAGVOLIMP, magazine volume DEC017 imported into tape jukebox
%SLS-S-MAGVOLIMP, magazine volume DEC019 imported into tape jukebox
```

This example imports a magazine to the second bin on face 3 of a TL820. The magazine also had some volumes bound to it prior to the import.

STORAGE INVENTORY ACS

Note

DCSC is not supported on systems running OpenVMS Version 7.1.

The STORAGE INVENTORY ACS command verifies that a range of volumes exists in the StorageTek ACS and optionally creates entries for the volumes in the MDMS volume database.

Format

```
$ STORAGE INVENTORY ACS start_volume_id end_volume_id
```

Restrictions

You must have the OPER privilege.

Parameters

start_volume_id
Specifies the starting volume name of the range to inventory.

end_volume_id
Specifies the ending volume name of the range to inventory.

Description

When a volume that currently exists in the MDMS volume database is inventoried, MDMS updates the the following volume information in the MDMS database:

- Media-type: set to DCSC_n
- Jukebox: set to DCSC_n
- The volume status become “in a jukebox slot”

Note that performing an inventory on a large group of volumes can be a time-consuming process. MDMS performs several checks to make sure the volume is in the correct state before declaring a volume’s inventory to be successful. When you inventory a large range of volumes, the request is split into groups of two volumes and information about each request is displayed to the operator at periodic intervals.

Qualifiers

/ADD
/NOADD
Adds volumes found during the inventory to the MDMS volume database, if they are not already there. /ADD is the default. When a volume is added to the MDMS volume database using this qualifier, the following defaults are applied:

- Volume Owner: set to current node
- Allocated Date: set to current date/time
- Purchased Date: set to current date/time
- Cleaned Date: set to current date/time
- Initialized Date: set to current date/time
- Scratch Date: set to 31-DEC-9999 23:59

- Media-type: set to DCSC
- Length: set to indicate no length
- Location: set to HEADQUARTERS
- Protection: set to S:RW,O:RW,G:R,W:
- Number IO Errors: set to 0
- Flag: set to DOWN
- Record Length: set to 0
- Block Factor: set to 0
- Jukebox: set to DCSC_n
- Volume location: set to “in a jukebox slot”

/LIBRARY=library_id

This qualifier is valid only with a StorageTek ACS.

Specifies the identifier number of the library to access. If omitted, the library used is defined by the logical name DCSC$ACSLIB_DEFAULT. The valid range for /LIBRARY is 1 to 4.

/MISSING=text

Indicates the action to be taken if a volume within a range of volumes is not in the ACS, but has a record in the MDMS volume database. The value of the qualifier is specified as one of the following actions:

Action	Result
QUIT	Terminates the command immediately with an error message.
REMOVE	Removes the missing volume’s record from the MDMS volume database.
EXPORT	Updates the missing volume’s record to indicate that it is out of the jukebox.

If the /MISSING qualifier is present but no action is specified, the default action is QUIT.

The restriction preventing an inventory on an RDF-accessed tape device exists because such an operation disables the SLS$TAPMGRRQ process on both the client and server nodes from processing any new requests for the amount of time the inventory is in progress. In such a configuration, use the STORAGE BIND command to associate cartridges with a specific magazine.

Examples

```
$ STORAGE INVENTORY ACS SQ0800 SQ0802

%SLS-S-VOLINVENTORIED, volume SQ0800 inventoried
%SLS-S-VOLADDED, volume SQ0800 added to SLS database
%SLS-S-VOLINVENTORIED, volume SQ0801 inventoried
%SLS-S-VOLADDED, volume SQ0801 added to SLS database
%SLS-S-VOLINVENTORIED, volume SQ0802 inventoried
%SLS-S-VOLADDED, volume SQ0802 added to SLS database
```

Inventoried volumes in the range of SQ0800 to SQ0802 and added them to the MDMS database.

STORAGE INVENTORY JUKEBOX

The STORAGE INVENTORY JUKEBOX command performs a physical inventory of the cartridges in a tape jukebox, such as the TL820, or a DLT magazine loader.

Format

$ STORAGE INVENTORY JUKEBOX tape_jukebox_name [/qualifier...]

Restrictions

- You cannot use STORAGE INVENTORY JUKEBOX on an RDF- accessed tape device.
- You must have the OPER privilege.
- While the STORAGE INVENTORY JUKEBOX operation is in progress,
- All qualifiers must appear after the tape_jukebox_name parameter. <Ctrl> <Y> is disabled at the terminal.

Parameters

tape_jukebox_name
The name of the jukebox you want to inventory.

Description

Once the label of each of the cartridges is obtained from the media, the MDMS volume database is updated to reflect each volume ID associated with its particular slot. The MDMS magazine database is also updated if a magazine exists in the database and covers the inventoried slot.

For jukeboxes with VISION systems, the label is read from the bar-code on the exterior of the cartridge. For other systems, the cartridge is mounted, examined, and dismounted to read the internal label. The latter case is a time-consuming process dependent on the total number of cartridges.

You can also specify a range of slots to inventory. This allows a partial inventory when a full inventory is not required.

Qualifiers

/ADD
/NOADD
Adds volumes found during the inventory to the MDMS volume database, if they do not already exist. The /MEDIA_TYPE qualifier must be used with the /ADD qualifier. When a volume is added to the MDMS volume database using this qualifier, most fields are set to defaults. Other fields are set according to the following table.

Field	Value	Set By
jukebox_name	Inventoried value	System
slot	Inventoried value	System
media type	Provided value	The operator

/NOADD is the default.

/MEDIA_TYPE=media_type

You must supply the /MEDIA_TYPE qualifier if the /ADD qualifier is used. It specifies the media type for inventoried volumes not found in the MDMS volume database.

/SLOT_RANGE=([start_slot,] count)
Specifies the range of slots to inventory for the jukebox.

The start_slot specifier refers to the first slot in the group of slots you want inventoried. If you omit the start_ slot specifier, the inventory starts on the first slot (slot 0).

The count specifier refers to the total number of slots you want inventoried starting with start_slot. If you want to inventory up to the last slot and do not know how many slots this would be, use quotation marks (““) as the count specifier. You can omit the parentheses if you are including only a specific value for the count specifier. For example, /SLOT_RANGE=10 inventories the first ten slots of the jukebox; /SLOT_RANGE=(5,10) inventories slots five through 14; /SLOT_RANGE=(5,””) starts the inventory at slot number 5 in the jukebox and continues until the last slot in the jukebox is reached.

Note

Depending on the number of cartridges being inventoried, a STORAGE INVENTORY JUKEBOX operation can be time consuming. During this time, the SLS$TAPMGRRQ process on the node where the tape device is connected is unable to process any new requests because it is waiting for the inventory to complete. Make sure you perform inventory commands when you expect MDMS activity to be at a minimum.

As an alternative for tape jukeboxes that have no robotic vision system, use STORAGE BIND to associate volumes with specific slots in the magazines.

The restriction preventing an inventory on an RDF-accessed tape device exists because such an operation disables the SLS$TAPMGRRQ process on both the client and server nodes from processing any new requests for the amount of time the inventory is in progress. In such a configuration, use the STORAGE BIND command to associate cartridges with a specific magazine.

Examples

1. `$ STORAGE INVENTORY JUKEBOX MYJUKE1`
   This inventories all slots in tape jukebox MYJUKE1.

2. `$ STORAGE INVENTORY JUKEBOX MYJUKE1/ADD/SLOT_ RANGE=(10,10)/ MEDIA_TYPE=TK85K`
   This inventories the 10 slots starting at slot 10 and adds any volumes that are not currently in the MDMS volume database.

Note

If the jukebox performed its own inventory (loading internal RAM), and there were tapes in one or more of the tape drives at the time, the slots the tapes were in will show as empty after the STORAGE INVENTORY command.

STORAGE LABEL

The STORAGE LABEL command generates a printable label for a specified volume or volume set.

Format

```
$ STORAGE LABEL volume-id
```

Parameters

volume-id

Specifies the volume ID of a single volume or of a volume set for which you want a printable label.

Description

The storage administrator determines whether the labels are sent to:

- A disk file
- A dedicated printer
- A spool device with a queue
- The null device

The label contains current information from the MDMS record that includes the following:

- Volume ID
- User name
- Date allocated
- Scratch date
- Next volume
- Previous volume
- Node name

Qualifiers

/VOLUME

Generates a printable label for a specific volume in a volume set, rather than the entire volume set.

Examples

```
$ STORAGE LABEL LAB002
```

Generates a printable label for volume LAB002. If the output is directed to a printer (as specified by the LBL symbol in TAPESTART.COM), the command prints the label.

Sample of a printed label for user SMITH:

```
Volume: VOL55               User: SMITH
Alloc: 10-JUL-1996          Next: *none*
Scratch: 10-JUL-1997        Prev: *none*
Node: VENUS
```

STORAGE LOAD

The STORAGE LOAD command requests that a specified volume be loaded onto a drive. If a drive can be loaded automatically, such as in an automated tape library, the load occurs automatically; otherwise, a human operator intervenes.

Format

```
$ STORAGE LOAD drive-name volume-id
```

Restrictions

- You must have the OPER privilege to load a drive not allocated to the current process.
- You must have the VOLPRO privilege to load a volume in the free state.

  The drive must:

  – Already be allocated to the requesting process

  – Not be in a mounted state

Note

Loading a volume in the free state does not prevent the volume from being allocated to another user. This applies even while the volume is loaded and is currently in use. Volumes intended for long-term use should be allocated before being loaded.

Parameters

drive-name

Specifies the name of the drive on which to load a volume. Use a physical device name or a logical name to identify the drive.

volume-id

Specifies the volume ID of the volume you want to load onto the drive.

/CHECK=[volume-id] (default)
/NOCHECK

Checks or compares the first 6 characters of a volume ID to the volume label. It is possible for a volume to have a volume label that is different from the volume ID recorded in the MDMS volume database.

Use the following naming recommendation:

- Use only 6 alphanumeric characters in a volume ID name to maintain ANSI control of labels.
- Give the volume ID the same name as the volume label.

WHEN . . .	THEN . . .
the volume label does not match the value of the volume ID	the operator is required to perform the load request with the correct volume.
you want to disable volume checking	enter the STORAGE LOAD/NOCHECK command.

/MOUNT[=[qualifiers]
/NOMOUNT (default)
Executes a DCL MOUNT command once the volume is loaded and verified (if the /CHECK qualifier has not been disabled). Use this qualifier to specify DCL MOUNT command qualifiers, such as /FOREIGN.

/REPLY=symbol
Stores the operator's reply in the specified local DCL symbol. The symbol defined contains the text of the operator's reply in the DCL REPLY/TO or REPLY/ABORT command. This qualifier is used for load requests that require operator intervention.

/WRITE_ENABLE (default)
/NOWRITE_ENABLE
The following descriptions explain this qualifier:

- /WRITE_ENABLE ensures that a volume is write-enabled when it is loaded.
- /NOWRITE_ENABLE ensures that a volume is write-protected when it is loaded.

Using the /WRITE_ENABLE qualifier requires write access to the volume.

Examples

1. `$ STORAGE LOAD MIA0 5432`
   The STORAGE LOAD command loads volume 5432 on the drive and checks to see if the volume label matches the value of the volume ID.
2. `$ STORAGE LOAD/CHECK MIA0 RVVOL4`
   The STORAGE LOAD/CHECK command loads the volume RVVOL4 onto the optical drive and checks to see if the volume label matches the value of the volume ID.

STORAGE RELEASE

The STORAGE RELEASE command releases a specified volume from the transition state to the free state and makes the volume available for allocation by another user.

Format

```
$ STORAGE RELEASE volume-id
```

Restrictions

- You must have the OPER privilege.
- You must have the privilege assigned to PRIV_CLEAN in the TAPESTART.COM file.

Parameters

volume-id
Specifies the name of the volume to release from the transition state.

Qualifiers

None.

Examples

```
$ STORAGE RELEASE 34433
```

Releases volume 34433 to the free state and makes it available for allocation by other users.

STORAGE REMOVE DRIVE

The STORAGE REMOVE DRIVE command removes a drive from the pool of allocated drives used by the MDMS software.

Format

```
$ STORAGE REMOVE DRIVE drive-name
```

Restrictions

You must have the OPER privilege.

Parameters

drive-name

Specifies the name of the drive that is unavailable. Use a physical device name or logical name to identify the drive.

Description

Available drives are listed in the ALLDEV parameter in the file TAPESTART.COM.

The MDMS software deallocates the drive when it is removed from this list and makes it available for use by other users or processes.

Qualifiers

None.

Example

```
$ STORAGE REMOVE DRIVE MUA0:
```

Removes drive MUA0: from the MDMS drive pool, making the drive currently unavailable for backup operations.

STORAGE REMOVE MAGAZINE

The STORAGE REMOVE MAGAZINE command removes a magazine from the MDMS magazine database. Any volume currently bound to the magazine is removed automatically.

Format

```
$ STORAGE REMOVE MAGAZINE magazine_name
```

Restrictions

The magazine to be removed cannot be imported into a tape jukebox. To see if the magazine is imported, use the STORAGE SHOW MAGAZINE command.

Parameters

magazine_name
The name of the magazine to remove from the database.

Qualifiers

None.

Example

```
$ STORAGE REMOVE MAGAZINE MAGNUM1
```

Removes the magazine name MAGNUM1 from the magazine database.

STORAGE REMOVE VOLUME

The STORAGE REMOVE VOLUME command removes a specified volume from the MDMS volume database.

Format

```
$ STORAGE REMOVE VOLUME volume-id
```

Restrictions

- You must have the OPER privilege.
- You must have the privilege assigned to PRIV_MODANY in the TAPESTART.COM file.

Parameters

volume-id
Specifies the volume ID of the volume to be removed.

Description

This command removes only the volume record, not the actual volume.

WHEN . . .	THEN . . .
you are removing either side of a double-sided volume	the other side of the volume is automatically removed.
the volume is located inside a jukebox	it must be exported out of the jukebox with the STORAGE EXPORT command before removing it from the MDMS volume database

Qualifiers

None.

Examples

1. `$ STORAGE REMOVE VOLUME JUN003`
   Removes volume JUN003 from the MDMS volume database.

2. `$ STORAGE EXPORT VOLUME TEST23`
   `$ STORAGE REMOVE VOLUME TEST23`
   The STORAGE EXPORT command exports volume TEST23 from a jukebox.
   The STORAGE REMOVE command removes volume TEST23 from the MDMS volume database.

STORAGE REPORT FILE

The STORAGE REPORT FILE command generates a report for one or more specific user files that have been recorded in the SLS user history files. SLS history files are created when user files are saved using either the:

- Save Screen option on the Operator Menu
- Save Screen option on the User Menu
- STORAGE SAVE/RECORD command

Note

The STORAGE REPORT FILE command is used to search user history files.

Format

```
$ STORAGE REPORT FILE file-spec[,...]
```

Parameters

file-spec[,...]

Specifies the file name to be searched. This parameter:

- Uses the standard VMS filespec format
- Allows you to specify more than one file name (separated by commas)
- Permits the use of the asterisk (*) in file specifications
- Permits the use of the asterisk (*) to specify the device name (any device will match)
- Permits specifying a node name to search system SLS history files
- Does not support the use of a null, zero, or negative version number

Restrictions

- The REPORT FILE command is limited to the BACKUP format only.
- SLS history files are not created for ASCII or EBCDIC formats.

Qualifiers

/BEFORE=[time]

Specifies that only entries created before the selected time will display. This time is when the file was backed up, not created. Use absolute or combination time format.

/DELETE
/NODELETE (default)

The /DELETE qualifier specifies the selected entries be deleted from the on-line history files instead of being displayed. Using the /DELETE qualifier:

- Leaves the file on backup media
- Deletes the on-line history entries

This is useful for cleaning out unwanted history entries.

Default:

/NODELETE

/NEXT_FILE
Indicates that searching is to begin with the file that follows the file specified by the DCL symbol SLS$INQ_FILE. This qualifier is useful when making wildcard (*) searches with the /SYMBOLS qualifier to see one file at a time.

/OUTPUT=output-file
Directs the information to an output file. The default output is the terminal screen.

/SAVE_SET=save-set
Specifies a search of on-line user history files for information on save sets. To specify more than one save set, separate the save set names with commas and enclose them in parentheses.

Example:

```
/SAVE_SET=(JUNE.SAVE,JULY.SAVE,AUGUST.SAVE)
```

The default is *.* which specifies all save sets.

/SINCE=[time]
Specifies that only entries made since the specified time will display. This time is when the file was backed up, not created. Use absolute or combination time format.

/SYMBOLS
/NOSYMBOLS (default)
The /SYMBOLS qualifier specifies the placement of the output to a set of DCL symbols instead of a report file. The following local DCL symbols are created.

```
SLS$INQ_FILE = file name of file found
SLS$INQ_SAVES = number of saved versions of file (n)
SLS$VOLUME_<index> = volume numbers
SLS$INQ_SET_<index> = save set names
SLS$INQ_DATE_<index> = date and time of backup job
SLS$INQ_POS_<index> = position on volume of save set
```

An Index value of . . .	Indicates the . . .
1 for SLSINQ_VOLUME_x, SLSINQ_ SET_x, etc.	Most recent backup of the file
n for SLSINQ_VOLUME_x, SLSINQ_ SET_x, etc.	Oldest backup of the file

How to find the next match of a wildcard search:

Type the same command line and include the /NEXT_FILE qualifier.

The /NOSYMBOLS qualifier is the default.

/USER_NAME=user-name
Specifies the user's name and searches the specified user's on-line history. Otherwise, the history files of the user invoking the command are searched.

Requirement:

This qualifier requires the OPER privilege.

/VOLUME=volume-id
Limits the search of history files to a specific volume. To specify more than one volume, separate the volume names with commas and enclose them in parentheses.

Example:

```
/VOLUME=(MAY,JUNE,JULY)
```

The default is to search all volumes.

Examples

The following examples illustrate the STORAGE REPORT FILE command.

1. `$ STORAGE REPORT FILE []*.*;*`

   Result:
   Creates a report of all files backed up by user SMITH. Note that if the report exceeds more than one page, then you are prompted to move from page to page.

```
Run date 21-JUN-1989 09:26
                      Page 1                            User Backup Report
------------------------------------------------------------------------------
Username:     SMITHiles:               USER$1:[SMITH]*.*;*
------------------------------------------------------------------------------
%SLS-I-HISTSEARCH, searching user history for USER$1:[SMITH]*.*;*...

USER$1:[SMITH]05JUN89_1032.LIS;1
              12-JUN-1989 14:22:34.14           UBRT01 12JUN89_1421.BAK;
USER$1:[SMITH]05JUN89_1107.LIS;1
              12-JUN-1989 14:22:34.14           UBRT01 12JUN89_1421.BAK;
USER$1:[SMITH]05JUN89_1107.LOG;1
              12-JUN-1989 14:22:34.14        UBRT01 12JUN89_1421.BAK;
.
.
.
End of report Press Return to continue
```

2. `$ STORAGE REPORT FILE/SYMBOLS *.DAT`

   Result:
   Specifies placement of the output for the first .DAT file that matches into DCL symbols instead a report file and displays a message similar to:

```
%SLS-I-HISTSEARCH, searching user history for USER$1:[*...]*.DAT;* ...
```

3. `$ STORAGE REPORT FILE/NEXT_FILE *.DAT`

   Result:
   Searches the files that follow the file specified by the DCL symbol SLS$INQ_FILE and displays the report on the specified .DAT files. Note that the /SYMBOLS qualifier was not included in this example, therefore displaying volume information directly to the terminal screen.

```
Run date 08-JUL-1989 12:38                                          Page 1
                          User Backup Report
------------------------------------------------------------------------------
Username:           JONES
Files:              USER$1:[*...]*.DAT;*
------------------------------------------------------------------------------
%SLS-I-HISTSEARCH, searching user history for USER$1:[*...]*.DAT;*...

USER$1:[JONES]DECW$SM_GENERAL.DAT;3
      21-JUN-1989 14:22:34.14              VOL24           21JUN89_1340.BAK;
USER$1:[JONES]DECW$TERMINAL_DEFAULT.DAT
      21-JUN-1989 14:22:34.14               VOL24          21JUN89_1340.BAK;
USER$1:[JONES]DECW$XDEFAULTS.DAT
      21-JUN-1989 14:22:34.14               VOL24          21JUN89_1340.BAK;
USER$1:[JONES]FOR002.DAT
      21-JUN-1989 14:22:34.14              VOL24         21JUN89_1340.BAK;
End of report

Press Return to continue
```

STORAGE REPORT SLOT

The STORAGE REPORT SLOT command generates a report on the storage slot location of a volume.

Format

```
$ STORAGE REPORT SLOT field[=value,...]
```

Restrictions

- You must have the OPER privilege.
- This command does not apply to cartridge slots inside a jukebox.

Parameters

field
Specifies what slot fields to include in the report. To specify more than one field, separate the fields by using commas. Select one or more of the following fields:

LOCATION[=valid location]
SLOT[=slot ID]
VOLUME[=volume ID]

Any field can contain the asterisk (*) and percent sign (%) wildcard characters. A field specified without a value will display all values.

Description

This command directs MDMS software to:

- Search its current database for slot information
- Generate a report containing the fields specified
- Sort information based upon a specified field

Qualifiers

The qualifiers for the STORAGE REPORT SLOT command are grouped into two categories:

1. Command qualifiers-Apply to the entire MDMS command
2. Field qualifiers (position dependent)-Apply to specific fields associated with the command

The following optional qualifiers can be used with the REPORT SLOT command.

Command Qualifiers

/OUTPUT=file
Specifies an output file. The default output is the terminal screen.

/TITLE=text
Specifies a specific title for the report. The title must be enclosed in quotation marks and follow the standard DCL text format.

Field Qualifiers

/PRINT (default)
/NOPRINT

The /PRINT qualifier (default) specifies the printing of a field. Use the /NOPRINT qualifier when you want to sort or select records, but do not want the field to print or be listed in the report.

/SORT
/NOSORT (default)
The /SORT qualifier specifies that volumes are listed based on the field indicated by the /SORT qualifier. /NOSORT is the default.

/WIDTH=number
Specifies the printing width of the field by number of characters.

Examples

1. `$ STORAGE REPORT SLOT LOCATION=HEADQUARTERS,SLOT,VOLUME`
   Displays all volumes in slots at the location of HEADQUARTERS. The software displays a report similar to the following:

```
Run date 10-APR-1996 18:57                                                Page 1
                   Slot File Report
Location                       Slot                      Volume
---------------------------------------------------------------------------
HEADQUARTERS                      31                          VOL6
HEADQUARTERS                       9                          VOL2
                       2 record(s) found

STORAGE REPORT SLOT LOCATION=HEADQUARTERS,SLOT.VOLUME

Press Return to continue...
```

2. `$ STORAGE REPORT SLOT/TITLE=”Empty Slots” LOCATION,SLOT,VOLUME=””/NOPRINT`
   Displays a list of slots that contain no volumes. The volume field is blank and is not printed. The title of the report is “Empty Slots.”

```
Run date 10-APR-1996 16:01                                                Page 1
                         Empty Slots
Location                        Slot
---------------------------------------------------------------------------
HEADQUARTERS                       31
HEADQUARTERS                        9
MARKETING                      TEXT20
MARKETING                     TEXT 22
                4 record(s) found

STORAGE REPORT SLOT TITLE=Empty Slots LOCATION,SLOT,VOLUME=/NOPRINT
Press Return to continue...
```

STORAGE REPORT SYSTEM

The STORAGE REPORT SYSTEM command generates a report on one or more files saved during SLS system backups.

Each report can contain information about one or several files.

Note

The STORAGE REPORT SYSTEM command is used to search system history files.

Format

```
$ STORAGE REPORT SYSTEM file-spec[,...]
```

Parameters

file-spec[,...]
Specifies the file to be searched. This parameter:

- Uses the standard VMS file specification format
- Permits the use of wildcard characters (* and %) in the file name
- Allows the device name to be specified by the asterisk (*) (any device matches)
- Does not support the use of a null, zero or negative number.

WHEN the fields of the file specification are not specified, THEN the current default values are used.

Restrictions

None.

Qualifiers

/BEFORE=[time]
Specifies that only entries created before the selected time will display. This time is when the file was backed up, not created. Use absolute or combination time format.

/CONCEALED
/NOCONCEALED (default)
The /CONCEALED qualifier specifies that the file names be looked up without translating the concealed device name. The /NOCONCEALED qualifier specifies that the file names be looked up using the file name expanded with the actual physical device name.

/HISTORY_SETS=history-set-name
Searches on-line history sets. Wildcard characters (* and %) are permitted. To specify more than one on-line history set, separate the on-line history set name with commas and enclose them in parentheses.

Example:

```
/HISTORY_SETS=(JUNE,JULY)
```

The default is *.*, which specifies all on-line history system sets.

/NEXT_FILE

Begins searching with the file that follows the file specified by the DCL symbol SLS$INQ_FILE. This qualifier is useful when making wildcard searches with the /SYMBOLS qualifier to view one file at a time.

/OUTPUT=output-file
Directs the information to an output file. The default output is the terminal screen.

/OWNER=uic
Specifies files by the owner's UIC.

WHEN . . .	THEN . . .
This qualifier is omitted.	Only files owned by the issuing user are displayed.
The user has SYSPRV or BYPASS privileges and does not specify the /OWNER=uic_qualifier.	All files are displayed.

/SINCE=[time]
Specifies that only entries made since the specified time will display. This time is when the file was backed up, not created. Use absolute or combination time format.

/SYMBOLS
/NOSYMBOLS (default)
The /SYMBOLS qualifier specifies placement of the information for the first file that matches a wildcard specification into a set of DCL symbols instead of a report file. The following local symbols are created.

```
SLS$INQ_FILE = file name of file found
SLS$INQ_SAVES = number of saved versions of file (n)
SLS$INQ_VOLUME_<index> = volume numbers
SLS$INQ_SET_<index> = save set names
SLS$INQ_DATE_<index> = date and time of backup job
SLS$INQ_POS_<index> = position on volume of save set
```

An Index value of . . .	Indicates the . . .
1 for SLSINQ_VOLUME_x, SLSINQ_ SET_x, etc.	Most recent backup of the file
n for SLSINQ_VOLUME_x, SLSINQ_ SET_x,_etc.	Oldest backup of the file

How to find the next match of a wildcard search:

Type the same command line and include the /NEXT_FILE qualifier.

The /NOSYMBOLS qualifier is the default.

Example

The following example illustrates the STORAGE REPORT SYSTEM command.

```
$ STORAGE REPORT SYSTEM USER$1:[BUCK.DEMO]*.*;*-
_$/OUTPUT=[BUCK.REPORTS]BACKUP.REP/BEFORE=17-JUN-1989/CONCEALED
```

Result:

This example:

- Searches any files in [BUCK.DEMO] directory on device USER$1: that were saved during a system backup before the 17th of June
- Does not translate the device name, but leaves it concealed

- Outputs the report to a file named [BUCK.REPORTS]BACKUP.REP

To display the output report file, enter the following command:

```
$ TYPE [BUCK.REPORTS]BACKUP.REP
```

Result:

A file similar to the following displays on the terminal screen.

```
Run date 20-JUN-1989 19:16                                              Page 1

                          System Backup ReportSet

GENERIC -- File           *::USER$1:[BUCK.DEMO]*.*;*
Filename----------------------------------------------------------------Owner--
- ----------Date_of_Backup---------Real--------Saveset----------------------

VIOLA::USER$1:[BUCK.DEMO]BAR.C;1
            12-JUN-1989 09:28    DEMO4    22MAY89_1130.BAK      [100,76]
VIOLA::USER$1:[BUCK.DEMO]BAR.C;1
            12-JUN-1989 09:28    DEMO4    22MAY89_1130.BAK      [100,76]
VIOLA::USER$1:[BUCK.DEMO]FOO.C;1
            12-JUN-1989 09:28    DEMO4    22MAY89_1130.BAK      [100,76]
VIOLA::USER$1:[BUCK.DEMO]FOO.C;1
            12-JUN-1989 09:28    DEMO4    22MAY89_1130.BAK      [100,76]
VIOLA::USER$1:[BUCK.DEMO]LOGIN.COM;40
            12-JUN-1989 09:28    DEMO4    22MAY89_1130.BAK      [100,76]
VIOLA::USER$1:[BUCK.DEMO]LOGIN.COM;39
             12-JUN-1989 09:28     DEMO4     22MAY89_1130.BAK        [100,76]

End of report
```

STORAGE REPORT VOLUME

The STORAGE REPORT VOLUME command generates a report for one or more volumes recorded in the MDMS volume database. Each requested report can contain information about one or several volumes in the MDMS volume database.

Format

```
$ STORAGE REPORT VOLUME parameter-field[=value], . . .
```

Restrictions

You must have the OPER privilege.

Parameters

parameter-field

Specifies the MDMS volume database fields to be placed in the report. If more than one field is specified, then separate the fields with commas. There is no limit for the number of selected fields for the parameter.

Table 1–1 describes the field parameters for the REPORT VOLUME command.

Table 1–1 Field Parameters

Field	Meaning	Value Format	Example Output
ACCOUNT	Owner's account name	String	ENGINEERING
ALLOCATED_DATE	Last allocation date	Date	18-FEB-1996
BLOCK_FACTOR	Number of records in one block	Numeric	20
BRAND	Brand name of a disk or tape volume	String	Digital
CARTRIDGE_SLOT	Number of a jukebox slot where a volume is stored	Numeric	21
CLEANED_DATE	Last date the volume was cleaned	Date	18-FEB-1996
DENSITY	Density of a recorded data for tape media	Numeric	6250
DRIVE	Name of a tape or optical drive	String	MUA0
ELIGIBLE_FOR_ ALLOCATION	Allocation eligibility	Special	No values. MDMS software lists the free volume's location, media type, length, and date the volume was freed.

Table 1–1 Field Parameters

FLAG	Status flag	Keyword	ALLOCATED
FORMAT	Recording format	String	BACKUP
FREED_DATE	The date the volume has been freed (deallocated)	Date	18-FEB-1996
INITIALIZATION_DATE	The last date the volume was initialized	Date	21-MAY-1996
IO_ERROR_COUNT	Number of I/O errors since a volume was last cleaned	Numeric	1500
JOB_NAME	Name of the job that wrote the volume	String	JOB1
JUKEBOX	Name of a jukebox	String	VENUS$JUKE1
LAST_ACCESS_DATE	The last date a volume was loaded	Date	03-JAN-1996
LENGTH	Volume length	Numeric	2400
LOCATION	Permanent location of a volume	String	HEADQUARTERS
MEDIA_TYPE	Type of media	String	9TRACK
MOUNT_COUNT	Number of times a volume has been mounted	Numeric	23
NEXT_VOLUME	Next volume in a set	String	ABC123
NODE_NAME	Owner's node name	String	BOSTON
NOTES	Descriptive notes	String	DRA2 BACKUP
OFFSITE_DATE	Date a volume is to be taken off site	Date	18-FEB-1996
ONSITE_DATE	Date a volume is to be returned on site	Date	12-MAY-1996
OTHER_SIDE	Opposite side of double-sided media	String	VOLB
OWNER	Owner's user identification code	Standard OpenVMS UIC format	[1,4]
POOL	Volume's pool name	String	GENERAL
PREVIOUS_VOLUME	Previous volume in a volume set	String	ABC123
PROTECTION	Access protection code	Special	No values. MDMS software displays S:RW,G:R

Table 1–1 Field Parameters

PURCHASE_DATE	Volume's purchase date	Date	18-FEB-1996
RECLENGTH	Record length of recorded data	Numeric	2400
SCRATCH_DATE	Date a volume is to be freed	Date	18-FEB-1996
SIDE	Side A or Side B of double- sided media	String	A
SLOT	Number of a non-jukebox slot where a volume is stored	Numeric	136
STATUS	Jukebox status or position of a double-sided medium	String	In slot
TIMES_CLEANED	Number of times a volume has been cleaned	Numeric	6
USER_NAME	Owner's user name	String	JONES
VOLUME	Volume ID	String	PUB001

Qualifiers

The qualifiers for the STORAGE REPORT VOLUME command are grouped into two categories:

- Command qualifiers-Apply to the entire MDMS command
- Field qualifiers-Apply only to the field on which they are placed

The following optional qualifiers can be used with the STORAGE REPORT VOLUME command.

Command Qualifiers

/DIRECT
/NODIRECT (default)

The /DIRECT qualifier specifies direct access to the MDMS volume database file.

- IF the /DIRECT qualifier fails because of protection violation,
- THEN retry the command using the /NODIRECT qualifier.

The /NODIRECT qualifier specifies using the SLS$TAPMGRRQ process to read the MDMS volume database file.

The /DIRECT qualifier requires SYSPRV, BYPASS, or READALL privileges.

/FILTER
/NOFILTER (default)

The /FILTER qualifier specifies that records are read from the MDMS volume database one record at a time, checked against any matching constraints (values), and then given to sort routines.

The /NOFILTER qualifier specifies that the entire MDMS volume database is to be sorted and records are checked against any matching constraints as the report file is generated.

The /FILTER qualifier is valid only with the /DIRECT qualifier.

The /FILTER qualifier is useful when only a portion of the MDMS volume database file is to be printed, such as generating a list of volumes in transition. The records are always filtered if the /DIRECT qualifier is not specified.

/OUTPUT=file
Specifies an output file. The default displays the report on the terminal screen.

/TITLE=text
Specifies the title for the report. The title must be enclosed in quotation marks. For example:

```
$ STORAGE REPORT VOLUME/TITLE=”Free volumes” VOLUME,FLAG=(Free)
```

Field Qualifiers

/PRINT (default)
/NOPRINT
The /PRINT qualifier is the default and specifies that the field be included in the report.

The /NOPRINT qualifier sorts or selects records but does not print or list the field in the report.

/SORT
/NOSORT (default)
The /SORT qualifier sorts volume records based on the field associated with the sort qualifier. The default is to sort by LOCATION.

/WIDTH=number
Specifies the printing width of the field in characters.

Examples

1. `$ STORAGE REPORT VOLUME VOLUME=VOL,*,FLAG=(ALLOCATED) /NOPRINT`
   Generates a report on all volumes with VOL as the prefix. The flag field is not printed.

2. `$ STORAGE REPORT VOLUME/DIRECT/FILTER ALLOCATED_DATE /SORT,VOLUME,USER`
   Generates a report on all volumes sorted by the allocation date and displays a report similar to the following:

```
Run date 10-APR-1996 17:52                                          Page 1

                  MDMS Volume Database File Report
Allocated                    Volume                Username
------------------------------------------------------------------------

20-DEC-1995 16:20              ATLAS1               SMITH
22-JAN-1996 10:00              TEST3                JONES
2-FEB-1996 00:07               VOLN5                JONES
14-MAR-1996 00:01              VOLN6                JONES
9-APR-1996 08:30               ATLAS2               SMITH
                    5 record(s) found

Press Return to continue...
```

3. `$ STORAGE REPORT VOLUME/NOFILT/TITLE=Status of Jukebox Volumes - _$ STATUS=(OUTSIDE,B_DRIVE)/SORT,VOLUME,FLAG,MEDIA_ TYPE=RV02K`
   Generates a report on all volumes sorted by the status field and displays a report similar to the following:

```
Run date 26-MAR-1996 13:27                                          Page 1

                   Status of Jukebox Volumes
Status              Volume            Status           Media Type
------------------------------------------------------------------------
Outside              ED10             Alloc              RV02K
```

```
Outside             ED11            Alloc           RV02K
In Slot             AIM001          Alloc           RV02K
In Slot             AIM007          Free            RV02K
In Slot             DEM002          Free            RV02K
Side A in drive     AIM004          Free            RV02K
                6 record(s) found
```

STORAGE REQUEUE

The STORAGE REQUEUE command reschedules execution of system backups for the current day. This is useful when system failures prevent regularly scheduled system backups from executing.

Format

```
$ STORAGE REQUEUE
```

Parameters

None.

Restrictions

Requires OPER privileges.

Qualifiers

None.

Example

The following example illustrates the STORAGE REQUEUE command.

```
$ STORAGE REQUEUE
```

Result:

The software requeues the SLS system backups that were not executed due to system failure.

STORAGE RESTORE

The STORAGE RESTORE command creates a batch job that restores one or more files or databases.

If the files were saved using the VMS BACKUP format, SLS automatically searches the system and user history files for the volume ID and save set in which the first file in this list was saved. You can use the /VOLUME_ID and /SAVE_ SET qualifiers to override this search and control exactly which version of a file should be restored.

If the databases were saved in RMUBACKUP format, SLS automatically searches the database history files for the volume ID and save set in which the most recent version of the database was saved.

The STORAGE RESTORE command puts the batch job number in a symbol called SLS$JOBNUM and the batch queue in a symbol called SLS$QUENAM. You use these two symbols for subsequent DCL SYNCHRONIZE commands.

Format

```
$ STORAGE RESTORE file-spec[,...]
```

Parameters

file_spec[,...]
Name of the file or list of files to restore. Wildcard characters (* or %) are allowed.

The first file specified in the list may be used as a search key to search SLS history database. This method of searching finds the volume ID and backup save set file from which to perform the restore operation.

Restrictions

- If you specify the /SCREEN qualifier, then you cannot specify any other parameters or qualifiers.
- You cannot use the /SCREEN qualifier to restore saved Oracle Rdb databases.
- If you omit the file_spec parameter, you must specify the qualifiers /SAVE_SET and /VOLUME_ID.

  Result:
  All files on the save set are restored.
- When restoring a database, you should specify a single file specification.

/CRC (default)
/NOCRC
/CRC qualifier specifies whether the software cyclic redundancy check (CRC) is to be verified.

The /NOCRC qualifier disables CRC operation.

Restriction:

This qualifier applies only to the BACKUP format.

/DB_CMDQUALS=list of RMU/RESTORE command qualifiers
Specifies an optional list of RMU/RESTORE command qualifiers to be appended onto the RMU/RESTORE command when the command is issued.

/DB_FILQUALS=list of RMU/RESTORE file or area qualifiers
Specifies an optional list of RMU/RESTORE file or area qualifiers to be appended onto the RMU/RESTORE command when the command is issued.

/DENSITY=density-keyword
Specifies either the density (in bpi) for tape volumes or the data compaction and record blocking option for TK90K cartridges. The meaning of this parameter depends upon the type of drive being used.

IMPORTANT: Note that the /DENSITY qualifier should be used when you have to specify a change in the kind of media. You should NOT specify /DENSITY as a selection criterion.

IF the volume is being loaded onto . . .	THEN use this qualifier . . .
a TA90 or TA90E cartridge system	/MEDIA_TYPE=keyword
all other devices	/DENSITY=keyword

Examples:

1600, 6250

How to find valid density keywords:

Allowed keywords for this qualifier are site-dependent. See your storage administrator for the valid density keywords at your site.

When to use this qualifier:

Use this qualifier when the:

- Volume ID is not specified
- The density (or data compaction) of the volume is going to be changed

When NOT to use this qualifier:

Do not use this qualifier if the recording density does not apply to media at your site.

/FORMAT=keyword
Specifies the storage format of a foreign volume. Valid formats include:

- BACKUP (default)
- ASCII
- EBCDIC
- RMUBACKUP

/HISTORY=history_name
Specifies the name of the history file group to search. Depending on the type of backup used to create the history file, the correct backup software will be used to perform the restore operation. See the HISNAM_n symbol assignments in TAPESTART.COM for the list of allowable values for this qualifier.

/LOG
/NOLOG (default)
The /LOG qualifier records each restored file in the log file of the batch job that SLS software generates when performing restore operations.

The /NOLOG qualifier is the default.

/MEDIA_TYPE=type

Specifies the type of media for a volume that does not have a record in the SLS volume database. This value is used by the SLS software to select an appropriate device for such volumes.

Restriction:

If you specify this qualifier, you cannot specify the /SCREEN qualifier in the same STORAGE RESTORE command.

/NEW_VERSION
/NONEW_VERSION (default)
/NEW_VERSION qualifier creates a new file with a version number one greater than the latest file on the disk.

The /NONEW_VERSION qualifier is the default.

This qualifier is position dependent:

Use this qualifier with the output qualifier.

/NOTES="string"
Writes the NOTES string to the notes field of the SLS database volume record.

/OUTPUT=output-file
Specifies the output file or directory in which the restored files are placed. If this qualifier is omitted, then files will be placed in the user's current default directory.

Requirement:

If you specify this qualifier, then you must supply the output filename.

/OVERLAY
/NOOVERLAY (default)
If a file exists on the disk with the same version number as the file being restored, then the /OVERLAY qualifier specifies that the contents of the existing file will be substituted (or overlaid) with the contents of the restored file.

IF the /OVERLAY qualifier is specified, AND the file being restored is larger than the present file, THEN more blocks are allocated on the disk to extend the file.

The /NOOVERLAY qualifier is the default.

This qualifier is position dependent:

Use this qualifier with the output specifier.

/OWNER=uic
Restores files that are owned by the specified UIC.

Requirements:

This qualifier requires the SYSPRV privilege. Write access to the files is necessary.

/POSITION=number
Specifies the tape mark count or position of a save set file on a volume.

When to use this qualifier:

Use this qualifier to quickly locate save sets on optical media.

/POST_PROCESSING="command"
Specifies a DCL command to execute after the restore operation completes, enclosed within quotation marks.

Restriction:

This qualifier cannot be used with the /SCREEN qualifier.

/PRE_PROCESSING=”command”
Specifies a DCL command to execute before the restore operation begins, enclosed within quotation marks.

Restriction:

This qualifier cannot be used with the /SCREEN qualifier.

/RECLENGTH=number
Specifies the record length on EBCDIC format tapes. The record length field must be greater than zero when EBCDIC files are restored.

Omitting this qualifier:

The following error message is displayed if the record length is omitted:

```
%SLS-X-FORNORECL, record length must be specified for foreign EBCDIC volumes
```

/REPLACE
/NOREPLACE (default)
The /REPLACE qualifier restores a new version of a file:

- With the same directory specification
- With the same file name
- With the same type
- With the same version number
- Deletes the copy of the previous file

The /NOREPLACE qualifier is the default.

This qualifier is position dependent:

Use this qualifier with the output specifier.

/SAVE_SET=save-set
Specifies the save set from which the restore operation will restore the files. If this qualifier is omitted, then SLS searches its’ history database for the name of the save set containing the highest version of the input file specified.

Requirements:

If you specify this qualifier, then you must supply the save set name.

Restriction:

This qualifier is only valid when specified with the /VOLUME_ID qualifier.

/SCREEN
Specifies the screen mode of operation. This qualifier displays the Restore Screen, the screen used in the SLS menu structure.

Restrictions:

- You cannot specify this qualifier with any other RESTORE qualifier.
- You cannot use this qualifier to restore a saved Oracle Rdb database.

/USER_NAME=user-name
Restores the specified users files or save sets.

Requirement:

To specify this qualifier, the requesting process must have OPER and CMKRNL privileges.

/VERIFY
/NOVERIFY (default)
The verify qualifier performs a compare operation after the restore operation. This operation compares the specified files or save sets on a volume, with files that are created on the disk as a result of the restore operation

The /NOVERIFY qualifier is the default.

/VOLUME_ID=volume-id
Specifies the volume ID of the volume that contains the file(s) to be restored.

If this qualifier is omitted, then SLS searches its' history files to find the volume ID where the save set was written that contains the highest version of the input file.

Restriction:

This qualifier is only valid when specified with the /SAVE_ SET qualifier.

Example

The following table illustrates how to use the STORAGE RESTORE command:

IF you want to . . .	AND the volume ID and save set name is . . .	THEN . . .
Restore a file(s) from a save set	Unknown	Enter. `$ STORAGE RESTORE DOCUMENT1.TXT` Result: SLS searches the SLS history database set to find the volume ID and save set file from which to restore file DOCUMENT1.TXT.

	Known	Enter:
		`$ STORAGE RESTORE DOCUMENT1.TXT -`
		`$_/SAVE_SET=BOOKS.BCK/VOLUME_ID=DOC-`
		`SETS`
		Result:
		Restores the file DOCUMENT1.TXT from the save set BOOKS.BCK that is located on the volume DOCSETS

Restores an entire save set	N/A	You must know the volume ID and the save set name.
		Enter:
		`$ STORAGE RESTORE/SAVE_SET=BOOKS.BCK`
		`$_/VOLUME_ID=DOCSETS`
		Result:
		Restores all the files from the save set BOOKS.BCK that is located on the volume DOCSETS.

STORAGE SAVE

The STORAGE SAVE command backs up files for safekeeping and long-term storage. The save operation can be performed onto removable media, such as a 9-track magnetic tape or an RV02K optical cartridge. Save operations are used for:

- Basic user backups
- System backups
- Standby archiving

The STORAGE SAVE command puts the batch job number in a symbol called SLS$JOBNUM and the batch queue in a symbol called SLS$QUENAM. You use these two symbols for subsequent DCL SYNCHRONIZE commands.

Format

```
$ STORAGE SAVE file-spec[, . . . ]
```

Parameters

file-spec[, . . .
Specifies the files or save sets to be backed up. The format is the standard VMS file specification.

Permitted characters:

This parameter permits the use of asterisk (*) and percent sign (%) wildcard characters in the file specification.

Restrictions

None.

Qualifiers

/AFTER=[time]
Specifies the time of day the save operation will take place.

Required format:

Specify absolute or combination time format.

/BACKUP
Selects files or save sets by comparing the BACKUP date and time recorded in the header record with the BACKUP date and time specified with the /BEFORE or /SINCE qualifier. The BACKUP date and time recorded in the header record is the BACKUP date and time the file was last saved or copied with the /RECORD qualifier.

Restriction:

This qualifier must be used with the /BEFORE or /SINCE qualifier, and cannot be used with the /CREATE, /MODIFIED, or /EXPIRED qualifiers.

WHEN you use the /BACKUP qualifier with . . .	AND the files were . . .	THEN . . .

The /BEFORE qualifier	Previously saved with the /RECORD qualifier	Files with a BACKUP date prior to the specified date or time are selected.
	Not previously saved with the /RECORD qualifier	All files without BACKUP dates are selected.
The /SINCE qualifier	Previously saved with the /RECORD qualifier	Files with a BACKUP date equal to or later than the specified date or time are selected.
	Not previously saved with the/RECORD qualifier	All files without BACKUP dates are selected.

/BEFORE=time
Selects files dated earlier than the date and time specified.

When to use:

Use this qualifier to select files with a time value using:

- /BACKUP
- /CREATED
- /EXPIRED
- /MODIFIED

Restriction:

You can use only one of the above four qualifiers at a time in the command line.

Required format:

Specify either absolute or combination time format.

/BLOCK_FACTOR=number
Specifies the records per block.

Restriction:

This qualifier applies only to the EBCDIC format.

/CRC (default)
/NOCRC
The /CRC qualifier performs a cyclic redundancy check (CRC) and stores the data in blocks of the save set.

Restriction:

This qualifier applies only to the BACKUP format.

The /NOCRC qualifier disables CRC operation.

/CREATED
Selects files according to the creation date of the file.

Restriction:

This qualifier must be used with either the /SINCE or /BEFORE qualifiers and cannot be used with the /BACKUP, /MODIFIED, or /EXPIRED qualifiers.

/DELETE

/NODELETE (default)

The /DELETE qualifier deletes files after they are saved.

The /NODELETE qualifier is the default.

/DENSITY=value

Specifies either the density (in bpi) for tape volumes or the data compaction and record blocking option for TK90K cartridges. The meaning of this parameter depends upon the type of drive being used.

IMPORTANT: Note that the /DENSITY qualifier should be used when you have to specify a change in the kind of media. You should NOT specify /DENSITY as a selection criterion.

IF the volume is being loaded onto . . .	THEN use this qualifier . . .
A TA90 or TA90E cartridge system	/MEDIA_TYPE=keyword
All other devices	/DENSITY=keyword

Examples:

1600, 6250

How to find valid density values:

Allowed values for this qualifier are site-dependent. See your storage administrator for the valid density values at your site.

When to use this qualifier:

Use this qualifier when the:

- Volume ID is not specified
- Density (or data compaction) of the volume is going to be changed

When NOT to use this qualifier:

Do not use this qualifier if the recording density does not apply to media at your site.

/EXCLUDE=(file-spec[, . . .])

Excludes files that meet the selection criteria from the save process and does not process these files.

/EXPIRED

Selects files according to their expiration date.

Restriction:

This qualifier must be used with either the /BEFORE or /SINCE qualifiers.

/FAST

Specifies that a fast file scan should be performed by:

- Reading the Files-11 index file on the disk volume
- Creating a table of files that match the specified qualifiers

Fast file scans reduce processing time and are useful when you want to search an entire volume disk but only want selected files.

/FORMAT=keyword

Specifies the volume storage format. Valid formats include:

- ASCII

- BACKUP (default)
- EBCDIC

/INITIALIZE
/NOINITIALIZE (default)
The /INITIALIZE qualifier initializes a volume before the save operation starts.

Restrictions:

Use this qualifier only if the volume has been allocated.

WHEN the . . .	THEN the . . .
SLS software selects a volume for you.	/INITIALIZE qualifier is automatically specified unless the volume is an optical cartridge.
Volume is an optical cartridge.	Initialization process can only be done one time.

The /NOINITIALIZE qualifier is the default.

/LENGTH=number
Specifies the volume length of tape media. The default length is site specific.

/LOG
/NOLOG (default)
The /LOG qualifier records the specifications of the individual saved files in the log file of the batch job. The log file is placed in your SYS$LOGIN directory with the file name of SAVE_SET.LOG.

The /NOLOG qualifier is the default.

/MEDIA_TYPE=type
Specifies the type of media. Examples are 9-track or TK50. The default media type is site specific.

/MODIFIED
Selects files according to the date the file was last modified.

Restriction:

This qualifier must be used with either the /BEFORE or /SINCE qualifiers.

/NOTES="string"
Writes the notes string to the notes field of the SLS record for each volume used in the save operation.

IF you want to . . .	THEN . . .	AND . . .
Perform standby archiving.	Specify the /VOLUME=ARCHIVE qualifier	Specify the archive class as the first eight characters in the /NOTES string by: • Placing the archive class before any notes to the volume • Using a space to separate the archive class from the note information • Enclosing the entire note string in quotation marks

Use a FOREIGN volume	Specify /VOLUME=FOREIGN	Specify the label for the volume as the first six characters in the /NOTES string.

The notes are displayed when you use either the STORAGE SHOW VOLUME or STORAGE SHOW VOLUME/SUMMARY commands.

/OWNER=uic
Saves the files owned by the specified UIC.

Requirement:

Write access to the files is necessary.

/POOL=pool-name
Selects a volume for the save operation from the specified pool instead of the default pool.

/POST_PROCESSING="command"
Specifies a DCL command to execute after the save operation completes, enclosed within quotation marks.

Restriction:

This qualifier cannot be used with the /SCREEN qualifier.

/PRE_PROCESSING="command"
Specifies a DCL command to execute before the save operation begins, enclosed within quotation marks.

Restriction:

This qualifier cannot be used with the /SCREEN qualifier.

/QUALIFIERS="/qualifier[/qualifier . . .]"
Applies the specified qualifiers to the VMS BACKUP command.

When to use:

Use this qualifier when the qualifier you need is not available with the STORAGE SAVE command (such as /BLOCK and /BUFFER).

/RECLENGTH=number
Specifies the record length in bytes.

Restriction:

This qualifier applies to the EBCDIC format only.

/RECORD
/NORECORD (default)
The /RECORD qualifier records the backup information in the on-line user history file. The on-line history file is used for subsequent reporting with the STORAGE REPORT command and RESTORE operations. The history information consists of the:

- Date
- File name
- Save set name
- Volume
- Time of the backup

Requirement:

The /RECORD qualifier must be used with the /STORAGE SAVE command if you want to create an on-line user history file for each file that is saved.

/SAVE_SET=save-set
Specifies the name of the save set written to the volume. If this qualifier is omitted, then the SLS software assigns a save set default name of ddmmmyy_hhmm.BCK,

Where:

dd = current day
mmm = current month
yy = current year
hh = current hour
mm = current minute

Character_limit:

Specify up to 17 characters.

/SINCE=time
Selects files that are equal to or later than the specified date and time.

When to use:

Use this qualifier to select the files with a time value using one of the following qualifiers:

- /BACKUP
- /CREATED
- /EXPIRED
- /MODIFIED

Restriction:

You can use only one of the above four qualifiers at a time in the command line.

/SCRATCH_DATE=date
Specifies the date a volume enters the retention period before being freed. The default scratch date is one year from the date of the BACKUP. Allowed values are site specific.

/SCREEN
Displays the SAVE screen from the SLS menu options.

Restriction:

You cannot save an Oracle Rdb database from this screen.

/USER_NAME=user-name
Performs a save operation on behalf of another user.

Requirements and restrictions:

This qualifier:

- Requires OPER and CMKRNL privileges
- Is only valid for the BACKUP format

/VERIFY
/NOVERIFY (default)
The /VERIFY qualifier performs a compare operation after the save operation. This qualifier compares the:

- Volume files saved to the backup media against

- Original disk files to ensure that the save operation is correct

The /NOVERIFY qualifier is the default.

/VOLUME=volume-id

Uses a specified volume in a volume set for the save operation.

IF you are . . .	THEN . . .	AND . . .
Performing standby archive.	Specify the /VOLUME=ARCHIVE qualifier with the /NOTES=”string” qualifier	Specify first word in the /NOTES string by: • Placing the archive class before any notes to the volume • Using a space to separate the archive class from the note information • Enclosing the entire note string in quotation marks
Use a FOREIGN volume	Specify /VOLUME=FOREIGN	Specify the label for the volume as the first word in the /NOTES string.

Case-sensitive qualifier:

The word ARCHIVE is case sensitive. Enter in uppercase.

Examples

The following examples illustrate the STORAGE SAVE command.

1.
```
$ STORAGE SAVE *.TXT/FORMAT=BACKUP/LOG/RECORD
```

Result:

This example:
Saves all files with the .TXT file extension in the current default directory
Specifies the format of the volume is BACKUP
Creates a log file of the files saved
Records the backup information (date, file name, save set name, volume and time of backup) in the user’s on-line history file

2.
```
$ STORAGE SAVE/INITIALIZE/DENSITY=2400/VOLUME=VOL77 RECORD238.TXT/LOG
```

Result:

This example:
Initializes VOL77
Specifies the tape media has a recording density of 2400 bpi
Saves the file RECORD238.TXT onto volume VOL77
Creates a log file for the file RECORD238.TXT

3.
```
$ STORAGE SAVE/VOLUME=ARCHIVE/NOTES=”FOREVER, Reports” JULRPT.TXT
```

Result:

This example:

Saves the file JULRPT.TXT using standby archive
Specifies that the archive class is FOREVER, which must be the first word in the /NOTES string stated before the Reports notes

STORAGE SELECT

The STORAGE SELECT command chooses a drive that:

- Supports the appropriate media type and recording density or data compaction of a volume
- Assigns the specified logical name to the device name
- Allocates the device to the requesting process

If the ALLDEV symbol in the file TAPESTART.COM is not empty, the operator is asked to select a drive. Otherwise, MDMS selects a drive.

For MDMS software drive selection, the following applies to the ALLDEV and SELDEV symbols in the file TAPESTART.COM:

- If the ALLDEV parameter is empty, then the SELDEV parameter should be empty also and MDMS will select a drive that meets the user's specified criteria (density, media type, or specific drive).
- If the ALLDEV symbols is not empty, MDMS can only use the drives listed in ALLDEV. The drives listed in the ALLDEV symbol are allocated by MDMS when SLS$STARTUP.COM is executed.
  - If a drive meets the required criteria and that drive is listed in the SELDEV symbol, MDMS automatically can select the drive without requesting an OPCOM response.
  - If drives that meet the required criteria are not listed in SELDEV, but are listed in ALLDEV, MDMS requests that the operator select one of the drives and then allocates the selected drive to the user.

After the SELECT command is issued, the name of the drive is displayed on the terminal screen. The DCL SHOW LOGICAL command also displays the drive's name.

If the specified volume is in a jukebox, the drive selected is from the same jukebox.

Formats

```
$ STORAGE SELECT logical-name volume-id
$ STORAGE SELECT logical-name /MEDIA_TYPE=type
$ STORAGE SELECT logical-name /DRIVE=drive name
```

Parameters

logical-name

Specifies the logical name to be assigned to the tape device. The logical name:

- Becomes a process logical name while the selected drive name becomes the equivalent name
- Remains defined until either of the follow occurs:
  - It is deassigned
  - The process terminates

The logical name cannot be longer than 31 characters.

volume-id

Specifies the name of the volume for which an appropriate drive is to be selected.

Description

When the STORAGE SELECT command completes, the drive name is displayed on the terminal screen.

Note

If the specified drive is assigned to the SELDEV symbol in the file SYS$MANAGER:TAPESTART.COM, then the drive is allocated without human operator intervention.

MDMS informs you if there is no drive available and, based on your configuration, does one of the following:

- Waits until a drive becomes available, unless the /NOWAIT qualifier is used (see below)
- Requests assistance from the operator at your site

When selecting a drive, it is important that the MDMS software knows the density of the volume to be loaded. This ensures that a drive capable of the proper density is allocated for the job.

Qualifiers

/DENSITY=value

Specifies either the density (in bpi) for tape volumes or the data compaction and record blocking option for TK90K cartridges. The meaning of this parameter depends upon the type of drive being used.

IMPORTANT: Note that the /DENSITY qualifier should be used when you have to specify a change in the kind of media. You should NOT specify /DENSITY as a selection criterion.

IF the volume is being loaded onto . . .	THEN use this qualifier . . .
a TA90 or TA90E cartridge system	/MEDIA_TYPE=keyword
all other devices	/DENSITY=keyword

Examples:

1600, 6250

Allowed values for this qualifier are site-dependent. See your storage administrator for the valid density values at your site.

When to use this qualifier:

Use this qualifier when the:

- Volume ID is not specified
- Density (or data compaction) of the volume is to be changed

Do not use this qualifier if the recording density does not apply to media at your site.

/DRIVE=device-name

Specifies the particular drive to allocate.

/MEDIA_TYPE=type

Specifies the type of media that the drive must support, such as 9-track, TK50, or RV02K media.

/REPLY=symbol

Selects requests that require operator intervention and stores the operator's reply in the specified local DCL symbol. The symbol defined contains the text of the operator's reply in the DCL REPLY/TO or DCL REPLY/ABORT command if the operator becomes involved in the selection of the drive.

/WAIT=[interval] (default)
/NOWAIT
The /WAIT qualifier (default) specifies the STORAGE SELECT command to wait until a drive is available. The MDMS software checks once a minute (default) for an available drive. To specify another time interval, supply a delta time with the /WAIT qualifier. The /NOWAIT qualifier disables waiting. An error is returned if the drive is not available.

Examples

1.
```
$ STORAGE SELECT/WAIT=0:0:20 MY$DRIVE LAB003
```

   This example:

   Selects a drive that supports the media type and density of volume LAB003
   Assigns the logical name MY$DRIVE to the selected drive
   Allocates the drive to the process
   If a drive is not available, checks every 20 seconds for an available drive

2.
```
$ STORAGE SELECT MY$DRIVE/MEDIA_TYPE=RV02K
```

   This example selects a drive that supports RV02K optical cartridges and displays a message similar to the following:

```
%DCL-I-ALLOC, _VENUS$MUC0: allocated.
```

STORAGE SET VOLUME

The STORAGE SET VOLUME command modifies the attributes of a specified volume or volume set.

Format

```
$ STORAGE SET VOLUME volume-id
```

Restrictions

- You must have the OPER privilege.
- You must have PRIV_MODOWN in the TAPESTART.COM file for any volume, whether the volume is allocated to the user or allocated to someone else.
- You must have PRIV_MODANY in the TAPESTART.COM file for a volume allocated to another user.
- You must have PRIV_MODANY in addition to PRIV_MODOWN in the TAPESTART.COM file for certain fields whether the volume is allocated to the user or allocated to someone else.

Parameters

volume-id

Specifies the volume ID of the volume to be modified. Table 1–2 lists the privileges required to use the associated qualifiers.

Table 1–2 Required Privileges to Modify Volumes

Qualifier	Owned Volumes	Unowned Volumes
/ACCOUNT	PRIV_MODOWN, PRIV_MODANY	PRIV_MODOWN, PRIV_MODANY
/ALLOCATED	PRIV_MODOWN, PRIV_MODANY	PRIV_MODOWN, PRIV_MODANY
/AVAILABLE	PRIV_MODANY	PRIV_MODANY
/BLOCK FACTOR	PRIV_MODOWN,	PRIV_MODOWN, PRIV_MODANY
/BRAND	PRIV_MODOWN, PRIV_MODANY	PRIV_MODOWN, PRIV_MODANY
/CLEANED	PRIV_MODOWN, PRIV_MODANY	PRIV_MODOWN, PRIV_MODANY
/DENSITY	PRIV_MODOWN	PRIV_MODOWN
/FORMAT	PRIV_MODOWN	PRIV_MODOWN, PRIV_MODANY
/FREED	PRIV_MODOWN, PRIV_MODANY	PRIV_MODOWN, PRIV_MODANY
/INITIALIZED	PRIV_MODOWN	PRIV_MODOWN, PRIV_MODANY
/IO_ERROR_COUNT	PRIV_MODOWN, PRIV_MODANY	PRIV_MODOWN, PRIV_MODANY
/JOB_NAME	PRIV_MODOWN	PRIV_MODOWN, PRIV_MODANY
/LAST_ACCESS	PRIV_MODOWN, PRIV_MODANY	PRIV_MODOWN, PRIV_MODANY
/LENGTH	PRIV_MODOWN, PRIV_MODANY	PRIV_MODOWN, PRIV_MODANY
/LOCATION	PRIV_MODOWN, PRIV_MODANY	PRIV_MODOWN, PRIV_MODANY
/MEDIA_TYPE	PRIV_MODOWN, PRIV_MODANY	PRIV_MODOWN, PRIV_MODANY
/MOUNT_COUNT	PRIV_MODOWN, PRIV_MODANY	PRIV_MODOWN, PRIV_MODANY
/NOTES	PRIV_MODOWN	PRIV_MODOWN, PRIV_MODANY
/OFFSITE	PRIV_MODANY	PRIV_MODANY
/ONSITE	PRIV_MODANY	PRIV_MODANY
/OTHER_SIDE	PRIV_MODOWN, PRIV_MODANY	PRIV_MODOWN, PRIV_MODANY
/OWNER	PRIV_MODOWN, PRIV_MODANY	PRIV_MODOWN, PRIV_MODANY

/POOL	PRIV_MODOWN, PRIV_MODANY	PRIV_MODOWN, PRIV_MODANY
/PROTECTION	PRIV_MODOWN	PRIV_MODOWN, PRIV_MODANY
/RECLENGTH	PRIV_MODOWN	PRIV_MODOWN, PRIV_MODANY
/RETAIN	PRIV_MODANY	PRIV_MODANY
/SCRATCH_DATE	PRIV_MODOWN	PRIV_MODOWN, PRIV_MODANY
/SIDE	PRIV_MODOWN, PRIV_MODANY	PRIV_MODOWN, PRIV_MODANY
/SLOT	PRIV_MODOWN, PRIV_MODANY	PRIV_MODOWN, PRIV_MODANY
/UNAVAILABLE	PRIV_MODOWN, PRIV_MODANY	PRIV_MODOWN, PRIV_MODANY
/ZERO	PRIV_CLEAN	PRIV_CLEAN

Note

Unless otherwise stated, each qualifier affects:

One side of double-sided media
The specified volume of a volume set

/ACCOUNT=string
Modifies the account name of the volume.

/ALLOCATED=date
Modifies the date the volume was allocated.

Specify absolute or combination time.

/AVAILABLE
Places a volume into the free or transition state (determined by your site) if the volume is currently in the down state.

/BLOCK_FACTOR=number
Modifies the number of records per physical tape block.

This qualifier should be used with the EBCDIC format only.

/BRAND=text
Modifies the volume manufacturer, such as Digital.

Specify 1 to 16 characters.

/CLEANED=date
Modifies the date the volume was last cleaned.

Specify absolute or combination time.

/DENSITY=value
Specifies either the density (in bpi) for tape volumes or the data compaction and record blocking option for TK90K cartridges. The meaning of this parameter depends upon the type of drive being used.

IMPORTANT: Note that the /DENSITY qualifier should be used when you have to specify a change in the kind of media. You should NOT specify /DENSITY as a selection criterion.

IF the volume is being loaded onto . . .	THEN use this qualifier . . .
a TA90 or TA90E cartridge system	/MEDIA_TYPE=keyword
all other devices	/DENSITY=keyword

Examples:

1600 bpi, 6250 bpi.

Allowed values for this qualifier are site-dependent.

Use this qualifier when the:

- Volume ID is not specified
- Density (or data compaction) of the volume is going to be changed

Do not use this qualifier if the recording density does not apply to media at your site.

/FORMAT=keyword
Modifies the volume to have one of the following formats:

- ASCII
- BACKUP
- EBCDIC
- RMUBACKUP

/FREED=date
Modifies the volume's freed date (the date the allocated volume entered the transition or free state).

/INITIALIZED=date
Modifies the initialization date of the volume.

Specify absolute or combination time.

/IO_ERROR_COUNT=number
Modifies the error count on a volume (the default is zero).

/JOB_NAME=name
Modifies the controlling job name.

Specify 1 to 12 characters.

/LAST_ACCESS=date
Modifies the date a volume was last accessed.

/LENGTH=number
Modifies the volume length of tape media. This qualifier does not affect a volume that is double-sided media.

/LOCATION=text
Modifies the location of a volume, such as HEADQUARTERS. This qualifier affects both sides of a volume that is double-sided media.

Specify 1 to 16 characters.

/MEDIA_TYPE=keyword

This qualifier is used to change the media type of the specified volume.

Using this qualifier requires:

- You must have the OPER privilege.
- You must have the privilege set by PRIV_MODOWN and PRIV_ MODANY in the TAPE-START.COM file.

/MOUNT_COUNT=value
Modifies the mount count on a volume.

/NOTES="string"
Modifies the notes field of a volume. This qualifier affects all the volumes of a volume set.

Specify 1 to 64 characters.

/OFFSITE=date
Modifies the date that a volume is to be sent off site. This qualifier affects both sides of a volume that is double-sided media.

Specify absolute or combination time.

/ONSITE=date
Modifies the date for a volume to be brought on site. This qualifier affects both sides of a volume that is double- sided media.

Specify absolute or combination time.

/OTHER_SIDE=name
Modifies the name of the volume on the opposite side of a double-sided volume.

/OWNER=uic
Modifies the owner field on a volume.

/POOL=pool-name
Modifies the pool name for a particular volume.

Specify 1 to 12 characters. Spaces are not allowed.

/PROTECTION=code
Modifies the protection code of a volume. Specify the standard OpenVMS format. The default protection code is site-specific.

This qualifier affects the entire volume set (no matter which volume in the set is specified).

/RECLENGTH=number
Modifies the record length in bytes.

This qualifier is used for the EBCDIC format only.

/RETAIN
Returns the specified volume or volume set (currently in the transition or free state) to its former owner.

Use this qualifier to recover an unintentionally freed volume.

The following table describes the /RETAIN qualifier process.

WHEN...	THEN...
a volume is retained from the free state	none of the user history files remain.
the specified volume is not part of a volume set	the volume can be retained.

the specified volume is the first volume in a volume set, *and* all volumes in the set can be retained	the entire volume set can be retained.
any specified volumes in a volume set can be retained	those volumes are retained. • IF any volumes from the volume set cannot be retained, • THEN those volumes are not retained.
the specified volume is the first volume in a volume set AND: • Some volumes in the volume set can be retained • Some volumes in the volume set cannot be retained	the volume cannot be retained.

/SCRATCH_DATE=date
Modifies the date a volume enters the transition state before it enters the free state. This qualifier affects the entire volume set (no matter which volume in the set is specified).

/SIDE=A
/SIDE=B
Specifies Side A or Side B of a volume that is double-sided media.

/SLOT=text
Modifies a storage slot location where a volume is stored. This qualifier affects both sides of a volume that is double-sided media.

Specify 1 to 8 characters.

/UNAVAILABLE
Places a volume in the down state (the volume is no longer in service).

/USER_NAME=user-name
Modifies the user's name (owner's field in a volume record). This qualifier affects the entire volume set (no matter which volume in the set is specified).

/ZERO
Sets the volume error and mount count of a volume to zero (0), and sets the date the volume was last cleaned to the current date and time.

Examples

1.
```
$ STORAGE SET VOLUME TEST00/SCRATCH_DATE=01-AUG-1996 /SLOT=BIN4/ZERO
```

   This example modifies the attributes of TEST00, that:
   Specifies that volume TEST00 enter the transition state 01-AUG-1996
   Changes the storage slot to BIN4
   Changes the mount and error counts to zero (0)

2.
```
$ STORAGE SET VOLUME/RETAIN VOL43/FORMAT=ASCII /NOTES="Personnel"
```

   This example:
   a. Returns volume VOL43 to its former owner
   b. Changes the volume format to ASCII
   c. Modifies the notes string for the volume

3. `$ STORAGE SET VOLUME/NOTES=" " VOL13`

   This example erases the notes on volume VOL13.
   A space is required between the quotation marks to erase the notes field.

STORAGE SHOW JUKEBOX

The STORAGE SHOW JUKEBOX command lists information about a tape jukebox. If you omit the tape_jukebox_name parameter, all defined jukeboxes are displayed.

Format

```
$ STORAGE SHOW JUKEBOX [tape_jukebox_name]
```

Parameters

tape_jukebox_name
The name of the jukebox whose contents you wish to display.

Qualifiers

None.

Examples

1. `$ STORAGE SHOW JUKEBOX TESTJUKE`

   Tape jukebox TESTJUKE, contains robot NODEA::JUA0:, contains 3 drives.

```
Drive                                                Drive Status
NODEA::$1$MUA21:                                    Available
NODEA::$1$MUA22:                                    Available
NODEA::$1$MUA23:                                    Available
```

   This example displays information about a specific jukebox.

2. `$ STORAGE SHOW JUKEBOX`

   Tape jukeboxes TESTJUKE, DUMMY_JUKE are configured.
   Tape jukebox TESTJUKE, contains robot NODEA::JUA0:, contains 3 drives.

```
Drive                                                Drive Status
NODEA::$1$MUA21:                                    Available
NODEA::$1$MUA22:                                    Available
NODEA::$1$MUA23:                                    Available
```

   Tape jukebox DUMMY_JUKE, contains robot NODEB::1MIA3:, contains 1 drive.

```
Drive                                              Drive Status
NODEB::$1$MIA3:                                    Allocated
```

   This example displays information about all known jukeboxes.

STORAGE SHOW LAST_ALLOCATED

The STORAGE SHOW LAST_ALLOCATED command displays the last volume allocated to the current or specified user.

Format

```
$ STORAGE SHOW LAST_ALLOCATED
```

Parameters

None.

Description

This command is useful for adding files or save sets to the last volume you allocated.

Use the STORAGE SHOW LAST_ALLOCATED command to show the last volume allocated to a specific user name.

Using the /SYMBOL qualifier places the volume ID of the last volume assigned to you into a DCL symbol in your local symbol table. The symbol is called SLS$LASALL_VOLUME.

The following optional qualifiers can be used with the STORAGE SHOW LAST_ALLOCATED command.

Qualifiers

/SYMBOLS
/NOSYMBOLS (default)
The /SYMBOLS qualifier creates the local DCL symbol SLS$LASALL_VOLUME to contain the last allocated volume ID. When this qualifier is used, information is not displayed to the terminal screen.

Use this qualifier in command files to determine which volumes have been allocated.

Using the /SYMBOL qualifier places the volume ID of the last volume assigned to you into a DCL symbol in your local symbol table. The symbol is called SLS$LASALL_VOLUME.

The /NOSYMBOLS qualifier is the default.

/USER_NAME=user-name
Specifies the user's name. Locates the volume last allocated to another user.

This qualifier requires the OPER privilege.

Example

```
$ STORAGE SHOW LAST_ALLOCATED/SYMBOLS
$ SHOW SYMBOL/LOCAL/ALL
SLS$LASALL_VOLUME ="VOL3"
```

This example:

- Creates a DCL symbol that stores the volume ID of the last allocated volume
- Displays the volume ID

STORAGE SHOW MAGAZINE

The STORAGE SHOW MAGAZINE command displays information about a magazine that is contained in the MDMS Magazine database. It displays the associated MDMS volume ID for each cartridge in that magazine and the jukebox name if the magazine is imported. If the magazine is imported, the jukebox slots are displayed.

Format

```
$ STORAGE SHOW MAGAZINE [magazine_name]
```

Parameters

magazine_name

The name of the magazine. If you do not provide a magazine name, MDMS displays a list of all magazines in the magazine database.

Qualifiers

/OUTPUT=filename

This directs the output to the specified file instead of the terminal.

Examples

1. `$ STORAGE SHOW MAGAZINE`

```
Magazine           Tape Jukebox      Tape Jukebox             Magazine
Name                   Name             Start Slot                 Size
ABSMAG01            Not imported                                 7 slots
BARBMAG1            Not imported                                11 slots
BARBMAG2            Not imported                                11 slots
JMSMAG1             Not imported                                 7 slots
MYMAG1              Not imported                                11 slots
TESTMAG            Not imported                                4 slots
```

   This example displays basic information about all magazines in the magazine database.

2. `$ STORAGE SHOW MAGAZINE MAG1`

   MAG1, is not imported into a tape jukebox, size is 11 slots.

```
Magazine    Jukebox     Volume      Volume          Volume    Volume
  Slot       Slot        ID          Type            State    Locaion
   0          -                     Slot empty
  1          -                     Slot empty
  2           -         DEC031      SLS volume
  3           -                     Slot empty
  4           -                     Slot empty
  5           -         DEC017      SLS volume
  6           -                     Slot empty
  7           -                     Slot empty
  8           -         DEC019      SLS volume
  9           -                     Slot empty
  10          -                     Slot empty
```

   This example displays information about an 11-slot magazine that is not imported.

3. `$ STORAGE SHOW MAGAZINE MAG2`

```
MAG2, is imported into tape jukebox JUKE1,
magazine size is 7 slots.

Magazine     Jukebox       Volume       Volume       Volume       Volume
Slot          Slot          ID          Type         State       Location
 0             0           VOL3         SLS volume   Allocated   In Drive
 1             1           VOL1         SLS volume   Free        In Slot
 2             2                        Slot empty
 3             3                        Slot empty
 4             4                        Slot empty
 5             5                        Slot empty
 6             6           ABS006       non-SLS volume
```

This output displays information about a 7-slot magazine that is imported into a jukebox.

STORAGE SHOW VOLUME

The STORAGE SHOW VOLUME command displays information about volumes or volume sets. You can display:

- Individual volume reports
- Volume summaries sorted by volume ID
- Volume summaries stored by scratch date

Formats

```
$ STORAGE SHOW VOLUME volume-id
$ STORAGE SHOW VOLUME/FORECAST
$ STORAGE SHOW VOLUME/SUMMARY
```

Restrictions

Using the STORAGE SHOW VOLUME command to show volumes not allocated to the current process requires that:

- You have the OPER privilege.
- You have the privilege assigned to PRIV_SEEANY in the TAPESTART.COM file.
- volume-id Specifies the volume or volume set to display.

Parameters

/FORECAST

Lists all volumes due to be freed in the order of their scratch dates. Within the report, a dash (-) in front of the volume ID indicates the first volume in the volume set.

This qualifier cannot be used with the volume-id parameter and must appear *before* any other qualifier.

/OUTPUT=file-spec

Specifies the output file in which to store volume information. The default is the terminal display.

This qualifier cannot be used with the /SYMBOLS qualifier.

/SYMBOLS
/NOSYMBOLS (default)

The symbols qualifier creates local DCL symbols that contain information about the specified volume.

This qualifier cannot be used with any other SHOW VOLUME qualifier.

WHEN...	THEN...
the /SYMBOLS qualifier is specified for a volume that is not part of a volume set	only information about the specified volume is returned.
the /SYMBOLS qualifier is used with multivolume sets	only information about the specified volume is placed in the symbols. To get information about other volumes in the volume set, use the SLS$INQ_NEXT_VOLUME symbol to step through the memebers of a volume set.

STORAGE SHOW VOLUME symbols:

SLS$INQ_VOLUME	SLS$INQ_UIC	SLS$INQ_REC_LEN
SLS$INQ_OWNER	SLS$INQ_LOCATION	SLS$INQ_BLOCK_FACTOR
SLS$INQ_FORMAT	SLS$INQ_PROTECTION	SLS$INQ_INITIALIZED
SLS$INQ_BRAND	SLS$INQ_NOTES	SLS$INQ_MEDIA_TYPE
SLS$INQ_ALLOCATED	SLS$INQ_OFFSITE	SLS$INQ_SLOT_NUMBER
SLS$INQ_SCRATCH	SLS$INQ_ONSITE	SLS$INQ_SIDE
SLS$INQ_PURCHASED	SLS$INQ_IO_ERRORS	SLS$INQ_OTHER_SIDE
SLS$INQ_CLEANED	SLS$INQ_FLAG	SLS$INQ_JUKEBOX
SLS$INQ_DENSITY	SLS$INQ_NEXT_VOLUME	SLS$INQ_JUKE_SLOT
SLS$INQ_LENGTH	SLS$INQ_PREVIOUS	SLS$INQ_DRIVE
SLS$INQ_MOUNTS	SLS$INQ_POOL	SLS$INQ_STATUS

The /NOSYMBOLS qualifier is the default.

/SUMMARY
Specifies all volumes allocated to a user and sorted by volume ID. This qualifier does not require a parameter. Within the report, a dash (-) in front of the volume ID indicates the first volume in a volume set.

This qualifier cannot be used with the volume-id parameter and must be specified *before* any other command qualifier in the command line.

/USER_NAME=user-name
Specifies the user's name and applies to the /FORECAST and /SUMMARY qualifiers when entering the STORAGE SHOW VOLUME command on another user's volumes.

This qualifier requires the MDMS SEEANY privilege.

Examples

1. `$ STORAGE SHOW VOLUME DEC031`

```
Volume:         DEC031              Owner:          VENUS::SMITH
Format:                             Brand:
Allocated:      16-NOV-1996 14:12   Scratch:        31-DEC-9999 23:59
Purchased:      16-NOV-1996 14:12   Cleaned:        16-NOV-1996 14:12
Media type:     TK85K               Length:         0
Mounts:         0                   UIC:            [0,0]
Location:       HEADQUARTERS        Protection:     S:RW,O:RW,G:R,W:
Notes:
Offsite:                            Onsite:
IO Errors:      0                   Flag:           FREE
```

```
Next volume:     *none*              Previous:        *none*

Pool:                                Rec len: 0       Block factor: 0

Initialized:     16-NOV-1996 14:12   Density:

Slot number:

Side:                                Other side:

Jukebox /        TESTJUKE / 112
slot:

Drive:
Volume is in a jukebox slot.
Volume is bound to slot 2 in magazine MAG1.
```

Displays all information in the volume database relating to volume DEC031.

2. `$ STORAGE SHOW VOLUME/SUMMARY`

This example lists all the volumes owned by the requesting user. The volumes are part of volume set ATLAS6.

```
Volume      Allocated          Scratch            Format         Notes
-ATLAS6      3-FEB-1996        3-FEB-1997         BACKUP
ATLAS7      15-MAR-1996       15-MAR-1997         BACKUP
ATLAS8       15-MAR-1996        15-MAR-1997          BACKUP
```

Note

The dash (-) in front of the volume ATLAS6 indicates that this is the first volume in a volume set.

STORAGE SPLIT

The STORAGE SPLIT command separates a volume set into two volumes or volume sets.

Format

```
$ STORAGE SPLIT volume-id
```

Restrictions

- You cannot separate a single volume even though one volume is considered to be a volume set. Two distinct volume IDs must be linked as a volume set before you can separate the volume set.
- Using the STORAGE SPLIT command to split a volume set for another user requires that:
  - You have the OPER privilege.
  - You have the privilege assigned to PRIV_MODANY in the TAPESTART.COM file.

Parameters

volume-id

Specifies the volume ID of the volume in a volume set before which the separation occurs. The specified volume becomes the first volume of a separate volume set.

The volume-id parameter cannot be the first volume in the volume set.

Qualifiers

/USER_NAME=user-name

Specifies the user's name.

This qualifier requires the OPER privilege.

Examples

1. `$ STORAGE SPLIT VOLUME_ID`

   All volumes that:
   Precede the specified volume belong to the first volume set
   Follow the specified volume belong to the second volume set

2. `$ STORAGE SHOW VOLUME/SUMMARY (1)`

```
Volume       Allocated        Scratch         Format     Notes
-VOL1        15-MAR-1996      25-NOV-1996     BACKUP     Engineering
VOL2         15-MAR-1996      25-NOV-1996     BACKUP     Engineering
VOL3         20-APR-1996      20-DEC-1996     BACKUP     Personnel
VOL4         22-APR-1996      21-DEC-1996     BACKUP     Reports
$
$ STORAGE SPLIT VOL3 (2)
$
$ STORAGE SHOW VOLUME VOL1 (3)
Volume: VOL1 Owner: VENUS::JONES
.
.
.
Next volume: VOL2 Previous: *none*
.
.
```

```
.
$ STORAGE SHOW VOLUME VOL3
Volume: VOL3 Owner: VENUS::JONES
.
.
.
Next volume: VOL4 Previous: *none* . . .
```

(1) The STORAGE SHOW VOLUME/SUMMARY command lists the volumes allocated to user JONES. Note that VOL1 is the first volume of the volume set.
(2) The STORAGESPLIT command splits volume set VOL1 at VOL3, creating two volume sets.
(3) The next two STORAGE SHOW VOLUME commands show volume sets VOL1 and VOL3. Volume set VOL1 now contains VOL1 and VOL2. Volume set VOL3 now contains volumes VOL3 and VOL4.

STORAGE STARTUP SYSTEM_BACKUP

The STORAGE STARTUP SYSTEM_BACKUP command manually starts a system backup or an Oracle RMU backup.

Format

```
$ STORAGE STARTUP SYSTEM_BACKUP file-spec submit-time
```

Parameters

file-spec
Specifies the name of the backup parameter file that the SLS software executes to perform the system backup. The backup parameter file *_SBK.COM, or *_DBSBK.COM for Oracle RMU backups, resides in the SLS$SYSBAK directory. When formatting this command, the _SBK.COM can be omitted.

submit-time
Specifies the time at which the job should be started.

Restrictions

- Requires OPER privileges
- Cannot be abbreviated (use the entire command format)
- Requires the *_SBK.COM or *_DBSBK.COM file to be located in the SLS$SYSBAK directory

Qualifiers

None.

Example

The following example illustrates the STORAGE STARTUP SYSTEM_BACKUP command.

```
$ STORAGE STARTUP SYSTEM_BACKUP MAY2989
```

Result:

Performs a manual system backup using SLS$SYSBAK:MAY2989_SBK.COM.

STORAGE UNBIND

The STORAGE UNBIND command unbinds the specified volume from the magazine and removes the volume name from the MDMS magazine database.

Format

```
$ STORAGE UNBIND volume_id magazine_name
```

Parameters

volume_id
The name of the volume to unbind.

magazine_name
The name of the magazine from which to unbind the specified volume.

Restrictions

Note that you cannot unbind a volume from an imported magazine.

Qualifiers

None.

Example

```
$ STORAGE UNBIND MYVOL MAGNUM1
```

Unbinds the volume MYVOL from the magazine MAGNUM1, assuming that MAGNUM1 is not imported.

STORAGE UNLOAD DRIVE

The STORAGE UNLOAD DRIVE command unloads a volume from a specific drive. When unloading a drive within a tape jukebox, the volume is returned to its home slot.

Format

```
$ STORAGE UNLOAD DRIVE drive_name
```

Parameters

drive_name
The name of the drive from which to unload the volume.

Restrictions

Requires the OPER privilege if you are unloading a drive not allocated to the requesting process.

Qualifiers

None.

Example

```
$ STORAGE UNLOAD DRIVE MUA0
```

Unloads any volume currently in drive MUA0.

STORAGE UNLOAD VOLUME

The STORAGE UNLOAD VOLUME command unloads a specified volume from a drive. When unloading a volume within a tape jukebox, the volume is returned to its home slot.

Format

```
$ STORAGE UNLOAD VOLUME volume-id
```

Restrictions

- The STORAGE UNLOAD VOLUME command requires OPER privileges to unload a drive not allocated to the requesting process.
- You cannot unload a volume from a drive if the volume is mounted on the drive.

Parameters

volume-id
Specifies the name of the volume to unload from a drive.

Description

This command is useful for:

- Freeing up a drive that contains a volume from a previous operation
- Locating a specific volume that has been loaded on any drive

Qualifiers

None.

Example

```
$ STORAGE UNLOAD VOLUME FY1996
```

Unloads volume FY1996 from the drive on which it is loaded.

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