Archive Backup System for OpenVMS

MDMS Reference Guide

Order Number: AA-R8EVN-TE

Software Version	Archive Backup System for OpenVMS Version V4.1
Required Operating System	OpenVMS VAX Version 6.2, 7.1, 7.2 or 7.3 & OpenVMS Alpha Version 6.2, 7.1-2, 7.2-1, 7.2-2, 7.3 or 7.3-1
Required Software	Media, Device and Management Services for OpenVMS Version V4.1
	DECnet (Phase IV) or DECnet-Plus (PhaseV)
	TCP/IP Services for OpenVMS

January 2003

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Printed in the U.S.A.

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Preface

Intended Audience

This document is intended for storage administrators who are experienced OpenVMS system managers. This document should be used in conjunction with the *Introduction to OpenVMS System Management* manual.

Conventions

The following conventions are used in this document:

Convention	Description
{}	In format command descriptions, braces indicate required elements.
[ ]	In format command descriptions, square brackets indicate optional elements of the command syntax. You can omit these elements if you wish to use the default responses.
boldface type	Boldface type in text indicates the first instance of a term defined in the Glossary or defined in text.
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 labels 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
HSM	HSM refers to Hierarchical Storage Management for OpenVMS software.
MDMS	MDMS refers to Media, Device and Management Services for OpenVMS software.
OpenVMS	OpenVMS refers to OpenVMS operating system.
SLS	SLS refers to Storage Library System for OpenVMS software.

Associate Documents

The following documents are part of Archive Backup System for OpenVMS documentation set:

- *Archive Backup System for OpenVMS Installation Guide*
- *Archive Backup System for OpenVMS Guide to Operations*
- *Archive Backup System for OpenVMS MDMS Reference Guide*

1

MDMS DCL Commands

MDMS is the Media, Device and Management Services Component of the Archive Backup System (ABS) and Hierarchical Storage Management (HSM) products.

You can use MDMS commands to manage all the databases for ABS. Alternatively, the pre-V4 ABS DCL commands are also available.

MDMS commands are also used to manipulate the media management database for HSM, whereas SMU manages the HSM database.

MDMS ALLOCATE DRIVE

The MDMS ALLOCATE DRIVE command selects and allocates a drive based on one of the following:

- A specified drive
- A specified volume
- A specified media type and optionally location, node, or group
- A specified jukebox

The selected drive name is assigned to the optional process logical name, which may be used in subsequent commands by that process.

Equivalent STORAGE Command: STORAGE SELECT

Format:

MDMS ALLOCATE DRIVE [drive_name]

Parameters

drive_name

The name of a specific drive to allocate, which must already have been created with a CREATE DRIVE command. This parameter is optional: drives can also be allocated on the basis of volume, media type, location or node, and jukebox, or certain combinations thereof.

The maximum length of the drive name is 31 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

Description

The MDMS ALLOCATE DRIVE command selects and allocates a drive based on one of the following:

- A specified drive
- A specified volume
- A specified media type and optionally location, node, or group
- A specified jukebox

The selected local OpenVMS device name and the drive name are assigned to the optional logical name in a search list. Both MDMS and non-MDMS DCL commands may be issued using the logical name. The logical name remains assigned until it is deassigned, the allocating process terminates, or the MDMS DEALLOCATE DRIVE command specifying the logical name is issued.

The MDMS ALLOCATE DRIVE command allocates the selected drive to the current process. After the MDMS ALLOCATE DRIVE command is issued, the name of the selected drive is displayed on the terminal screen. The DCL SHOW LOGICAL command also displays the OpenVMS local device name and the drive name.

MDMS supports allocation of both local drives and remote drives (using the RDF software). However, allocation of remote drives through RDF is not available if you are running with the ABS-OMT license.

MDMS attempts to allocate a drive local to the node performing the allocation, if one matches the selection criteria. Failing that, a TMSCP-accessible drive is chosen next. If that fails, an RDF-accessible remote drive is chosen.

Privileges

The request requires MDMS_ALLOCATE_ALL or MDMS_ALLOCATE_OWN.

MDMS_ALLOCATE_OWN requires the specification of an owned volume for selection. All other selections including the drive name parameter require MDMS_ALLOCATE_ALL.

MDMS_ASSIST is also required unless /NOASSIST is specified.

Restrictions

The drive_name parameter cannot be used with the /MEDIA_TYPE, /JUKEBOX, /LOCATION, /NODE, /GROUP, or /VOLUME qualifiers.

The /JUKEBOX qualifier cannot be used with /GROUP, /LOCATION, /NODE, /VOLUME, or the drive_name parameter.

The /MEDIA_TYPE qualifier cannot be used with /VOLUME or the drive_name parameter.

The VOLUME qualifier cannot be used with /GROUP, /LOCATION, /MEDIA_TYPE, /NODE, /JUKEBOX or the drive_name parameter.

The /GROUP, /JUKEBOX, /LOCATION and /NODE qualifiers are mutually exclusive. If one is specified, then /MEDIA_TYPE must also be specified (except for /JUKEBOX).

The /[NO]PREFERRED qualifier is ignored if /VOLUME is not supplied.

Qualifiers

/ASSIST (D)
/NOASSIST
The default /ASSIST qualifier outputs an operator request to allocate a drive if there is a problem allocating a drive immediately. If the operator responds positively to the operator message, the request is retried, otherwise the request fails. The /NOASSIST qualifier performs the operation without operator assistance, and uses the /RETRY and /INTERVAL qualifiers to perform retries. If all retries are exhausted the command fails.

The right MDMS_ASSIST is required unless /NOASSIST is specified.

/DEFINE=logical_name
Specifies the logical name to be assigned for the drive. The logical name is a process logical name.

The maximum length of the logical name is 31 characters.

The logical name is assigned to an equivalence string containing the drive name and allocated VMS device name in a search list - as such, both MDMS and non-MDMS commands (e.g. MOUNT) can be issued on the logical name.

/GROUP=group_name
When used with /MEDIA_TYPE, you can specify the name of the group (of nodes supporting the drive) from which to select and allocate the drive. Only one group may be specified.

This qualifier requires the right MDMS_ALLOCATE_ALL.

/INTERVAL=delta_time
Specifies the interval between retries when no drives are available. If not specified, the default interval is one minute.

/JUKEBOX=jukebox_name
The name of the jukebox from which the drive will be selected.

The maximum length of the jukebox name is 31 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

If /MEDIA_TYPE is also specified, the drive must support the specified media type as well as being in the jukebox.

This qualifier requires the right MDMS_ALLOCATE_ALL.

/LOCATION=location
When used with /MEDIA_TYPE, this qualifier specifies the location of the node from which to select and allocate the drive. Only one location may be specified.

This qualifier requires the right MDMS_ALLOCATE_ALL.

/MEDIA_TYPE=media_type
The distinct media type that the drive must support. This media type must match one defined for a drive in the media type attribute (for read/write allocation), or in the read only media type attribute (for read-only allocation).

This qualifier requires the right MDMS_ALLOCATE_ALL.

/NODE=node_name
When used with /MEDIA_TYPE, you can specify the name of the node from which to select and allocate the drive. Only one node may be specified.

This qualifier requires the right MDMS_ALLOCATE_ALL.

/NOPREFERRED (D)
The /PREFERRED qualifier tries to allocate the preferred drive for a volume, when /VOLUME is entered; this is the last drive that the volume was loaded in, if that drive is available. The default /NOPREFERRED forces a round-robin drive selection.

/REPLY=symbol
The name of the symbol to receive the operator's reply when operator intervention is needed. The symbol will contain the operator reply to the DCL REPLY/TO or DCL REPLY/ABORT commands. The maximum length of a symbol name is 31 characters. This qualifier is only applicable when /ASSIST is specified.

/RETRY_LIMIT=number
/NORETRY_LIMIT
This qualifier specifies if MDMS should retry the operation if no drive is available and /ASSIST is not specified. /NORETRY_LIMIT means that there is no limit on the number of retries. Retries are performed at the delta time specified by /INTERVAL. If all retries are exhausted, the operation fails.

The default is /RETRY_LIMIT=0 which means that no retries are performed.

/VOLUME=volume_id
The volume ID of the volume for which an appropriate drive will be selected that can support the volume's media type and placement. If a volume is specified that currently resides in a jukebox, the drive selected will be from the same jukebox if the drives in the jukebox support the media type of the volume.

The maximum length of the volume ID is 6 characters.
Valid characters are " ,!,",%-?,A-Z,_".

/WRITE (D)
/NOWRITE
Specifies that the drive is to be allocated for read-only operations only. This potentially makes a larger pool of drives available for allocation for certain media types.

The default is WRITE.

Examples

```
$ MDMS ALLOCATE DRIVE $1$MUA5 /DEFINE=MYDRIVE
```

This command allocates the drive 1MUA5 and assigns the drive name to the MYDRIVE logical name. Note that the drive name is the same as the VMS device name in this case.

```
$ MDMS ALLOCATE DRIVE JUKE_2_DRIVE_1 /ASSIST -
_$ /REPLY=ALLOC_REPLY
```

This command allocates drive JUKE_2_DRIVE_1, and requests operator assistance if the allocation fails, and stores the operator's reply message in symbol ALLOC_REPLY.

```
$ MDMS ALLOCATE DRIVE /VOLUME=LAB003 /NOWRITE -
_$ /NOPREFERRED
```

This command allocates a drive that supports volume LAB003 for read-only operations, and requests a round-robin drive selection rather than use the preferred drive.

```
$ MDMS ALLOCATE DRIVE /JUKEBOX=TESTJUKE -
_$ /DEFINE=MYDRIVE
```

This command allocates one of the drives in jukebox TESTJUKE and assigns the drive name to the MYDRIVE logical name.

```
$ MDMS ALLOCATE DRIVE /MEDIA_TYPE=TK85K -
_$ /NODE=CRUMBS /INTERVAL=00:00:10 /NORETRY_LIMIT
```

This command allocates a drive that supports the TK85K media type on node CRUMBS, and specifies a retry interval of 10 seconds if a drive is not immediately available with no limit on retries.

MDMS ALLOCATE VOLUME

The MDMS ALLOCATE VOLUME command allocates available free volumes to the requesting user or a specified user.

Equivalent STORAGE Command: STORAGE ALLOCATE

Format:

MDMS ALLOCATE VOLUME [volume_id]

Parameters

volume_id

Specifies the volume to allocate. This parameter is optional, and volumes can be allocated on the basis of /BIND, /JUKEBOX, /LIKE_VOLUME, /LOCATION, /MEDIA_TYPE or /POOL instead.

The maximum length of the volume_id is 6 characters. Valid characters are " ,!,",%-?,A-Z,_".

Description

The MDMS ALLOCATE VOLUME command allocates available free volumes to the requesting user or a specified user. The newly allocated volume(s) can also be appended to the end of a volume set. A volume set is defined to be one or more allocated volumes.

If the volume_id parameter is used, that specific volume will be allocated if it is in the Free state. If the volume_id parameter is not used, a Free volume will be selected based on one or more of the following selection criteria.

- Bind volume
- Jukebox
- Like volume
- Location
- Pool
- Media type

Privileges

The request requires MDMS_ALLOCATE_ALL or MDMS_ALLOCATE_POOL.

MDMS_ALLOCATE_POOL requires the volume to be allocated from a named pool to which the calling user is authorized. All other allocations, including allocation from the scratch (unnamed) pool and the specification of /USER_NAME require MDMS_ALLOCATE_ALL.

The /BIND qualifier requires MDMS_BIND_ALL if the /USER_NAME qualifier is specified, or MDMS_BIND_OWN.

The /BLOCK_FACTOR, /DESCRIPTION, /FORMAT, /RECLENGTH, [NO]SCRATCH_DATE and /[NO]TRANSITION_TIME qualifiers require MDMS_SET_ALL or MDMS_SET_VOLUME if the /USER_NAME qualifier is specified, or MDMS_SET_OWN or MDMS_SET_POOL.

MDMS_ASSIST is also required unless /NOASSIST is specified.

Restrictions

The volume_id parameter cannot be used with the /JUKEBOX, /LIKE_VOLUME, /LOCATION, /POOL or /QUANTITY qualifiers.

/BIND cannot be used with the /LIKE_VOLUME, /JUKEBOX, /LOCATION, /MEDIA_TYPE, or /POOL qualifiers.

/LIKE_VOLUME cannot be used with the /BIND, /JUKEBOX, /LOCATION, /MEDIA_TYPE or /POOL qualifiers.

/MEDIA_TYPE is required when /JUKEBOX, /LOCATION, or /POOL are specified.

/MEDIA_TYPE is also required when allocating a specific volume that has multiple media types.

Qualifiers

/ASSIST (D)
/NOASSIST
The default /ASSIST qualifier outputs an operator request to allocate a volume if there is a problem allocating a volume. If the operator responds positively to the operator message, the request is retried, otherwise the request fails. The /NOASSIST qualifier performs the operation without operator assistance, and fails if there is a problem allocating a volume.

The right MDMS_ASSIST is required unless /NOASSIST is specified.

/BIND=volume_id
The new allocated volume or volume set is appended to the volume set specified by the volume_id. The volume_id specifies the selection criteria for allocating the new volume(s).

The maximum length of the volume_id is 6 characters. Valid characters are " ,!,",%-?,A-Z,_".

When the /BIND qualifier is used, the following attributes must match:

- Media type
- Pool
- Placement (in same jukebox, magazine, or location)

The BIND volume must be allocated

This qualifier requires the right MDMS_BIND_OWN, or MDMS_BIND_ALL if the /USER_NAME qualifier is used.

/BLOCK_FACTOR=number
Modifies the block factor attribute of the allocated volume record(s). If not specified, the block factor attribute is not changed.

This qualifier requires the right MDMS_SET_OWN or MDMS_SET_POOL, and MDMS_SET_ALL or MDMS_SET_VOLUME

if the /USER_NAME qualifier is used.

/DEFINE=logical_name
Specifies a logical name to be assigned for the volume allocated. The logical name is a process logical name. If the /QUANTITY qualifier is used, the returned volume will be the first volume in the volume set. The maximum length of the logical name is 31 characters.

/DESCRIPTION="text"
Modifies comments about the object in the volume record. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters.

To clear the existing description, specify "". If not specified, the volume description is not changed.

This qualifier requires the right MDMS_SET_OWN or MDMS_SET_POOL, and MDMS_SET_ALL or MDMS_SET_VOLUME if the /USER_NAME qualifier is used.

/FORMAT=keyword
This qualifier modifies the format field in the volume record. If not specified, the format attribute is not changed. Valid values are:

- ASCII
- BACKUP
- EBCDIC
- NONE
- RMUBACKUP

This qualifier requires the right MDMS_SET_OWN or MDMS_SET_POOL, and MDMS_SET_ALL or MDMS_SET_VOLUME if the /USER_NAME qualifier is used.

/JUKEBOX=jukebox_name
When specified with /MEDIA_TYPE, allocates a volume that resides in the specified jukebox.

/LIKE_VOLUME=volume_id
This qualifier directs that the allocated volume has attribute values identical to those specified to the volume_id. The following attributes define a "like volume".

- Media type
- Pool
- Placement (in the same jukebox, magazine, or location)

/LOCATION=location
When specified with /MEDIA_TYPE, specifies the location from which to allocate volume(s). If a volumes placement is OFFSITE then the offsite location is used. Otherwise the volume's ONSITE location is used. If not specified, other selection criteria are used to allocate the volume(s).

/MEDIA_TYPE=media_type
Specifies that the volume(s) are allocated with the specified media type. If not specified, other selection criteria are used to allocate the volume(s). This qualifier is required when allocating a specific volume that currently has multiple media types defined for it.

/POOL=pool_name
The pool from which the volume(s) will be selected.

The maximum length of the pool name is 31 characters. Valid characters are "$,-,0-9,A-Z,_,a-z".

The user must be authorized for the pool unless he has MDMS_ALLOCATE_ALL.

/QUANTITY=number
The number of volumes to allocate. Use this qualifier to allocate more than one volume. The default value is 1. If you enter a number greater than 1, the allocated volumes are bound together in one volume set. If you use the /BIND qualifier, these allocated volumes are bound to the end of the volume (set) specified in the /BIND qualifier.

/RECLENGTH=number
Modifies the volume's record length attribute. If not specified, the record length attribute is not changed.

This qualifier requires the right MDMS_SET_OWN or MDMS_SET_POOL, and MDMS_SET_ALL or MDMS_SET_VOLUME if the /USER_NAME qualifier is used.

/REPLY=symbol
The name of the symbol to receive the operator's reply when operator intervention is needed. The symbol will contain the operator reply to the DCL REPLY/TO or DCL REPLY/ABORT commands. The maximum length of a symbol name is 31 characters. This qualifier is only applicable when /ASSIST is specified.

/SCRATCH_DATE=date
/NOSCRATCH_DATE
Modifies the scratch date in the volume record. The scratch date is the date that the volume is placed in the TRANSITION state (or FREE state if the volume has no transition time). If /NOSCRATCH_DATE is specified, the volume will never be automatically deallocated. If not specified, the volume's scratch date is not changed.

This qualifier requires the right MDMS_SET_OWN or MDMS_SET_POOL, and MDMS_SET_ALL or MDMS_SET_VOLUME if the /USER_NAME qualifier is used.

/TRANSITION_TIME=delta_time
/NOTRANSITION_TIME
Modifies the amount of time, as a delta time, that will be applied to the current scratch date to form the length of time the volume(s) will remain in the TRANSITION state before going into the FREE state.

Use the standard OpenVMS delta time format to specify a delta time for the duration.

If /NOTRANSITION_TIME is specified, the volume goes directly into the FREE state on deallocation. If not specified, the transition time in the volume record is not changed.

This qualifier requires the right MDMS_SET_OWN or MDMS_SET_POOL, and MDMS_SET_ALL or MDMS_SET_VOLUME if the /USER_NAME qualifier is used.

/USER_NAME=username
The user for whom the volume is being allocated. The username must exist on the system where the command is entered.

The maximum length of the username is 31 characters.

This qualifier requires the right MDMS_ALLOCATE_ALL.

Examples

```
$ MDMS ALLOCATE VOLUME /QUANTITY=3 /MEDIA_TYPE=TK85K
```

This command allocates three TK85K volumes to the current user. The volumes are bound in a new volume set.

```
$ MDMS ALLOCATE VOLUME /MEDIA=TK85K /LOCATION=CXO
```

This command allocates one TK85K volume at location CXO to the current user.

```
$ MDMS ALLOCATE VOLUME /BIND=TEST01
```

This command allocates one volume with the same attributes as TEST01 to the current user. The new volume is bound to the end of the volume set containing TEST01.

```
$ MDMS ALLOCATE VOLUME USER30 /DESCRIPTION="MAY REPORTS"
```

This command allocates volume USER30 to the current user and modifies the volume's description to "MAY REPORTS".

```
$ MDMS ALLOCATE VOLUME /LIKE_VOLUME=AGW500 -
/USER_NAME=SYSTEM
```

This command allocates a volume with similar attributes to volume AGW500, for user SYSTEM

MDMS BIND VOLUME

The MDMS BIND VOLUME command binds a volume to another volume or volume set or binds a volume set to another volume set.

Equivalent STORAGE Command: STORAGE APPEND

Format:

MDMS BIND VOLUME [volume_id]

Parameters

volume_id

Specifies the volume ID of the volume to bind. If an existing volume set is to be bound to another volume or volume set, then specify the volume ID of the first member of the volume set to bind. If the volume_id parameter is omitted, a volume with similar characteristics to those in the set will be allocated and bound to the end of the volume set.

The maximum length of a volume ID is 6 characters. Valid characters are " ,!,",%-?,A-Z,_".

Description

The MDMS BIND VOLUME command binds a volume to another volume or volume set or binds a volume set to another volume set. When binding to a volume or volume set, all involved volumes must be allocated and of the same media type.

When binding a volume set to another volume or volume set, the volume_id parameter must be the first member of the volume set. To append to the end of a volume set, use the /TO_SET qualifier.

The volumes in the volume set must already be allocated to the same user (username and UIC). When a new volume is bound to a volume set the scratch dates of all volumes in the set are set to the scratch date of the newly bound volume.

Privileges

The request requires MDMS_BIND_ALL or MDMS_BIND_OWN.

If the /USER_NAME qualifier is not specified, MDMS_BIND_OWN allows the user to bind volumes which are allocated to him. Binding on behalf of another user with the /USER_NAME qualifier requires MDMS_BIND_ALL.

Restrictions

None

Qualifiers

/TO_SET=volume_id
The volume ID of a volume or volume set member. The volume (set) specified in the volume_id parameter is appended to the end of the volume set containing this volume.

The maximum length of the volume ID is 6 characters. Valid characters are " ,!,",%-?,A-Z,_".

If the volume_id command parameter is not specified, then a volume similar to the volume in the /TO_SET qualifier is allocated and bound to the end of that volume set.

/USER_NAME=username
The user for whom the volume is being bound. The username must exist on the system where the command is entered. The maximum length of the username is 31 characters.

This qualifier requires the right MDMS_BIND_ALL.

Examples

```
$ MDMS BIND VOLUME VOL001/TO_SET=VOL006
```

Volume set one contains VOL001, VOL002 and VOL003.

Volume set two contains VOL004, VOL005 and VOL006.

This command binds the volume set containing VOL001 to the volume set containing VOL006. The created volume set will contain volumes VOL004, VOL005, VOL006, VOL001, VOL002, VOL003. Volumes in both volume sets must have compatible attributes.

```
$ MDMS BIND VOLUME VOL002 /TO_SET=VOL005 -
 /USER_NAME=SYSTEM
```

Volume VOL002 is a single volume and VOL005 is part of a volume set that contains VOL004, VOL005 and VOL006. This command binds the volume VOL002 to the volume set containing VOL005. The created volume set will contain volumes VOL004, VOL005, VOL006, VOL002. All the volumes involved are allocated to user SYSTEM.

MDMS CANCEL REQUEST

The MDMS CANCEL REQUEST command cancels a previously issued request. The request may have been issued either synchronously or asynchronously.

Equivalent STORAGE Command: None.

Format:

MDMS CANCEL REQUEST request_id [,...]

Parameters

request_id

Specifies the request ID(s) of the request(s) to cancel. If the request ID is not known, the user can issue a SHOW REQUESTS command, which displays the request ID's of all outstanding requests.

Description

The MDMS CANCEL REQUEST command cancels the specified outstanding request. The following types of request can be cancelled using this command:

- ALLOCATE DRIVE
- ALLOCATE VOLUME
- INITIALIZE VOLUME
- INVENTORY JUKEBOX
- LOAD DRIVE
- LOAD VOLUME
- MOVE MAGAZINE
- MOVE VOLUME
- UNLOAD DRIVE
- UNLOAD VOLUME
- Any operation involving OPCOM

Privileges

The request requires MDMS_CANCEL_ALL, MDMS_CANCEL_OWN or MDMS_CANCEL_POOL.

If you are canceling your own request, MDMS_CANCEL_OWN or MDMS_CANCEL_POOL is required. If you are canceling any other request, MDMS_CANCEL_ALL is required.

Restrictions

None

Qualifiers

None

Example

```
$ MDMS CANCEL REQUEST 812
```

This command cancels the request with ID 812.

MDMS CREATE ARCHIVE

The MDMS CREATE ARCHIVE command creates a new archive definition in the MDMS database. Archives were formerly known as storage classes, archive classes and storage policies. Archive is the new common name.

Equivalent ABS Command: CREATE STORAGE_CLASS

Format:

MDMS CREATE ARCHIVE archive_name [,...]

Parameters

archive_name

Specifies the name of the archive.

The maximum length of the archive name is 63 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of archive names may be entered.

Description

The MDMS CREATE ARCHIVE command creates a new archive definition in the MDMS database. An archive describes where data is saved and its catalog information.

When creating a new object record, MDMS supplies default values on attributes you do not specify. Alternatively, they can be inherited from a specified archive using the /INHERIT qualifier.

Privileges

The request requires MDMS_CREATE_ALL.

The /VOLUME_SETS qualifier also requires MDMS_SET_PROTECTED. since this attribute is normally managed by MDMS. You should not modify this attribute unless you are trying to recover from an abnormal situation.

Restrictions

This command is restricted to nodes with an ABS license.

The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default.

The /EXPIRATION_DATE and /RETENTION_DAYS qualifiers are mutually exclusive.

The following combinations of qualifiers are not allowed based on the archive type:

DISK:	/CONSOLIDATION	TAPE:	/DESTINATION
	/DRIVES		
	/LOCATION		
	/MEDIA_TYPE		

DISK:	/CONSOLIDATION	TAPE:	/DESTINATION
	/POOL		
	/VOLUME_SETS		

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list. This is the default when specifying list items.

/ARCHIVE_TYPE=keyword
The archive type specifies the type of archive media associated with the archive. The options are:

DISK	Files are saved to or restored from a disk. The destination may be filled in to specify the disk and directory where the archive data resides.
TAPE	Files are saved to or restored from a tape volume and MDMS is used to manage the tape volume.

The default is TAPE.

/CATALOG=(NAME=catalog_name, [NO]NODES=(node[,...]))
The /CATALOG qualifier specifies the name of the catalog used by the archive, and a list of nodes and/or groups that can directly access the catalog. Specify a local catalog name representing a catalog object in the MDMS database. With the NODES keyword, you may specify nodes, groups or a combination thereof. If you specify NONODES, the local execution node on which a save or restore is performed is used as the catalog node.

By default, the catalog name "ABS_CATALOG" is used. For an archive named "DISASTER_RECOVERY" the default is no catalog name.

The default for nodes is NONODES.

/CONSOLIDATION=(option[,...])
The /CONSOLIDATION qualifier specifies the criteria under which new volume sets are created for this archive. You may specify one or more of the following options:

- INTERVAL=delta_time - The time to elapse from the creation of the last volume set to the creation of a new volume set. To specify an unlimited consolidation interval, specify NOINTERVAL.
- SAVESETS=number - The maximum number of savesets to exist on a volume set before a new volume set is created. Zero means no limit.
- VOLUMES=number - The maximum number of volumes which may be added to the current volume set. Zero means no limit.

A new volume set is created when any one of the consolidation criteria expire. By default, the consolidation criteria is set to:

```
INTERVAL=7-00:00:00, SAVESETS=0, VOLUMES=0
```

If no consolidation criteria are specified, new volume sets are not created unless an error occurs. This qualifier is allowed only with archive type TAPE.

/DESCRIPTION="text"
Comments about the object. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. To clear the description, specify "".

/DESTINATION=disk:[dir]
If the archive type is DISK, the /DESTINATION qualifier specifies the disk and directory where the archive data resides. If no destination is specified for archive type DISK, the following is used by default:

```
ABS$ROOT:[000000]
```

This qualifier is allowed only with archive type DISK.

/DRIVES=(drive_name[,...])
/NODRIVES (D)
The /DRIVES qualifier specifies a list of tape drives to be used by the archive. Specify one or more drive names. By default, no drives are specified, meaning that any drive satisfying other compatibility criteria may be used.

This qualifier is allowed only with archive type TAPE.

/EXPIRATION_DATE=absolute_time
/NOEXPIRATION_DATE
The /EXPIRATION_DATE qualifier specifies the date that saved data will expire. Specify an absolute or delta date/time, or a reserved word such as TODAY or TOMORROW. Alternatively, use the relative /RETENTION_DAYS qualifier to specify the number of days the saved data should be retained. /NOEXPIRATION_DATE means that the data is retained indefinitely.

By default, data is retained for 365 days.

/INHERIT=archive_name
This qualifier allows you to specify an existing archive record from which the new object record inherits attribute values. MDMS supplies default values if you specify none. All attributes may be inherited with the exception of the following:

Archive Name

/LOCATION=location_name
/NOLOCATION
The /LOCATION qualifier specifies the location to be used to allocate a drive to load a scratch volume (s. HELP MDMS ALLOCATE DRIVE/LOCATION). Specify a location name specified in the database. This qualifier is applicable only for archive type TAPE. /NOLOCATION removes location as a selection criterion for volume allocation.

By default, the domain default onsite location is used.

/MAXIMUM_SAVES=number
The /MAXIMUM_SAVES qualifier specifies the maximum number of save operations that can execute simultaneously using this archive. For example, you can create three save requests and schedule them to run simultaneously, assuming that there are enough resources (e.g. drives) available. Valid values are 1 - 36. The default is 1.

/MEDIA_TYPE=media_type
The /MEDIA_TYPE qualifier specifies the media type of tape volumes used for this archive. By default, the domain default media type is used if the archive type is TAPE, otherwise none.

This qualifier is allowed only with archive type TAPE.

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username.

The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the cluster_name::username of the user entering the CREATE command on the object from a node in the cluster.

/POOL=pool_name
/NOPOOL (D)
The /POOL qualifier specifies the pool from which volumes will be allocated. Specify a pool name that exists in the database. If you specify /NOPOOL, then only volumes with no pool definition may be used (equivalent to the SCRATCH pool).

By default, no pool is defined.

This qualifier is allowed only with archive type TAPE.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

/RETENTION_DAYS=number
The /RETENTION_DAYS qualifier specifies the number of days to retain data for this archive. Either this qualifier or /EXPIRATION_DATE may be used to specify this information. If neither an expiration date nor retention days are specified, then the data is retained indefinitely.

By default, a retention of 365 days is used.

/VOLUME_SETS=(volume_id[,volume_id])
/NOVOLUME_SETS
The /VOLUME_SETS qualifier specifies the active volume set(s) being used (for write) by the archive. Each volume_id should represent the first volume in the volume set.

/NOVOLUME_SETS clears the volume sets, and forces a new volume set to be allocated when the archive is next used.

Setting of volume sets is not recommended as ABS normally assigns volume sets to archives. This is a protected field.

This qualifier requires the right MDMS_SET_PROTECTED.

This qualifier is allowed only with archive type TAPE.

Example

```
$ MDMS CREATE ARCHIVE USER_BACKUPS -

$_ /ACCESS_CONTROL=(USER=*::SMITH, -

$_ ALLOW=(SET,SHOW,READ,WRITE,EXECUTE,DELETE,CONTROL)) -

$_ /CONSOLIDATION=VOLUMES=10 -

$_ /RETENTION_DAYS=30
```

This command creates an archive USER_BACKUPS, specifying access control for user SMITH on all nodes and user JONES on node NOD001 to have all allowed accesses, and a consolidation criterion of 10 volumes per volume set, and a retention period of 30 days.

MDMS CREATE CATALOG

The MDMS CREATE CATALOG command creates a new catalog definition in the local ABS database.

Equivalent ABS Command: RUN SYS$SYSTEM:ABS$CATALOG_OBJECT

Format:

MDMS CREATE CATALOG catalog_name [,...]

Parameters

catalog_name

Specifies the name of the catalog.

The maximum length of the catalog name is 26 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

Description

The MDMS CREATE CATALOG command creates a new catalog definition in the local ABS database. A catalog describes how, where and what information about saved data is recorded.

When creating a new object record, MDMS supplies default values on attributes you do not specify.

Privileges

The request requires MDMS_CREATE_ALL.

Restrictions

This command is restricted to nodes with an ABS license.

The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object

- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

Only ONE access control entry is allowed for a catalog object.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list. This is the default when specifying list items.

/DIRECTORY=disk:[dir]
The /DIRECTORY qualifier specifies the disk and directory specification where the catalog files are created.

If no directory is specified, the default is ABS$CATALOG.

If the catalog files already exist no newer versions are created.

The directory must be included in the search list for the ABS$CATALOG logical name.

/NODE=node_name
The /NODE qualifier specifies on which node the new catalog will be created.

The default is the node on which the CREATE CATALOG command is entered.

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username.

The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the cluster_name::username of the user entering the CREATE command on the object from a node in the cluster.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

/STAGING (D)
/NOSTAGING
The /STAGING qualifier turns on the use of a staging catalog during saves. Using a staging catalog can greatly speed up a save operation, and deferring update of the full catalog to an off-line operation.

However, a restore cannot be performed until the full catalog is updated. Use of staging is highlyrecommended. The /NOSTAGING qualifier turns off use of a staging catalog.

Staging is only used on catalog types FILES and VOLUME_SETS.

The default is staging enabled.

/TYPE=keyword
The /TYPE qualifier defines the type of catalog being used. Select one of the following options:

• DISKS	This type of catalog records only information about disk volumes. As such, restores must apply to whole disks. Individual file restores are not possible from this type of catalog. However, this type is catalog is much smaller than the other types.
• FILES (D)	This type of catalog records both disk and file information, and there is one set of catalog files for the catalog object. This option produces a low number of files to maintain but recovering disk space from deleted entries requires manual intervention on the catalog. This type was used in previous versions of ABS and is available for compatibility purposes.
• ORACLE_DB	This type of catalog records the backup file names for a save of a database using the System Backup to Tape interface.
• VOLUME_SETS	this type of catalog records both disk and file information, and there is one set of catalog files for each volume set. This option produces a much larger number of catalog files, but the catalog cleanup and associated deleted space recovery is optimal. Catalogs space is reclaimed by simply deleting the catalog file when the associated volume set reaches its scratch date.
• SLS	This type of catalog is compatible with the catalog format used by SLS. Only restore operations are allowed for already existing SLS catalogs.

The default and recommended value is FILES.

Example

```
$ MDMS CREATE CATALOG JOE_CATALOG -

$_ /ACCESS_CONTROL=(USER=MYJOE::JOE, -

$_ALLOW=(SET, SHOW, EXECUTE, DELETE, READ, WRITE)) -

$_ /DIRECTORY=DISK$USER:[JOE]

$_ /NODE=MYJOE

$_ /STAGING
```

This command creates a catalog JOE_CATALOG, specifying user JOE on node MYJOE with selected allowances, with the catalog residing on MYJOE::DISK$USER:[JOE] and staging enabled.

MDMS CREATE DRIVE

The MDMS CREATE DRIVE command creates a new drive definition in the MDMS database.

Equivalent STORAGE Command: None

Format:

MDMS CREATE DRIVE drive_name [,...]

Parameters

drive_name

Specifies the name of the drive. The OpenVMS device name must also be specified with the /DEVICE qualifier if it is different from the drive name. The drive name must be unique in the MDMS domain. You should not specify a node in the drive name; rather you should specify either a list of nodes or groups that have access to the drive in the /NODES or /GROUPS qualifiers.

The maximum length of a drive name is 31 characters. Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of drive names may be entered.

Description

The MDMS CREATE DRIVE command creates a new drive definition in the MDMS database.

When creating a new object record, MDMS supplies default values on attributes you do not specify. Alternatively, they can be inherited from a specified drive using the /INHERIT qualifier.

Privileges

The request requires MDMS_CREATE_ALL.

The /STATE qualifier also requires MDMS_SET_PROTECTED.

Since this attribute is normally managed by MDMS. You should not modify this attribute unless you are trying to recover from an abnormal situation.

Restrictions

The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default.

The /JUKEBOX and /STACKER qualifiers are mutually exclusive.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ACCESS=keyword
This qualifier defines the type of access to the drive, which can be one of the following keywords:

ALL (D)	Supports local node/cluster/fibre access and remote (RDF) access
LOCAL	Supports local node/cluster/fibre access only
REMOTE	Supports remote (RDF) access only

Access to drives is restricted on allocate requests - for example, it is not possible to allocate a drive designated as local access remotely using RDF. However, with the proper rights, it is possible to issue other MDMS commands (such as LOAD) both locally and remotely.

The default is ALL.

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list. This is the default when specifying list items.

/AUTOMATIC_REPLY (D)
/NOAUTOMATIC_REPLY
Specifies that MDMS automatically replies to all OPCOM messages that can be polled for completion on requests for this particular drive.

The default is /AUTOMATIC_REPLY.

/DESCRIPTION="text"
Comments about the drive. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. To clear the description, specify "".

/DEVICE=vms_device_name
Specifies the OpenVMS device name of the drive. This qualifier is required if the OpenVMS device name is different from the drive name. Do not specify a node specification (NODE::name) in the vms_device_name. Instead use the /NODES or /GROUPS qualifier.

The default device name is the drive name.

/DISABLED
Places the drive in the disabled state. This prevents the drive from being selected and allocated for use. This takes effect immediately. However, if the drive is already in use, operations on that drive will continue until the drive is deallocated.

The default is /ENABLED.

/DRIVE_NUMBER=number
This qualifier defines the drive number for robot commands if the drive is in a jukebox. This qualifier must be specified for multi-drive MRD-controlled jukeboxes.

The default is drive number 0.

/ENABLED (D)
Places the drive in the enabled state. This allows the drive to be selected and allocated for use. This takes effect immediately.

The default is /ENABLED.

/GROUPS=(group_name[,...])
/NOGROUPS
Specifies the names of groups of nodes that share common access to this device. Usually, only one group is specified. If neither /NODES or /GROUPS are specified, the node from which the-command was issued is used as the node name. Groups can also be specified with the /NODES qualifier.

/INHERIT=drive_name
This qualifier allows you to specify an existing drive record from which the new object record inherits attribute values. MDMS supplies default values if you specify none. All attributes maybe inherited with the exception of the following:

Drive Name

Device name

State

/JUKEBOX=jukebox_name
If the drive is in a jukebox, this qualifier specifies the jukebox name.

/MEDIA_TYPE=(media_type[,...])
/NOMEDIA_TYPE
Specifies one or more distinct media types that the drive can support for read-write access. The /REMOVE or /REPLACE qualifiers can be used to remove or replace objects in the list, rather than adding them by default. The /NOMEDIA_TYPES qualifier removes all media types. When a drive is created with no media types, the default media type from the domain is used.

/NODES=(node_name[,...])
/NONODES
Specifies one or more distinct nodes that have direct access to the drive. The /REMOVE or /REPLACE qualifiers can be used to remove or replace objects in the list, rather than adding them by default. The /NONODE qualifier removes all nodes. If neither /NODES nor /GROUPS is specified, the node from which the command was issued is used as the node name.

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username.

The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the cluster_name::username of the user entering the CREATE command on the object from a node in the cluster.

/READONLY=(media_type[,...])
/NOREADONLY
Specifies one or more distinct media types that the drive can support for read-only access. The /REMOVE or /REPLACE qualifiers can be used to remove or replace objects in the list, rather than adding them by default. The /NOREADONLY qualifier removes all read-only media types.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

/SHARED
/NOSHARED (D)
The /SHARED qualifier defines that the drive may be used by non-MDMS clients and that the drive is only partially managed. If the drive is set to the default /NOSHARED, the MDMS server allocates the drive at all times it is not used by an application or user. Setting the drive to /SHARED clears this allocation.

The default is /NOSHARED.

/STACKER
/NOSTACKER (D)
The /STACKER qualifier indicates that the drive is to be treated as a stacker gravity loader. The default /NOSTACKER indicates that the drive is to be treated as a standalone drive, or a robotically-controlled jukebox, as appropriate.

The default is /NOSTACKER.

/STATE=state
This is a protected field that should be modified only to recover on error. Use the LOAD and UNLOAD commands to manipulate the state field under normal operation. The /STATE qualifier sets the current drive state. The valid keywords are:

Empty

Full

Loading

Unloading

This qualifier requires the right MDMS_SET_PROTECTED.

Examples

```
$ MDMS CREATE DRIVE $1$MUA5:
```

This command creates a local drive called 1MUA5 with default parameters supplied by MDMS. In this example, the drive name is equivalent to the OpenVMS device name and the current node is used as the drive's node name.

```
$ MDMS CREATE DRIVE DRIVE_1 /DEVICE=$1$MUA5:/NODE=FARLFT
```

This command creates a local drive called DRIVE_1 for OpenVMS device 1MUA5 on node FARLFT.

```
$ MDMS CREATE DRIVE JUKE_1_DRIVE_1 -

/MEDIA_TYPES=(TK85K, TK88K) /DEVICE=$1$MKA500 -

/GROUPS=COOKIE /SHARE /JUKEBOX=JUKE_1/DRIVE_NUMBER=1 /ACCESS=ALL
```

This command creates a drive with drive name JUKE_1_DRIVE_1 and OpenVMS device name $ 1MKA500 in group COOKIE, for local and remote access, shared by non-MDMS users, and supporting media types TK85K and TK88K. The drive is part of jukebox JUKE_1 with drive number 1.

```
$ MDMS CREATE DRIVE FRED /ACCESS=REMOTE
```

This command creates a drive object record named FRED for remote access. MDMS supplies all default attribute values.

$ MDMS CREATE DRIVE SPARKY_5 /DEVICE=1MUA5 -

/NODE=SPARKY /DISABLE /MEDIA_TYPES=TK85K /ACCESS=ALL

This command defines drive SPARKY_5 , device 1MUA5 on node SPARKY, that supports media type TK85K, supports both local and remote access, and is located on remote node SPARKY. The drive is not available for immediate use.

MDMS CREATE ENVIRONMENT

The MDMS CREATE ENVIRONMENT command creates a new environment definition in the MDMS database. Environments were formerly known as execution environments or environment policies.

ENVIRONMENT is the new common name.

Equivalent ABS Command: CREATE ENVIRONMENT

Format:

MDMS CREATE ENVIRONMENT environment_name [,...]

Parameters

environment_name

Specifies the name of the environment.

The maximum length of the environment name is 63 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of environment names may be entered.

Description

The MDMS CREATE ENVIRONMENT command creates a new environment definition in the MDMS database. An environment describes how data is saved and restored during execution.

When creating a new object record, MDMS supplies default values on attributes you do not specify. Alternatively, they can be inherited from a specified environment using the /INHERIT qualifier.

Privileges

The request requires MDMS_CREATE_ALL.

Restrictions

This command is restricted to nodes with an ABS license.

The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/ACTION=keyword
The /ACTION qualifier specifies an operation to perform on files or data being saved using this environment. Select one of the following options:

RECORD_DATE	Modifies the BACKUP date on files being saved (VMS_FILES only)
NO_CHANGE	Does not perform any operation on the data being saved
DELETE_OBJECT	Deletes the data being saved - this is typically used for long-term archive operations

If not specified, the default is RECORD_DATE.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list. This is the default when specifying list items.

/ASSIST (D)
/NOASSIST
The /ASSIST qualifier specifies whether saves and restores using this environment utilize operator assistance (using OPCOM) when needed to continue the operation. If /ASSIST is specified and operator intervention is needed an OPCOM message will be output. If /NOASSIST is specified and an operator intervention is needed, the operation will fail and the next operation will be performed (if possible).

The default is /ASSIST.

/COMPRESSION=keyword
The /COMPRESSION qualifier specifies the type of compression to be used during save operations using this environment. This option is only applicable to UNIX client operations. Select one of the following options:

- GZIP_COMPRESSION
- UNIX_COMPRESSION
- NONE (D)

The default is NONE.

/DATA_SAFETY=(keyword[,...])
/NODATA_SAFETY
The /DATA_SAFETY qualifier specifies one or more options that the backup agent uses to ensure the integrity of the data being saved. The qualifier is applicable to archive type TAPE and when using OpenVMS Backup as the backup agent. Select one or more of the following options:

• CRC	Performs a Cyclic Redundancy check and writes it for each data block on a tape volume
• FULL_VERIFY	Rereads all saved data and compares to what is on disk
• XOR	If the CRC check detects a bad block during a restore operation, the XOR mechanism allows recovery of the block.

By default, data safety options are added. However, you can use the /REMOVE qualifier to remove any option, and the /REPLACE qualifier to replace the option list. If you specify /NODATA_SAFETY, then all options are removed.

If not specified, the default options are:

(CRC, FULL_VERIFY, XOR)

/DESCRIPTION="text"
Comments about the object. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. To clear the description, specify "".

/DRIVE_COUNT=number
The /DRIVE_COUNT qualifier specifies the number of drives to use for each save or restore using this environment. If there are at least as many drives available as the drive count, that number of drives are allocated for each save and restore request. If not, a reduced number of drives are allocated.

The default and highly recommended value is 1. The number of drives may range from 1 to 32.

/EPILOGUE="string"
/NOEPILOGUE (D)
The /EPILOGUE qualifier specifies a string to execute after an entire save or restore operations completes. The string may be up to 80 characters and must be enclosed in quotes.

By default, no epilogue command is executed.

/INHERIT=environment_name
This qualifier allows you to specify an existing environment record from which the new object record inherits attribute values. MDMS supplies default values if you specify none. All attributes may be inherited with the exception of the following:

Environment Name

/INTERVAL=delta_time
The /INTERVAL qualifier specifies the time between retries if a save or restore operation fails. This is used in association with the /RETRY_LIMIT qualifier. The interval range must be between 1 - 60 minutes.

If /RETRY_LIMIT is greater than zero, the default interval applied is 00:15:00 (15 minutes).

/LINKS_ONLY
/NOLINKS_ONLY (D)
The /LINKS_ONLY qualifier specifies that only UNIX symbolic links are backed up. The /NOLINKS_ONLY qualifier specifies that UNIX symbolic links are followed and the data is backed up as well. This qualifier is applicable to UNIX client backups only.

The default is LINKS_ONLY.

/LISTING_OPTION=keyword
The /LISTING_OPTION qualifier specifies the level of detail in the list file for a save or restore operation. Select one of the following options:

•	NONE (D)	No listing file is generated
•	BRIEF	Generates a brief listing file
•	FULL	Generates a full listing file including full file names and file information provided by the backup agent

If not specified, the default is NONE.

/LOCK
/NOLOCK (D)
The /LOCK qualifier specifies the action to take when data usage conflicts occur. If /LOCK is specified, data is saved even if other applications have the data locked for write access. If /NOLOCK is specified, the data is not saved if other applications have the data locked for write access.

The default is /NOLOCK.

/NOTIFICATION=(option[,...])
/NONOTIFICATION
The /NOTIFICATION qualifier specifies options to use for notifying mail user or OPCOM classes when using this environment. Select one or more of the following options:

- MAIL=(username[,...])
  Specifies one or more mail users to receive mail on completion of an operation. The username may include a node name (node::username) or group name (group::username). By default the mail is sent to the user on the node on which the request executes.
- OPCOM=(class[,...])
  Specifies one or more OPCOM classes to receive an OPCOM on completion of an operation. The class names must be valid OpenVMS OPCOM class names (TAPES etc).
- TYPE=keyword
  Specifies the level of detail included in the notification. This keyword is applicable to MAIL users only. Select one of the following options:
  - BRIEF
  - FULL
  - NORMAL
- WHEN=(option[,...])
  Specifies when the notification is sent and under what circumstances. Select one or more of the following options:
  - COMPLETE
    Sends notification at the completion of a request with any status
  - ERROR
    Sends notification at the completion of a request with error or fatal status
  - FATAL
    Sends notification at the completion of a request with fatal status
  - START
    Sends notification at the start of a request
  - WARNING
    Sends notification at the completion of a request with warning, error or fatal status

Only one notification entry can be entered per command. Use the /ADD, /REMOVE and /REPLACE qualifiers to add, remove or replace mail users, OPCOM classes or when definitions. The username(s) in an entry must match exactly to successfully modify or remove an entry.

If not specified, the default is:

```
(OPCOM=TAPES, TYPE=BRIEF, WHEN=FATAL)
```

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username.

The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the cluster_name::username of the user entering the CREATE command on the object from a node in the cluster.

/PROFILE=(USER=username, option[,...])
The /PROFILE specifies the execution user context when running saves or restore in this environment. A profile must contain a username, and one or more of the following options:

- CLUSTER=cluster_name
  A name of a cluster (group). This is used together with the username to identify the user account on the cluster. Specify "*" for all clusters.
- NODE=node_name
  A name of a node. This is used together with the username to identify the user account on the node. Specify "*" for all nodes.
- PRIVILEGES=(privileges[,...])
  A list of OpenVMS privileges. If specified, this overrides the default privileges obtained from the user's UAF record on the node or cluster.
- RIGHTS=(right[,...])
  A list of rights names. If specified, this overrides the default rights obtained from the user's UAF record on the node or cluster.

If the username is not specified, the existing username in the profile is assumed. The username must not contain a node or cluster name, and must be a valid OpenVMS user on the node or cluster specified.

If the profile is not specified, the following defaults are applied:

USER=ABS

CLUSTER=*

NODE=*

PRIVILEGES=NONE (will use ABS privileges on execution node)

RIGHTS=NONE (will use ABS rights on execution node)

If just a username is provided, the default node is the node in which the command is entered. The privileges and rights are obtained from the UAF file for the specified user on the specified node (or the command node if none).

User name can also be specified as a special keyword <REQUESTER>. This means that the user profile in the associated save or restore request is used. This is the normal situation for user backups. The other profile fields are not used in this case.

/PROLOGUE="string"
/NOPROLOGUE (D)
The /PROLOGUE qualifier specifies a string to execute before an entire save or restore operations starts. The string may be up to 80 characters and must be enclosed in quotes.

By default, no prologue command is executed.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

/RETRY_LIMIT=number
/NORETRY_LIMIT
The /RETRY_LIMIT qualifier specifies the number of retries performed if a save or restore operation fails. If you specify a retry limit of 0, no retries are attempted. /NORETRY_LIMIT means that there is no limit on the number of retries.

If not specified, the default value is 3.

/SPAN_FILESYSTEMS
/NOSPAN_FILESYSTEMS (D)
The /SPAN_FILESYSTEMS qualifier specifies that a save operation backs up the entire file system if the file system spans physical devices. The /NOSPAN_FILESYSTEMS qualifier backs up only the root file system. Applicable only to UNIX client backup operations.

If not specified, the default is /NOSPAN_FILESYSTEMS.

Examples:

```
$ MDMS CREATE ENVIRONMENT USER_SAVE_ENV -

$_ /ACTION=RECORD -

$_ /PROFILE=USER=<REQUESTER> -

$_ /NOTIFICATION=(MAIL=SYSTEM, TYPE=NORMAL, WHEN=COMPLETE)
```

This command creates an environment USER_SAVE_ENV, specifying an action to record backup dates on files, and adding a notification to mail to user SYSTEM a normal level of detail at the completion of any operation. The profile name of <REQUESTER> specifies a user backup that will use the profile in the save or restore request.

```
$ MDMS CREATE ENVIRONMENT SYSTEM_SAVE_ENV -

$_ /NOASSIST -

$_ /LIST=FULL -

$_ /INTERVAL=00:02:00

$_ /RETRY_LIMIT=1000
```

This command creates an environment SYSTEM_SAVE_ENV, specifying no operator assistance, a full listing, and a retry limit of 1000 at 2-minute intervals.

MDMS CREATE GROUP

The MDMS CREATE GROUP command creates a definition of a group of nodes in the MDMS domain.

Equivalent STORAGE Command: None

Format:

MDMS CREATE GROUP group_name [,...]

Parameters

group_name

Specifies the name of the group. A group includes nodes that share a common storage device, or some other relationship. There is no limit to the number of groups that you may specify, and any node may appear in any number of groups. Groups may or may not be equivalent to clusters in your environment. Groups may be used instead of nodes in drive and jukebox definitions, and also as authorized or default users in pool definitions.

The maximum length of the group name is 31 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of group names may be entered.

Description

The MDMS CREATE GROUP command creates a new group definition in the MDMS database. When creating a new object record, the user can specify attribute values or allow for MDMS default value assignments. Alternatively, values can be inherited from a specified group using the /INHERIT qualifier.

Privileges

The request requires MDMS_CREATE_ALL.

Restrictions

The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object

- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list. This is the default when specifying list items.

/DESCRIPTION="text"
Comments about the group. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. To clear the description, specify "".

/INHERIT=group_name
This qualifier allows you to specify an existing group record to inherit attribute values. All attributes may be inherited except for group name.

/NODES=(node_name[,...])
/NONODES
Specifies one or more distinct nodes that are members of the group. The /REMOVE or /REPLACE qualifiers can be used to remove or replace objects in the list, rather than adding them by default. The /NONODES qualifier removes all nodes.

When specifying nodes, the node names are the MDMS node names, which should have an equivalent node object (not the DECnet-Plus (Phase V) or TCP/IP fullnames).

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username.

The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the cluster_name::username of the user entering the CREATE command on the object from a node in the cluster.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

Examples

```
$ MDMS CREATE GROUP HOSER /NODES=(TOOKUS, GREAT, NORTH)
```

This command creates a group named HOSER and includes the nodes TOOKUS, GREAT, and NORTH.

```
$ MDMS CREATE GROUP MOUNTIE /INHERIT=HOSER -

/NODES=LABATT /ADD
```

This command creates a new group that includes the nodes in the group HOSER and adds node LABATT to the node list. You might use this command if the group HOSER includes all nodes in an OpenVMS Cluster, and you want to manage a device shared between that cluster and node LABATT (which could be a member of a different OpenVMS Cluster)

MDMS CREATE JUKEBOX

The MDMS CREATE JUKEBOX command creates a new jukebox definition in the MDMS database.

Equivalent STORAGE Command: None

Format:

MDMS CREATE JUKEBOX jukebox_name [,...]

Parameters

jukebox_name

Specifies the name of the jukebox. The jukebox must be unique in the MDMS domain.

The maximum length of the jukebox name is 31 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of jukebox names may be entered.

Description

The MDMS CREATE JUKEBOX command creates a new jukebox definition in the MDMS database. MDMS supplies attribute values when creating a new object record. Alternatively, they can be inherited from a specified jukebox using the /INHERIT qualifier.

An MDMS jukebox may be controlled by the MRD subsystem if it accepts direct SCSI robotic operations. Each MRD-controlled jukebox contains a set of slots, drives and robotics configured with a single robotic device name, regardless of whether the the jukebox is a loader, a single-tower library or a multi-tower library. A robot name must be associated with each MRD-controlled jukebox. For multi-tower configurations, a topology field may optionally be associated with the jukebox if the jukebox supports direct magazine moves.

Certain other types of jukeboxes, specifically silos manufactured by StorageTek, require the DCSC subsystem for control. With this model, each MDMS jukebox object maps to a Library Storage Module (LSM) containing a carousel of cells, drives and robotics. One or more LSMs are contained in an Automated Cartridge System (ACS) and one or more ACS's are managed by a UNIX-based system called a library. For each DCSC-controlled jukebox, the library, ACS ID and LSM ID must be specified. In addition, each LSM contains one or more Cartridge Access Points (CAPs) that are used to move volumes into and out of the jukebox (LSM). Each CAP may contain a differentnumber of cells, so the CAP size should be specified for each CAP for optimal performance. A value of 40 is used if the CAP size isnot specified for a particular CAP.

Privileges

The request requires MDMS_CREATE_ALL.

The /STATE qualifier also requires MDMS_SET_PROTECTED since this attribute is normally managed by MDMS. You should not modify this attribute unless you are trying to recover from an abnormal situation.

Restrictions

The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ACCESS=keyword
This qualifier defines the type of access to the jukebox, which can be one of the following keywords:

ALL (D) - supports local node/access and remote access - default

LOCAL - supports local node/cluster access only

REMOTE - supports remote access only

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/ACS=acs_id
The /ACS qualifier specifies the Automated Cartridge System (ACS) identifier. The default value is zero. Each MDMS jukebox maps to one Library Storage Module (LSM), and requires the specification of the library, ACS and LSM identifiers. Valid for DCSC-controlled jukeboxes only.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list. This is the default when specifying list items.

/AUTOMATIC_REPLY (D)
/NOAUTOMATIC_REPLY
Specifies that MDMS automatically replies to all OPCOM messages that can be polled for completion on requests for this particular jukebox.

/CAP_SIZE=(number[,...])
For DCSC-controlled jukeboxes equipped with Cartridge Access Points (CAPs), this attribute specifies the number of cells for each CAP. The first number is the size for CAP 0, the next for CAP 1 etc. If a size is not specified for a CAP, a default value of 40 is used. Specifying the CAP size optimizes the movement of volumes to and from the jukebox by filling the CAP to capacity for each move operation. When specifying CAP sizes, the specified numbers always replace any previous sizes in the database. Valid for DCSC-controlled jukeboxes only.

/CONTROL=keyword
This qualifier specifies the robot control facility used to control the jukebox's robot. The valid keywords are:

MRD (D) - The robot is controlled with the MRD facility

DCSC - The jukebox is a silo controlled by the DCSC facility - for StorageTek(R) Silos only. This option is not available when running with the ABS-OMT license:
control is hard-coded to MRD.

/DESCRIPTION="text"
Defines comments about the object in the record. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. To clear the existing description, specify "".

/DISABLED
Places the jukebox in the disabled state. This prevents all drives in the jukebox from being selected and allocated for use. This takes effect immediately. However, any drives in use will continue to be used until they are deselected.

/ENABLED (D)
Places the jukebox in the enabled state. This allows drives in the jukebox to be selected and allocated for use. This takes effect immediately. This is the default.

/GROUPS=(group_name[,...]
/NOGROUPS
Specifies the names of groups of nodes that share common access to this device. Normally, only one group is specified. The /REMOVE or /REPLACE qualifiers can be used to remove or replace objects in the list, rather than adding them by default. The /NOGROUPS qualifier removes all groups. If neither /NODES nor /GROUPS is specified, the node from which the request was issued is used as the node name. Groups can also be specified with the /NODES qualifier.

/INHERIT=jukebox_name
This qualifier allows you to specify an existing jukebox record to inherit attributes. MDMS supplies values for attributes you do not specify on creation. All attributes may be inherited except, for the following:

Jukebox name

Robot name

State

/LIBRARY=library_id
This qualifier specifies the library identifier for a silo. Valid values are 1,2,3,4, and the default is 1 when the jukebox is controlled by DCSC and 0 (not applicable) when controlled by MRD. Each MDMS jukebox maps to one Library Storage Module (LSM), and requires specification of the library, ACS and LSM identifiers.

/LOCATION=location_name
/NOLOCATION
This qualifier specifies the location of the jukebox, which is used when moving volumes into and out of the jukebox. If notspecified, or /NOLOCATION is specified, the default onsite location from the domain record is used as the jukebox location.

/LSM=lsm_id
The /LSM qualifier specifies the Library Storage Module (LSM) identifier. The default value is zero. Each MDMS jukebox maps to one Library Storage Module (LSM), and requires the specification of the library, ACS and LSM identifiers. Valid for DCSC-controlled jukeboxes only.

/NODES=(node_name[,...])
/NONODES
Specifies one or more nodes that can directly access the jukebox. The /REMOVE or /REPLACE qualifiers can be used to remove or replace objects in the list, rather than adding them by default. The /NONODES qualifier removes all nodes.

If neither /NODES nor /GROUPS is specified, the node from which the request was issued is used as the node name.

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username.

The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the cluster_name::username of the user entering the CREATE command on the object from a node in the cluster.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

/ROBOT=robot_name
/NOROBOT
The /ROBOT qualifier defines the OpenVMS device name of the robot. Required for, and applicable to MRD-controlled jukeboxes only. Do not specify a node name in the robot name.

/SLOT_COUNT=number
The /SLOT_COUNT qualifier specifies the total number of slots in the entire jukebox. For any jukebox, either the slot count or topology must be specified. Valid for MRD-controlled jukeboxes only.

/STATE=keyword
This is a protected field that should be modified only to recover on error. Use the LOAD, UNLOAD or MOVE commands to manipulate the state field under normal operation. The /STATE qualifier specifies the usage state of the jukebox. The keyword values are:

Available - The jukebox is available for use

In_use - The jukebox is in use

This qualifier requires the right MDMS_SET_PROTECTED.

/THRESHOLD=number
Specifies that an OPCOM message is output when the number of free volumes in the jukebox falls below the specified number. The default value is zero, which disables the feature. The OPCOM message is output on a node that can directly access the jukebox.

/TOPOLOGY=(TOWERS=(number[,...]), FACES=(number[,...]), LEVELS=(number[,...]), SLOTS=(number[,...]))
Specifies topology of jukebox, when a TL820-class jukebox is being used as a magazine. Valid for MRD-controlled jukeboxes only. The topology specification allows OPCOM messages to move magazines to be specified with TOWER, FACE, LEVEL rather than slot range. The specification of topology is optional. For each tower in the configuration, a corresponding entry must also be placed in FACES LEVELS and SLOTS that reflects the configuration of that tower.

The tower numbers start at zero, and additional towers must be the next number in sequence (i.e. 0,1,2 etc). Other specifications are absolute counts of the entity being specified for each tower (i.e. the total number of faces, levels and slots in each tower).

For example, for a three-tower jukebox, each tower having 8 faces, the first tower having two levels and the other two towers having three levels, and support of 11-slot bin-packs, the topology specification would be:

```
/TOPOLOGY=(TOWERS=(0,1,2), /FACES=(8,8,8), LEVELS=(2,3,3),

SLOTS=(11,11,11)
```

/USAGE=[NO]MAGAZINE
The /USAGE=MAGAZINE qualifier specifies that the jukebox is configured for magazines, and that the movement of volumes may be performed using magazines. The /USAGE=NOMAGAZINE qualifier does not support magazine use. The default is NOMAGAZINE.You must specify /USAGE=MAGAZINE when defining the /TOPOLOGY attribute. Note that you can use the jukebox for non-magazine moves even when the usage is magazine, but the reverse is not true. Valid for MRD-controlled jukeboxes only.

Examples

```
$ MDMS CREATE JUKEBOX JUKE_1 /SLOT_COUNT=7 -

/ROBOT=$1$DUA512: /USAGE=MAGAZINE
```

This command creates a jukebox JUKE_1 with 7 slots and controlled by robot 1DUA512: and supports magazines. The control type is MRD by default, and the current node is used as the node name supporting the jukebox.

```
$ MDMS CREATE JUKEBOX JUKE_2 /SLOT_COUNT=140 -

/ROBOT=$1$DUA600 /USAGE=NOMAGAZINE /GROUPS=COOKIE
```

This command creates a jukebox JUKE_2 with 140 slots and controlled by robot 1DUA600 in group COOKIE. The control type is MRD by default and magazines are not supported.

```
$ MDMS CREATE JUKEBOX JUKE_3 /CONTROL=DCSC /LIBRARY=1 -

/ACS=0 /LSM=0 /CAP_SIZE=(20,30)
```

This command creates a DCSC-controlled jukebox JUKE_3 with a library number of 1, ACS ID of 0 and LSM ID of 0. In addition, there are two CAPS with sizes of 20 for CAP 0, and 30 for CAP 1. The control type is DCS meaning this is a silo, does not support magazines, and other default attribute values are supplied by MDMS.

```
$ MDMS CREATE JUKEBOX JUKE_4 /CONTROL=MRD -

/ROBOT=$1$DUA510: /TOPOLOGY=(TOWERS=(0,1),FACES=(8,8), -

LEVELS=(3,2),SLOTS=(11,11))
```

This command creates a multi-tower jukebox, controlled by MRD with robot name 1DUA510: Its topology is:

TOWER 0 with 8 faces, 3 levels and 11 slots; TOWER 1with 8 faces, 2 levels and 11 slots.

MDMS CREATE LOCATION

The MDMS CREATE LOCATION command creates a new location definition in the MDMS database.

Equivalent STORAGE Command: None

Format:

MDMS CREATE LOCATION location [,...]

Parameters

location

Specifies the name of the location.

The maximum length of the location is 31 characters. Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of locations may be entered.

Description

The MDMS CREATE LOCATION command creates a new location definition in the MDMS database. MDMS supplies attribute values you do not define on creation. Alternatively, they can be inherited from a named location object using the /INHERIT qualifier.

Privilegs

The request requires MDMS_CREATE_ALL.

Restrictions

None

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/DESCRIPTION="text"
Defines comments about the object in the record. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. To clear the existing description, specify "".

/INHERIT=location_name
This qualifier allows you to specify an existing location record to inherit default attributes. The default is that MDMS supplies the default values. All attributes may be inherited except for location name.

/LOCATION=location
/NOLOCATION (D)
The /LOCATION qualifier allows you to specify a parent location, thus creating a location hierarchy. If there is no parent location, specify /NOLOCATION. Use parent locations to allow selection of volumes or drives in compatible locations. One location is compatible with another if it has a common parent location in the hierarchy. If you do not wish to utilize the compatible location feature, do not specify parent locations. Locations with common parents are most useful where the parents and siblings are in close proximity to one another (e.g. rooms 101 and 102, with parent location floor 1), and selection of volumes or drives from any of the locations is desired. Do not use parent locations across larger distances.

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username.

The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the cluster_name::username of the user entering the CREATE command on the object from a node in the cluster.

/SPACES=(range)
/NOSPACES
The /SPACES qualifier defines individual spaces for volumes or magazines at the location. Spaces are alphanumeric strings of up to 8 characters. The spaces can be specified as a range - only a single range is supported.

When specifying a range, the first and last spaces in the range must have the same number of characters (as in the example), and there is a limit of 1000 spaces per location. The /NOSPACES qualifier removes all spaces.

Examples

```
$ MDMS CREATE LOCATION SHELF_40 /SPACES=(40:S001-40:S100)
```

This command creates a shelf location for volumes with 100 spaces, named 40:S001 to 40:S100.

```
$ MDMS CREATE LOCATION VAULT_1
```

This command creates a location named VAULT_1 with no spaces.

MDMS CREATE MAGAZINE

The MDMS CREATE MAGAZINE command creates a new magazine definition in the MDMS database.

Equivalent STORAGE Command: STORAGE ADD MAGAZINE

Format:

MDMS CREATE MAGAZINE magazine_name [,...]

Parameters

magazine_name

Specifies the name of the magazine.

The maximum length of the magazine name is 31 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of magazine names may be entered.

Description

The MDMS CREATE MAGAZINE command creates a new magazine definition in the MDMS database. Magazines are used for two reasons:

- For compatibility with previous versions of MDMS, where loader-type jukeboxes could only be supported using magazines.
- To support a set of volumes in a physical magazine whose placement is the same for all volumes in the magazine. In other words, if a volume is in a magazine, it is moved with all the other volumes in the magazine.

It is important to note that you no longer have to use magazines for loader-type jukeboxes. You may instead choose to treat volumes separately and move them into and out of jukeboxes individually.

Privileges

The request requires MDMS_CREATE_ALL.

Several protected qualifiers also require MDMS_SET_PROTECTED since these attributes are normally managed by MDMS. You should not modify these attributes unless you are trying to recover from an abnormal situation.

The /JUKEBOX, /PLACEMENT, /POSITION and /START_SLOT are qualifiers that also require MDMS_SET_PROTECTED.

Restrictions

None

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/DESCRIPTION="text"
Defines comments about the object in the record. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. To clear the existing description, specify "".

/INHERIT=magazine_name
This qualifier allows you to specify an existing magazine record to inherit default attributes. The default is that MDMS supplies values you do not specify. All attributes may be inherited except for the following:

Magazine name

Jukebox name

Placement

Position

Start slot

/JUKEBOX=jukebox_name
This is a protected field that should only be modified to recover on error. Use the MOVE MAGAZINE command to set up the jukebox name under normal operations. This qualifier specifies the name of the jukebox in which the magazine resides. The maximum length of the jukebox name is 31 characters.

This qualifier requires the right MDMS_SET_PROTECTED.

/OFFSITE=([LOCATION=location][,[NO]DATE[=date]])
/NOOFFSITE
This qualifier specifies the date that the magazine is to be taken offsite and the offsite location. The location field is required when using the /OFFSITE qualifier if no location has been previously specified. The LOCATION keyword cannot be negated and if specified must point to a valid location object. Specify a VMS absolute or delta time in the date field. The NODATE keyword may be used to remove the date. This has the effect of disabling the schedule for the magazine, while retaining the location. To clear the offsite date specify /NOOFFSITE.

The default offsite location is that stored in the domain object.

/ONSITE=([LOCATION=location][,[NO]DATE[=date]])
/NOONSITE
This qualifier specifies the date that the magazine is to be brought back onsite and the onsite location. The location field is required when using the /ONSITE qualifier if no location has been previously specified. The LOCATION keyword cannot be negated and if specified must point to a valid location object. Specify a VMS absolute or delta time in the date field. The NODATE keyword may be used to remove the date. This has the effect of disabling the schedule for the magazine, while retaining the location. To clear the onsite date, specify /NOONSITE.

The default onsite location is that stored in the domain object.

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username.

The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the cluster_name::username of the user entering the CREATE command on the object from a node in the cluster.

/PLACEMENT=keyword
This is a protected field that should only be modified to recover on error. Use the MOVE MAGAZINE command to set up the placement under normal operation. This qualifier defines the current placement of the magazine. Select one of the following options:

JUKEBOX

OFFSITE

ONSITE

MOVING

This qualifier requires the right MDMS_SET_PROTECTED.

/POSITION=position=(tower,face,level)
This is a protected field that should only be modified to recover on error. Use the MOVE MAGAZINE command to set up the position under normal operation. The /POSITION qualifier specifies the position in the jukebox that the magazine resides.

The tower, face and level specification represent the relative number of the tower, face and level, starting from 0. So for absolute jukebox slot of zero, the corresponding position is (0,0,0). The next position in the jukebox would be (0,0,1) and so on, according to the topology defined for the jukebox.

This qualifier requires the right MDMS_SET_PROTECTED.

/SLOT_COUNT=number
The /SLOT_COUNT qualifier specifies the number of slots in a magazine to store volumes. The default slot count is 32 which can be used for all magazines, but you should specify the actual value for best results.

/SPACES=(range)
/NOSPACES
This qualifier specifies the space(s) in a location in which the magazine is stored when not in a jukebox. Spaces are alphanumeric strings of up to 8 characters. The /NOSPACES qualifier removes all spaces.

/START_SLOT=(number)
This is a protected field that should only be modified to recover on error. Use the MOVE MAGAZINE command to set up the start slot under normal operation. This qualifier specifies the starting jukebox slot when the magazine is placed in a jukebox.

This qualifier requires the right MDMS_SET_PROTECTED.

Examples

```
$ MDMS CREATE MAGAZINE MYMAG01 /SLOT_COUNT=7 -

/ONSITE=(LOCATION=SHELF1) /SPACE=2
```

This command creates a magazine called MYMAG01 with 7 slots, which is stored in location space 2 in location SHELF1 when not in a jukebox.

```
$ MDMS CREATE MAGAZINE MAG002 /SLOT_COUNT=32 -

/SPACES=(SA001-SA032)/ONSITE=(LOCATION=HEADQUARTERS, -

DATE=01-JAN-2001)/OFFSITE=(LOCATION=DPS, -

DATE=01-JAN-2000)
```

This command creates a magazine MAG002, with 32 slots, which is stored in onsite location HEADQUARTERS in spaces SA001-SA032, due to be moved offsite on 01-Jan-2000 to location DPS, and back onsite on 01-Jan-2001.

```
$ MDMS CREATE MAGAZINE MAG003 /SLOT_COUNT=32 -

/SPACES=SPC001 /JUKE=JUKE_1 /POSITION=(0,1,2)
```

This command creates a magazine MAG003, with 32 slots, which is stored in space SPC001. When in a jukebox, the magazine resides in jukebox JUKE_1 in position tower 0, face 1, level 2. Note that jukebox and position should not normally be specified - rather, these are set up when moving the magazine into the jukebox with a MOVE MAGAZINE command.

MDMS CREATE MEDIA_TYPE

The MDMS CREATE MEDIA_TYPE command creates a new media type definition in the MDMS database.

Equivalent STORAGE Command: None

Format:

MDMS CREATE MEDIA_TYPE media_type [,...]

Parameters

media_type

Specifies the name of the media type.

The maximum length of the media type name is 31 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of media types may be entered.

Description

The MDMS CREATE MEDIA_TYPE command creates a new media type definition in the MDMS database. A media type definition consists of a required density, and optional compaction length and capacity, if applicable.

Privileges

The request requires MDMS_CREATE_ALL.

Restrictions

None

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/CAPACITY=number
The /CAPACITY qualifier specifies the capacity in megabytes of the tape. This is used by some MDMS clients to estimate end-of-tape conditions. By default, capacity is set to zero.

/COMPACTION (D)
/NOCOMPACTION
The /COMPACTION qualifier specifies that the media type should use compaction when writing to tape. This is the default. If you do not wish to use compaction, then specify /NOCOMPACTION.

/DENSITY=density
Specifies a density string between 1 and 31 characters in length that the media type supports. Note that the COMP keyword for compaction should be specified in the /COMPACTION attribute, not density.

/DESCRIPTION="text"
Defines comments about the media type. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description is can range from 0 to 255 characters. Specify "" to clear the description.

/INHERIT=media_type_name
This qualifier allows you to specify an existing media type record to inherit default attributes. The default is that MDMS supplies values you do not specify on creation. All attributes may be inherited except for media type name.

/LENGTH=length
The /LENGTH qualifier specifies the length of a 9-track magnetic tape, and is expressed in feet. By default, length is set to zero.

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username.

The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the cluster_name::username of the user entering the CREATE command on the object from a node in the cluster.

Examples

```
$ MDMS CREATE MEDIA_TYPE TK85K_COMP /COMPACTION
```

This command creates a new media type called TK85K_COMP with compaction enabled.

```
$ MDMS CREATE MEDIA_TYPE TAPE_800 /DENSITY=800 -

/LENGTH=2400
```

This command creates a new media type called TAPE_800, a 9-track media type with 800 bpi density and a length of 2400 feet.

```
$ MDMS CREATE MEDIA_TYPE TAPE_1600 -

/INHERIT=TAPE_800 /DENSITY=1600
```

This command creates a new media type called TAPE_1600, a 9-track media type with 1600 bpi density and a length of 2400 feet (inherited from media type TAPE_800).

MDMS CREATE NODE

The MDMS CREATE NODE command creates a new node definition in the MDMS node database.

Equivalent STORAGE Command: None

Format:

MDMS CREATE NODE node_name [,...]

Parameters

node_name

Specifies the name of the node. Do not append colons to the node name. The node name should be the DECnet (Phase IV) node name (i.e. logical SYS$NODE) if DECnet (Phase IV) is used on the node.

Otherwise it should be a unique name chosen by the MDMS administrator and it should match the SYSGEN parameter SCSNODE. If SCSNODE is not defined the node name has to match the host or node name portion of the DECnet-Plus (Phase V) or TCP/IP fullname. If SCSNODE name is not defined and no network name is available the server starts up with a name of "MDMS$SERVER".

If DECnet-Plus (Phase V) and/or TCP/IP are used, the appropriate fullnames should be stored as attributes of the node. Do not use the node name to specify fullnames.

The maximum length of the node name is 31 characters. Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of node names may be entered.

Description

The MDMS CREATE NODE command creates a new node definition in the MDMS database. A node record must exist for each node that can act as a client to the database server. In addition, a node record must exist for each node capable of being a database server.

When creating a new object record, default attributes are supplied by MDMS. Alternatively, they can be inherited from a specified node using the /INHERIT qualifier.

Privileges

The request requires MDMS_CREATE_ALL.0

Restrictions

The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list. This is the default when specifying list items.

/DATABASE_SERVER (D)
/NODATABASE_SERVER
The /DATABASE_SERVER qualifier means the node can be a database server, supporting failover operations. To be a database server, the node must have direct access to the MDMS Database files.

In addition, this node name should be added to the definition of the logical name MDMS$DATABASE_SERVERS in SYS$STARTUP:MDMS$SYSTARTUP.COM on all nodes in the domain.

/DECNET_PLUS_FULLNAME=node_fullname
This qualifier allows you to specify the DECnet-Plus (Phase V) fullname for a node. The fullname may be up to 255 characters. If this node has a DECnet-Plus name defined by logical name "SYS$NODE_FULLNAME" then the DECNET_PLUS_FULLNAME has to be defined for this node and has to exactly match the DECnet-Plus (Phase V) name.

The DECNET_PLUS_FULLNAME has to be defined in order for this node to be fully enabled when the DECnet transport has been enabled and DECnet-Plus is running on the system. The fullname can be specified in upper or lower case.

/DESCRIPTION="text"
Defines comments about the node. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. Specify "" to clear the description.

/DISABLED
Places the node in the disabled state. This prevents the node from participating in the MDMS domain as either a server or a client. This takes effect immediately.

/ENABLED (D)
Places the node in the enabled state. This allows the node to participate in MDMS operations. This takes effect immediately. This is the default.

/INHERIT=node_name
This qualifier allows you to specify an existing node record to inherit attributes. The default is that MDMS supplies attribute values you do not supply on creation. All attributes may be inherited except for:

Node name

DECnet_Plus fullname

TCPIP fullname

/LOCATION=location
/NOLOCATION
The /LOCATION qualifier specifies the location of the node, which is used when allocating volumes and drives. If not specified, or /NOLOCATION is specified, the default onsite location from the domain record is used as the node location.

/OPCOM=(class[,...])
/NOOPCOM
The /OPCOM qualifier adds the specified classes used for notifying operators. All OPCOM for devices on the node are sent to all specified classes on the node. The /REMOVE or /REPLACE qualifiers can be used to remove or replace classes in the list, rather than adding them by default. Specify /NOOPCOM to disable OPCOM notification. By default, the node acquires OPCOM classes from the domain record. The following classes are valid:

CARDS	NETWORK	OPER6	OPER12
CENTRAL	OPER1	OPER7	PRINTER
CLUSTER	OPER2	OPER8	REPLY
DEVICES	OPER3	OPER9	SECURITY
DISKS	OPER4	OPER10	SOFTWARE
LICENSE	OPER5	OPER11	TAPES

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username.

The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the cluster_name::username of the user entering the CREATE command on the object from a node in the cluster.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

/TCPIP_FULLNAME=node_fullname[:low_port-high_port]
This qualifier allows you to specify the TCP/IP full name for a node. The full name may be up to 255 characters. If this node has a TCP/IP name defined by logical name "*INET_HOST" the TCPIP_FULLNAME has to be defined and has to exactly match the full IP name as "<INET_HOST>.<INET_DOMAIN>". For INET_DOMAIN see logical name "*INET_DOMAIN". The TCPIP_FULLNAME has to be defined in order for this node to be fully enabled when the TCPIP transport has been enabled. The fullname can be specified in upper or lower case.

The low_port and high_port numbers specify the range of TCP/IP port numbers used by the server to listen for incoming requests. The default is 2501-2510. If this conflicts with other applications, a new range above 1023 can be specified. The range should contain at least 10 port numbers for the MDMS server to select one at a time.

Note that the MDMS GUI requires TCP/IP running on all GUI nodes, and on the MDMS server nodes to which the GUI may connect.

/TRANSPORT=(keyword[,...])
Specifies the network transports to be used, as a prioritized ordered list. The /REMOVE or /REPLACE qualifiers can be used to remove or replace objects in the list, rather than adding them bydefault.

Enter one or more of:

- DECNET - listen to incoming requests from other MDMS servers on DECnet (Phase IV) and DECnet-Plus (Phase V)
- TCPIP - listen to incoming requests from other MDMS servers on TCP/IP

Setting a new transport will automatically start the listener for this transport on the database server node. Likewise, removing a transport will take place within 10 seconds on the database server node. For client nodes, transport changes will take place the next time network connections time out (usually within 10 minutes). If the change needs to take place immediately, the client node server process must be restarted.

The node name and/or the node full names have to be set accordingly for a transport to work correctly.

Examples

```
$ MDMS CREATE NODE TABLES /LOCATION=COMPUTER_LAB_1 -

  /TRANSPORT=(DECNET,TCPIP) /OPCOM=(CENTRAL,TAPES) -

  /TCPIP_FULLNAME=TABLES.CXO.DEC.COM
```

This command creates a new node definition named "TABLES" with a location, transport protocols and OPCOM classes. The node supports DECnet (node name TABLES) and TCP/IP with a fullname of TABLES.CXO.DEC.COM.

```
$ MDMS CREATE NODE CHAIRS /INHERIT=TABLES -

  /DECNET_PLUS_FULLNAME=DEC:CHAIRS.CXO.DEC.COM -

  /TCPIP_FULLNAME=CHAIRS.CXO.DEC.COM:3000-3050
```

This command creates a new node named CHAIRS, which inherits location, OPCOM classes and transport definitions from node TABLES, with specified DECnet-Plus and TCPIP full names. The TCP/IP connections may be received over ports 3000 - 3050.

MDMS CREATE POOL

The MDMS CREATE POOL command creates a new pool definition in the MDMS database.

Equivalent STORAGE Command: None

Format:

MDMS CREATE POOL pool_name [,...]

Parameters

pool_name

Specifies the name of the pool.

The maximum length of the pool name is 31 characters. Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of pool names may be entered.

Description

The MDMS CREATE POOL command creates a new pool definition in the MDMS pool database. A pool definition consists of a list of authorized users, and users for whom the pool is the default pool. If a user is listed in either list, he/she is authorized for the pool.

Privileges

The request requires MDMS_CREATE_ALL.

Restrictions

The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list. This is the default when specifying list items.

/AUTHORIZED_USERS=(node/group_name::username[,...])
/NOAUTHORIZED_USERS
Specifies one or more distinct users to the pool specified by node or group name and user name. Only authorized or default users can allocate volumes belonging to the pool. The /REMOVE or /REPLACE qualifiers can be used to remove or replace users in the list, rather than adding them by default.

/DEFAULT_USERS=(node/group_name::username[,...])
/NODEFAULT_USERS
Specifies one or more distinct users to the pool as the users' default pool. Only authorized or default users can allocate volumes belonging to the pool. The /REMOVE or /REPLACE qualifiers can be used to remove or replace users in the list, rather than adding them by default. A particular node/group::user combination should only be defined with the /DEFAULT qualifier for one pool.

/DESCRIPTION="text"
Defines comments about the pool. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. Specify "" to clear the description.

/INHERIT=pool_name
This qualifier allows you to specify an existing pool record to inherit attributes. The default is that MDMS supplies values you do not supply on creation. All attributes except pool name me be inherited.

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username.

The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the cluster_name::username of the user entering the CREATE command on the object from a node in the cluster.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

/THRESHOLD=number
Specifies that an OPCOM message is output when the number of free volumes in the pool falls below the specified number. The default value is zero, which disables the feature. The OPCOM message is output on the database server node.

Examples

```
$ MDMS CREATE POOL TEST_POOL/AUTHORIZE=COOKIE::ABS
```

This command creates a pool called TEST_POOL with one authorized user.

```
$ MDMS CREATE POOL JIMS_POOL /DEFAULT=(OREO::JIM, -

CRUMBS::JIM, DSORDS::JIM) /ADD
```

This command adds default users to pool JIMS_POOL. The names before the double colons are a mixture of node names and group names.

MDMS CREATE RESTORE

The MDMS CREATE RESTORE command creates a new restore definition in the MDMS database. Restores were formerly known as restore requests or restore transactions. Restore is the new common name.

Equivalent ABS Command: RESTORE

Format:

MDMS CREATE RESTORE restore_name [,...]

Parameters

restore_name

Specifies the name of the restore.

The maximum length of the restore name is 39 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of restore names may be entered.

Description

The MDMS CREATE RESTORE command creates a new restore definition in the MDMS database. Restores are used to copy previously-saved data from an archive back to online disk storage.

When creating a new object record, MDMS supplies default values on attributes you do not specify. Alternatively, they can be inherited from a specified restore using the /INHERIT qualifier. In addition, you can create a restore by inheriting from a save request.

The data specifications for restores can be supplied in one of two ways:

- Using the /INCLUDE, /EXCLUDE, /DATA_SELECT_TYPE and /SOURCE_NODE qualifiers. These qualifiers can be used to specify a set of data specifications of a single data type that can be restored. These are not positional qualifiers. This option is recommended for most restores, and this information is stored in a default selection that is mapped to the restore by MDMS. The default selection name is:
  restore_name_REST_SEL_DEF
- For more complex data specifications, you can create your own selections and map them to the restore using the /SELECTIONS qualifier. This options gives you more granularity in data selection, and allows you to have mixed data select types in a single restore.
  Most restores are ONE_TIME_ONLY (the default) and do not need to be scheduled. However, restores can also be regularly scheduled in the same way as saves. If you wish to use one of the supplied frequency options, MDMS creates a schedule and initializes it to appropriate values. The schedule for any restore is called
  restore_name_REST_SCHED
  Alternatively, if you wish to define a schedule not handled in the supplied frequencies, you can use one of the following options:
- For scheduler types INTERNAL and EXTERNAL, you can define /FREQUENCY=CUSTOM, and modify the schedule to your own specification.
- For scheduler type SCHEDULER, you can define /FREQUENCY=EXPLICIT, and define a string to pass the explicit schedule to the scheduler in the qualifier /EXPLICIT_INTERVAL.

Privileges

The request requires MDMS_CREATE_ALL.

Restrictions

This command is restricted to nodes with an ABS license.

The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default.

The /DELETE_INTERVAL and /KEEP qualifiers are mutually exclusive.

The /BEFORE_DATE, /DATE_ARCHIVED and /SINCE_DATE qualifiers are mutually exclusive.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list. This is the default when specifying list items.

/ARCHIVE=(archive_name[,archive_name])
The /ARCHIVE qualifier allows you to specify one or two archives associated with the restore. The first archive name is applicable to full and selective threads in restores. If specified, the second archive name is associated with incremental threads in restores. If a second name is not specified, incremental threads use the first archive name. For any thread, the catalog name from the first archive is always used. At least one archive name must be supplied for a restore. If an archive is not specified, the archive "SYSTEM_BACKUPS" is used by default.

/BASE_DATE=date
/NOBASE_DATE
The base date is used as a starting point for restores that have a repeating schedule frequency. Subsequent schedules are applied by adding the multiples of the frequency to the base date. If the restore is not to be repeated, then no base date is needed.

By default, if a base date is not specified but a start date is, the base date is set to the start date. If neither is specified, the base date is not set and the restore is not scheduled for execution.

/BEFORE_DATE=date
/NOBEFORE_DATE
You can select files for restore based on the date archived before a certain date. If specified, the restore will apply to the latest date archived before the specified date. /NOBEFORE_DATE clears the before date and uses other date criteria to select files, as follows:

- DATE_ARCHIVED - The latest file saved on the specified date
- SINCE_DATE - The first file saved after the specified date
- No date - The latest copy of the file

/CATALOG=(NAME=catalog_name, [NO]NODES=(node[,...]))
/NOCATALOG (D)
The /CATALOG qualifier specifies the name of the catalog used by the restore, and a list of nodes and groups that can directly access the catalog. This catalog overrides the catalog defined in the first archive specified in the restore. If you specify /NOCATALOG, then the catalog in the first restore archive is used.

Specify a local catalog name representing a catalog object in the MDMS database. With the NODES keyword, you may specify nodes, groups or a combination thereof. If you specify NONODES, the local execution node on which the restore is performed is used as the catalog node.

The default is /NOCATALOG.

/DATA_SELECT_TYPE=keyword
The /DATA_SELECT_TYPE qualifier specifies the type of data to restore in the default selection.Select one of the following options:

- VMS_FILES
- VMS_SAVESET
- UNIX_FILES
- WINDOWS_FILES
- RDB_V42_DATABASE
- RDB_V42_STORAGE_AREA
- RDB_V51_DATABASE
- RDB_V51_STORAGE_AREA
- RDB_V60_DATABASE
- RDB_V60_STORAGE_AREA
- RDB_V61_DATABASE
- RDB_V61_STORAGE_AREA
- RDB_V70_DATABASE

- RDB_V70_STORAGE_AREA

If not specified, MDMS attempts to determine the data select type based on the include file syntax. If MDMS cannot determine this, VMS_FILES is used. The data select type specification is stored in the default selection.

/DATE_ARCHIVED=date
/NODATE_ARCHIVED
You can select files for restore based on the date archived. If specified, the restore will apply to the latest copy of the data on the date archived. /NODATE_ARCHIVED clears the date archived and uses other date criteria to select files, as follows:

- BEFORE_DATE - The latest file saved before the specified date
- SINCE_DATE - The first file saved after the specified date
- No date - The latest copy of the file

/DELETE_INTERVAL=delta_time
The /DELETE_INTERVAL qualifier specifies the duration of certain restore requests after their start of execution. The qualifier is applicable only to restores with a scheduling frequency of ONE_TIME_ONLY. For these restores, the restore object (and any associated schedules and selections) are deleted after the delete interval has passed following the start of the restore execution. If you do not wish the restore to be deleted, specify /KEEP.

If not specified, the delete interval is 03-00:00:00 (3 days) for restores of frequency ONE_TIME_ONLY, and 0 for all other frequencies.

/DESCRIPTION="text"
Comments about the object. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. To clear the description, specify "".

/DESTINATION=disk:[dir]
The /DESTINATION qualifier specifies the target destination disk/directory location for the restore. Specify a disk and directory combination. If destination is not specified, the restore data is restored to the original disk location from where the data was saved. To clear the destination, enter "".

The default is that no destination is specified, and the original save destination is used.

/ENVIRONMENT=environment_name
The /ENVIRONMENT qualifier specifies the environment object to use for the restore. Specify an environment name in the MDMS database.

If no environment is specified, one of the following defaults is used:

- The first archive name suffixed by "_ENV", if it exists
- Otherwise "DEFAULT_ENV"

/EPILOGUE="string"
/NOEPILOGUE (D)
The /EPILOGUE qualifier specifies a string to execute after each restore thread (i.e. each include list item specification in the restore). The string may be up to 80 characters and must be enclosed in quotes.

By default, no epilogue command is executed.

/EXCLUDE=(data_specification[,...])
/NOEXCLUDE (D)
The /EXCLUDE qualifier is used to exclude files that otherwise would be included with the /INCLUDE qualifier. This is used to exclude files for save or restore when a more general wild-card specification is specified for the include. The exclude specification is stored in the default selection.

This qualifier is not valid for UNIX or WINDOWS operations.

By default, no files are excluded.

/EXECUTION_NODES=(node_name[,...])
The /EXECUTION_NODES qualifier specifies one or more node names on which the restore request can be executed. Any one of the nodes can be the execution node for the request. /GROUPS may also be specified.

If no nodes or groups are specified, the include specification uses the node on which the restore was created.

/EXPLICIT_INTERVAL="string"
/NOEXPLICIT_INTERVAL (D)
When using scheduler type SCHEDULER you can specify the scheduling frequency using /EXPLICIT_INTERVAL. Enter a string in a format known to the scheduler. /NOEXPLICIT_INTERVAL clears the explicit interval. This qualifier is only applicable when /FREQUENCY=EXPLICIT.

By default, no explicit interval is defined.

/FREQUENCY=keyword
The /FREQUENCY qualifier specifies the scheduling frequency for this restore. Select one of the following options:

- ONE_TIME_ONLY (D) - Scheduled one time only based on the base date or start date. This restore cannot be rescheduled, and the restore will automatically be deleted when the delete interval expires. This is the default.
- ON_DEMAND - Sheduled on demand when a start date (or base date) is entered. Can be rescheduled by entering a new start date (or base date).
- DAILY - Scheduled on a daily basis at the time contained within the base date.
  Example: 21-JAN-2001, 22-JAN-2001...
- WEEKLY - Scheduled on a weekly basis on anniversaries of the base date day (MON-FRI) and time.
  Example: 21-JAN-2001, 28-JAN-2001...
- BIWEEKLY - Scheduled on a biweekly (once every two weeks) basis on anniversaries of the base date day (MON-FRI) and time.
  Example: 21-JAN-2001, 04-FEB-2001...
- SEMI_MONTHLY - Scheduled twice a month based on the base date (1-31) and time, and either two weeks before or after the date.
  Example: 21-JAN-2001, 07-FEB-2001... ++CHECK++
- MONTHLY - Scheduled monthly based on the base date (1-31) and time and subsequent monthly anniversaries.
  Example: 21-JAN-2001, 21-FEB-2001...
- QUARTERLY- Scheduled once every three months on the base date (1-31) and time, and three-month anniversaries thereafter.
  Example: 21-JAN-2001, 21-APR-2001...

- SEMI_ANNUALLY - Scheduled once every six months on the base date (1-31) and time, and six-month anniversaries thereafter.
  Example: 21-JAN-2001, 21-JUL-2001...
- ANNUALLY - Scheduled once every year on the base date (1-31) and time, and twelve-month anniversaries thereafter.
  Example: 21-JAN-2001, 21-JAN-2002...
- NEVER - Cannot be scheduled. This option can be used as a placeholder. The frequency must be changed to something else before the restore can execute.
- EXPLICIT - When using scheduler type SCHEDULER, this option utilizes the string in EXPLICIT_INTERVAL to determine the scheduling frequency.
- CUSTOM - When using scheduler types INTERNAL or EXTERNAL, this option utilizes a user-defined schedule object, which has the frequency defined internally. Use this option if none of the above scheduling frequencies is appropriate.

/GROUPS=(group_name[,...])
/NOGROUPS
Specifies the names of groups of execution nodes on which this restore can be run. Usually, only one group is specified. If neither /EXECUTION_NODES nor /GROUPS are specified, the node from which the command was issued is used as the node name.

/INCLUDE=(data_specification[,...])
/NOINCLUDE (D)
The /INCLUDE qualifier allows you to enter a list of up to 24 data_specifications to restore. The data specifications can be OpenVMS disks, files, Windows or UNIX path and file specifications, or Rdb databases or storage areas. However, all specifications must be of the same data select type, as specified in the /DATA_SELECT_TYPE qualifier.

The include specification, together with the data select type, exclude and source_node specifications are stored in a default selection object which has the name:

restore_name_REST_SEL_DEF

This selection object can be modified independently to add such refinements as exclude lists, and additional selections can be added to any restore.

/NOINCLUDE removes the include file specification.

By default, there is no include specification.

/INCREMENTAL
/NOINCREMENTAL (D)
The /INCREMENTAL qualifier specifies that the restore should be an incremental restore. If not specified, the restore will be a full restore or selective restore based on the data_specification in the associated include specification or selections. /NOINCREMENTAL clears the incremental specification.

The default is /NOINCREMENTAL.

/INHERIT=restore_name
/INHERIT=save_name
This qualifier allows you to specify an existing restore record from which the new object record inherits attribute values. MDMS supplies default values if you specify none. All attributes may be inherited with the exception of the following:

Restore Name

For restores only, you can also inherit most attributes from a correspoding save. This is most useful if you want to restore everything that was saved in a specific save request. All attributes can be inherited except for the following:

- Restore Name
- Before Date
- Catalog
- Date Archived
- Destination
- Frequency
- Owner Name
- Since Date
- Start Time

With both types of inherit, the show only attributes of Job Number and Transaction Status are not inherited.

/KEEP
The /KEEP qualifier indicates that the restore is not to be automatically deleted, and clears the delete interval.

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username.

The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the cluster_name::username of the user entering the CREATE command on the object from a node in the cluster.

/PROLOGUE="string"
/NOPROLOGUE (D)
The /PROLOGUE qualifier specifies a string to execute before each restore thread (i.e. each include list item specification in the restore). The string may be up to 80 characters and must be enclosed in quotes.

By default, no prologue command is executed.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

/SELECTIONS=(selection[,...])
/NOSELECTIONS
When using the default selection, this qualifier is not needed, as MDMS adds it automatically. However, if you want to add your own selections to this restore, you add them with the /SELECTION qualifier. By default a selection is added, but you can also remove selections with the /REMOVE qualifier, and replace selections with the /REPLACE qualifier. /NOSELECTIONS removes all selections from the restore.

/SEQUENCE_OPTION=keyword
The /SEQUENCE_OPTION qualifier defines the type of sequencing used during the restore operation. Select one of the following options:

- SEQUENTIAL - Performs each restore thread sequentially. Each restore thread must fully complete before the next one starts.
- OVERLAPPED - Starts the next restore thread as soon as the backup drive or device is available for use.

The default is SEQUENTIAL.

/SINCE_DATE=date
/NOSINCE_DATE
You can select files for restore based on the date archived after a certain date. If specified, the restore will apply to the first date archived after the specified date. You can specify date as an absolute date, as a combination of absolute and delta times, or as one of the following keywords: TODAY (default), TOMORROW, or YESTERDAY.

/NOSINCE_DATE clears the since date and uses other date criteria to select files, as follows:

- BEFORE_DATE - The latest file saved before the specified date
- DATE_ARCHIVED - The latest file saved on the specified date
- No date - The latest copy of the file

/SKIP_TIME=delta_time
/NOSKIP_TIME (D)
It is possible to run a restore at any time, including times when it is not normally scheduled. You may, for example, want to run a restore three hours early, or you may want to run an extra restore for some reason.

By default, if you run a restore at an unscheduled time, MDMS will also run it at its regularly scheduled time as well. If you do not want this, then enter a skip time when starting the restore at the non-scheduled time. The skip time will be added to the start time, and MDMS will not schedule the restore until at least after the skip_time value.

The default is /NOSKIP_TIME.

/SOURCE_NODE=node_name
/NOSOURCE_NODE (D)
The /SOURCE_NODE qualifier specifies the node to which UNIX or WINDOWS files are restored. This qualifier does not apply to VMS_FILES or Rdb databases, where the source node is the execution node. The source_node specification is stored in the default selection.

By default, no source node is defined, but is required for a UNIX or WINDOWS restore to function correctly.

/START_DATE[=date]
/NOSTART_DATE
The /START_DATE qualifier is used to schedule a restore to start at an unscheduled time. The /BASE_DATE is used to specify the normal scheduled times. By default, the start date is set to the base date if not separately specified.

The date value for the /START_DATE is optional. If not specified, the default is now. /NOSTART_DATE clears the next start date, and the restore will not be scheduled.

Examples

```
$ MDMS CREATE RESTORE REST1 -

_$ /ARCHIVE=REST1_ARC -

_$ /ENVIRONMENT=REST1_ENV -

_$ /INCLUDE=(USER1$:[SMITH...]*.*;*, -

_$ USER2$:[JONES...]*.*;*)

_$ /EXECUTION_NODES=NOD001 -

_$ /START
```

This commands creates a restore REST1, which uses archive REST1_ARC and environment REST1_ENV. The data to restore is NOD001::USER1$:[SMITH...]*.*;* and NOD001::USER2$:[JONES...]*.*;*, which will be restored to their original locations. The data select type is VMS_FILES. The /START qualifier starts the restore immediately, and the restore is a ONE_TIME_ONLY.

```
$ MDMS CREATE RESTORE REST2 -

_$ /SELECTIONS=(SELECT1, SELECT2, SELECT3)

_$ /FREQUENCY=MONTHLY

_$ /BASE_DATE=01-JAN-2001:01:00:00
```

This command creates a restore REST2, whose data selections are contained in user-created selection objects SELECT1, SELECT2 AND SELECT3. This restore is regularly scheduled on a monthly basis on the first of each month at 1:00 am. The default archive SYSTEM_BACKUPS and environment SYSTEM_BACKUPS_ENV are used.

MDMS CREATE SAVE

The MDMS CREATE SAVE command creates a new save definition in the MDMS database. Saves were formerly known as save requests, archive requests or archive transactions. Save is the new common name.

Equivalent ABS Command: SAVE

Format:

MDMS CREATE SAVE save_name [,...]

Parameters

save_name

Specifies the name of the save.

The maximum length of the save name is 39 characters. Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of save names may be entered.

Description

The MDMS CREATE SAVE command creates a new save definition in the MDMS database. Saves are used to copy online disk data to an archive for the purposes of data safety (backup), disaster recovery, or long term off-line archival.

When creating a new object record, MDMS supplies default values on attributes you do not specify. Alternatively, they can be inherited from a specified SAVE using the /INHERIT qualifier.

The data specifications for saves can be supplied in one of two ways:

- Using the /INCLUDE, /EXCLUDE, /DATA_SELECT_TYPE and /SOURCE_NODE qualifiers. These qualifiers can be used to specify a set of data specifications of a single data type that can be saved. These are not positional qualifiers. This option is recommended for most saves, and this information is stored in a default selection that is mapped to the save by MDMS. The default selection name is:
  save_name_SAVE_SEL_DEF
- For more complex data specifications, you can create your own selections and map them to the save using the /SELECTIONS qualifier. This options gives you more granularity in data selection, and allows you to have mixed data select types in a single save.
  Saves are normally scheduled to execute at regular intervals according to your site-specific needs. If you wish to use one of the supplied frequency options, MDMS creates a schedule and initializes it to appropriate values. The schedule for any save is called
  save_name_SAVE_SCHED
  Alternatively, if you wish to define a schedule not handled in the supplied frequencies, you can use one of the following options:
- For scheduler types INTERNAL and EXTERNAL, you can define /FREQUENCY=CUSTOM, and modify the schedule to your own specification.
- For scheduler type SCHEDULER, you can define /FREQUENCY=EXPLICIT, and define a string to pass the explicit schedule to the scheduler in the qualifier /EXPLICIT_INTERVAL.

Privileges

The request requires MDMS_CREATE_ALL.

Restrictions

This command is restricted to nodes with an ABS license. The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default.

The /DELETE_INTERVAL and /KEEP qualifiers are mutually exclusive.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list. This is the default when specifying list items.

/ARCHIVE=(archive_name[,archive_name])
The /ARCHIVE qualifier allows you to specify one or two archives associated with the save. The first archive name is applicable to full and selective threads in saves. If specified, the second archive name is associated with incremental threads in saves. If a second name is not specified, incremental threads use the first archive name. For any thread, the catalog name from the first archive is always used. At least one archive name must be supplied for a save.

If an archive is not specified, the archive "SYSTEM_BACKUPS" is used by default.

/BASE_DATE=date
/NOBASE_DATE
The base date is used as a starting point for saves that have a repeating schedule frequency. Subsequent schedules are applied by adding the multiples of the frequency to the base date. If the save is not to be repeated, then no base date is needed.

By default, if a base date is not specified but a start date is, the base date is set to the start date. If neither is specified, the base date is not set and the save is not scheduled for execution.

/DATA_SELECT_TYPE=keyword
The /DATA_SELECT_TYPE qualifier specifies the type of data to save in the default selection. Select one of the following options:

- VMS_FILES
- VMS_SAVESET
- UNIX_FILES
- WINDOWS_FILES
- RDB_V42_DATABASE
- RDB_V42_STORAGE_AREA
- RDB_V51_DATABASE
- RDB_V51_STORAGE_AREA
- RDB_V60_DATABASE
- RDB_V60_STORAGE_AREA
- RDB_V61_DATABASE
- RDB_V61_STORAGE_AREA
- RDB_V70_DATABASE
- RDB_V70_STORAGE_AREA

If not specified, MDMS attempts to determine the data select type based on the include file syntax. If MDMS cannot determine this, VMS_FILES is used. The data select type specification is stored in the default selection.

/DELETE_INTERVAL=delta_time
The /DELETE_INTERVAL qualifier specifies the duration of certain saves after their start of execution. The qualifier is applicable only to saves with a with a scheduling frequency of ONE_TIME_ONLY.

For these saves, the save object (and any associated schedules and selections) are deleted after the delete interval has passed following the start of the save execution. If you do not wish the save to be deleted, specify /KEEP.

If not specified, the delete interval is 03-00:00:00 (3 days) for saves of frequency ONE_TIME_ONLY, and 0 for all other frequencies.

/DESCRIPTION="text"
Comments about the object. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. To clear the description, specify "".

/ENVIRONMENT=environment_name
The /ENVIRONMENT qualifier specifies the environment object to use for the save. Specify an environment name in the MDMS database.

If no environment is specified, one of the following defaults is used:

- The first archive name suffixed by "_ENV", if it exists
- Otherwise "DEFAULT_ENV"

/EPILOGUE="string"
/NOEPILOGUE (D)
The /EPILOGUE qualifier specifies a string to execute after each save thread (i.e. each include list item specification in the save). The string may be up to 80 characters and must be enclosed in quotes.

By default, no epilogue command is executed.

/EXCLUDE=(data_specification[,...])
/NOEXCLUDE (D)
The /EXCLUDE qualifier is used to exclude files that otherwise would be included with the /INCLUDE qualifier. This is used to exclude files for save or restore when a more general wild-card specification is specified for the include. The exclude specification is stored in the default selection.

This qualifier is not valid for UNIX or WINDOWS operations.

By default, no files are excluded.

/EXECUTION_NODES=(node_name[,...])
The /EXECUTION_NODES qualifier specifies one or more node names on which the save request can be executed. Any one of the nodes can be the execution node for the request. /GROUPS may also be specified.

If no nodes or groups are specified, the include specification uses the node on which the save was created.

/EXPLICIT_INTERVAL="string"
/NOEXPLICIT_INTERVAL (D)
When using scheduler type SCHEDULER, you can specify the scheduling frequency using /EXPLICIT_INTERVAL. Enter a string in a format known to the external scheduler. /NOEXPLICIT_INTERVAL clears the explicit interval. This qualifier is only applicable when /FREQUENCY=EXPLICIT.

By default, no explicit interval is defined.

/FREQUENCY=keyword
The /FREQUENCY qualifier specifies the scheduling frequency for this save. Select one of the following options:

- ONE_TIME_ONLY (D) - Scheduled one time only based on the base date or start date. This save cannot be rescheduled, and the save will automatically be deleted when the delete interval expires. This is the default.
- ON_DEMAND - Scheduled on demand when a start date (or base date) is entered. Can be rescheduled by entering a new start date (or base date).
- DAILY - Scheduled on a daily basis at the time contained within the base date. Example: 21-JAN-2001, 22-JAN-2001...

- DAILY_FULL_WEEKLY - Scheduled on a daily basis, with a full save on the base date and weekly anniversaries, and incremental saves on other days.
  Example: 21-JAN-2001, 22-JAN-2001...
- WEEKLY - Scheduled on a weekly basis on anniversaries of the base date day (MON-FRI) and time.
  Example: 21-JAN-2001, 28-JAN-2001...
- BIWEEKLY - Scheduled on a biweekly (once every two weeks) basis on anniversaries of the base date day (MON-FRI) and time.
  Example: 21-JAN-2001, 04-FEB-2001...
- SEMI_MONTHLY - Scheduled twice a month based on the base date (1-31) and time, and either two weeks before or after the date.
  Example: 21-JAN-2001, 07-FEB-2001... ++CHECK++
- MONTHLY - Scheduled monthly based on the base date (1-31) and time and subsequent monthly anniversaries.
  Example: 21-JAN-2001, 21-FEB-2001...
- QUARTERLY - Scheduled once every three months on the base date (1-31) and time, and three-month anniversaries thereafter.
  Example: 21-JAN-2001, 21-APR-2001...
- SEMI_ANNUALLY - Scheduled once every six months on the base date (1-31) and time, and six-month anniversaries thereafter.
  Example: 21-JAN-2001, 21-JUL-2001...
- ANNUALLY - Scheduled once every year on the base date (1-31) and time, and twelve-month anniversaries thereafter.
  Example: 21-JAN-2001, 21-JAN-2002...
- LOG_2 - Scheduled daily based on a full and incremental algorithm to optimize save/restore times (see Guide to Operations)
  Example: 21-JAN-2001, 22-JAN-2001...
- LOG_3 - Scheduled daily based on a full and incremental algorithm to optimize save/restore times (see Guide to Operations)
  Example: 21-JAN-2001, 22-JAN-2001...
- NEVER - Cannot be scheduled. This option can be used as a placeholder. The frequency must be changed to something else before the save can execute.
- EXPLICIT - When using scheduler type SCHEDULER, this option utilizes the string in EXPLICIT_INTERVAL to determine the scheduling frequency.
- CUSTOM - When using scheduler types INTERNAL or EXTERNAL, this option utilizes a user-defined schedule object, which has the frequency defined internally. Use this option if none of the above scheduling frequencies is appropriate.

/GROUPS=(group_name[,...])
/NOGROUPS
Specifies the names of groups of execution nodes on which this save can be run. Usually, only one group is specified. If neither /EXECUTION_NODES nor /GROUPS are specified, the node from which the command was issued is used as the node name.

/INCLUDE=(data_specification[,...])
/NOINCLUDE (D)
The /INCLUDE qualifier allows you to enter a list of up to 24 data_specifications to save. The data specifications can be OpenVMS disks, files, Windows or UNIX path and file specifications, or Rdb databases or storage areas. However, all specifications must be of the same data select type, as specified in the /DATA_SELECT_TYPE qualifier. The include specification is stored in the default selection.

The include specification, together with the data select type, exclude and source_node specifications are stored in a default selection object which has the name:

save_name_SAVE_SEL_DEF

This selection object can be modified independently to add such refinements as exclude lists, and additional selections can be added to any save.

/NOINCLUDE removes the include file specification.

By default, there is no include specification.

/INCREMENTAL
/NOINCREMENTAL (D)
The /INCREMENTAL qualifier specifies that the save should be an incremental save. If not specified, the save will be a full save or selective save based on the data_specification in the associated include specification or selections. /NOINCREMENTAL clears the incremental specification.

The default is /NOINCREMENTAL.

/INHERIT=save_name
This qualifier allows you to specify an existing save record from which the new object record inherits attribute values. MDMS supplies default values if you specify none. All attributes may be inherited with the exception of the following:

Save Name

/KEEP
The /KEEP qualifier indicates that the save is not to be automatically deleted, and clears the delete interval.

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username.

The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the cluster_name::username of the user entering the CREATE command on the object from a node in the cluster.

/PROLOGUE="string"
/NOPROLOGUE (D)
The /PROLOGUE qualifier specifies a string to execute before each save thread (i.e. each include list item specification in the save). The string may be up to 80 characters and must be enclosed in quotes.

By default, no prologue command is executed.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

/SELECTIONS=(selection[,...])
/NOSELECTIONS
When using the default selection, this qualifier is not needed, as MDMS adds it automatically. However, if you want to add your own selections to this save, you add them with the /SELECTION qualifier. By default a selection is added, but you can also remove selections with the /REMOVE qualifier, and replace selections with the /REPLACE qualifier. /NOSELECTIONS removes all selections from the save.

/SEQUENCE_OPTION=keyword
The /SEQUENCE_OPTION qualifier defines the type of sequencing used during the save operation. Select one of the following options:

- SEQUENTIAL - Performs each save thread sequentially. Each save thread must fully complete before the next one starts.
- OVERLAPPED - Starts the next save thread as soon as the backup drive or device is available for use.

The default is SEQUENTIAL.

/SKIP_TIME=delta_time
/NOSKIP_TIME (D)
It is possible to run a save at any time, including times when it is not normally scheduled. You may, for example, want to run a save three hours early, or you may want to run an extra save for some reason.

By default, if you run a save at an unscheduled time, MDMS will also run it at its regularly scheduled time as well. If you do not want this, then enter a skip time when starting the save at the non-scheduled time. The skip time will be added to the start time, and MDMS will not schedule the save until at least after the skip_time value.

The default is /NOSKIP_TIME.

/SOURCE_NODE=node_name
/NOSOURCE_NODE (D)
The /SOURCE_NODE qualifier specifies the node from which UNIX or WINDOWS files are saved. This qualifier does not apply to VMS_FILES or Rdb databases, where the source node is the execution node. The source_node specification is stored in the default selection.

By default, no source node is defined, but is required for a UNIX or WINDOWS save to function correctly.

/START_DATE[=date]
/NOSTART_DATE
The /START_DATE qualifier is used to schedule a save to start at an unscheduled time. The /BASE_DATE is used to specify the normal scheduled times. By default, the start date is set to the base date if not separately specified.

The date value for the /START_DATE is optional. If not specified, the default is now. /NOSTART_DATE clears the next start date, and the save will not be scheduled.

Examples

```
$ MDMS CREATE SAVE SAVE1 -

_$ /ARCHIVE=SAVE1_ARC -

_$ /ENVIRONMENT=SAVE1_ENV -

_$ /INCLUDE=(USER1$:[SMITH...]*.*;*, -

_$ USER2$:[JONES...]*.*;*)

_$ /EXECUTION_NODES=NOD001 -

_$ /START
```

This commands creates a save SAVE1, which uses archive SAVE1_ARC and environment SAVE1_ENV. The data to save is NOD001::USER1$:[SMITH...]*.*;* and NOD001::USER2$:[JONES...]*.*;*, which will be saved to their original locations. The selection type is VMS_FILES. The /START qualifier starts the save immediately, and the save is a ONE_TIME_ONLY.

```
$ MDMS CREATE SAVE SAVE2 -

_$ /SELECTIONS=(SELECT1, SELECT2, SELECT3) -

_$ /ARCHIVE=SYSTEM_BACKUPS -

_$ /ENVIRONMENT=SYSTEM_BACKUPS_ENV

_$ /FREQUENCY=DAILY_FULL_WEEKLY

_$ /BASE_DATE=01-JAN-2001:20:00:00
```

This command creates a save SAVE2, whose data selections are contained in user-created selection objects SELECT1, SELECT2 AND SELECT3. This save is regularly scheduled with DAILY_FULL_WEEKLY, which means that a full save is performed on the base date and weekly anniversaries, and incremental saves are performed on all other days. The base time is 8:00 pm. The archive SYSTEM_BACKUPS and environment SYSTEM_BACKUPS_ENV are used.

MDMS CREATE SCHEDULE

The MDMS CREATE SCHEDULE command creates a new schedule definition in the MDMS database. Schedule is a new object type.

Equivalent ABS Command: None

Format:

MDMS CREATE SCHEDULE schedule_name

Parameters

schedule_name

Specifies the name of the schedule.

The maximum length of the schedule name is 63 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of schedule names may be entered.

Description

The MDMS CREATE SCHEDULE command creates a new schedule definition in the MDMS database. You can use schedules to execute any DCL command (including MDMS commands)at regular intervals.

Schedules are used by MDMS to execute saves and restores. However, these schedules are created implicitly by MDMS and do not need to be created with this command. However, you can modify CUSTOM schedules by using the SET SCHEDULE command.

When creating a new object record, MDMS supplies default values on attributes you do not specify. Alternatively, they can be inherited from a specified schedule using the /INHERIT qualifier.

Privileges

The request requires MDMS_CREATE_ALL.

Restrictions

The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object

- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list. This is the default when specifying list items.

/AFTER_SCHEDULE=(NAME=schedule_name, WHEN=option)
/NOAFTER_SCHEDULE
The /AFTER_SCHEDULE qualifiers specifies that this schedule is scheduled for execution after the AFTER_SCHEDULE name, under the circumstances defined in WHEN. This can be used to serialize a series of operations one after the other, and conditionally execute this schedule depending on the status of the AFTER_SCHEDULE.

The SCHEDULE should be a schedule name defined in the MDMS database. For WHEN, select one of the following:

ALL (D)	Unconditionally execute this schedule when the AFTER_SCHEDULE completes
ERROR	Execute this schedule if the AFTER_SCHEDULE completed with ERROR or FATAL status
FATAL	Execute this schedule if the AFTER_SCHEDULE completed with FATAL status
NONE	Do not execute this schedule (can be used as a placeholder)
SUCCESS	Execute this schedule if the AFTER_SCHEDULE completed with SUCCESS or INFORMATIONAL status
WARNING	Execute this schedule if the AFTER_SCHEDULE completed with WARNING, ERROR or FATAL status

If an /AFTER_SCHEDULE name is specified, the default WHEN option is ALL.

/NOAFTER_SCHEDULE removes the dependency to execute after another schedule.

There is a restriction with using the /AFTER_SCHEDULE qualifier. Only those schedules (created automatically by MDMS) that have an associated save can be assigned to the /AFTER_SCHEDULE qualifier. Schedules that do NOT have an associated save cannot be assigned to the /AFTER_SCHEDULE qualifier. Hence, any schedule (one with an associated save, or one which executes DCL commands) can have a dependency on a schedule with an associated save, but not on a schedule which executes DCL commands. This is a current MDMS design limitation.

/COMMAND="string"
The /COMMAND qualifier specifies the command to submit to DCL when the schedule executes. Specify a valid DCL command line in quotes. This qualifier must be entered for the schedule to do any useful work.

/DATES=(date[,...])
/NODATES (D)
The /DATES qualifier specifies on which days of the month you wish the schedule to execute. Valid values are 1-31. You can enter a date, a list of dates, a range of dates and a list of ranges (e.g. 1-7, 15-21). /NODATES indicates that all dates are valid (1-31) and other criteria are used for scheduling. You can use the /ADD, /REMOVE and /REPLACE qualifiers to manipulate the dates list.

The default is /NODATES.

/DAYS=(day[,...])
/NODAYS (D)
The /DAYS qualifier specifies on which days of the week you wish the schedule to execute. Valid values use at least the first three letters of the days of the week (English only). You can enter a day, a list of days, a range of days and a list of ranges (e.g. MON-WED, SAT-SUN). /NODAYS indicates that all day are valid (MON-SUN) and other criteria are used for scheduling. You can use the /ADD, /REMOVE and /REPLACE qualifiers to manipulate the days list.

The default is /NODAYS.

/DESCRIPTION="text"
Comments about the object. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. To clear the description, specify "".

/EXCLUDE=(date[,...])
/NOEXCLUDE (D)
The /EXCLUDE qualifier specifies specific dates that you wish to exclude from execution, even though the other scheduling parameters would normally schedule on that date. This can be used to exclude scheduled operations on holidays for example. Enter one or more dates in OpenVMS date format (04-JUL-2001), separated by commas. You can specify dates up to 9 years in the future. /NOEXCLUDE removes all dates from the exclude list. You can use the /ADD, /REMOVE and /REPLACE qualifiers to manipulate the exclude list.

By default, no exclude dates are defined.

/INCLUDE=(date[,...])
/NOINCLUDE (D)
The /INCLUDE qualifier specifies specific dates that you wish to include for execution, even though the other scheduling parameters would normally not schedule on that date. This can be used to include operations on special days that require special attention. Enter one or more dates in OpenVMS date format (31-DEC-2001), separated by commas. You can specify dates up to 9 years in the future. /NOINCLUDE removes all dates from the include list. You can use the /ADD, /REMOVE and /REPLACE qualifiers to manipulate the include list.

By default, no include dates are defined.

/INHERIT=schedule_name
This qualifier allows you to specify an existing schedule record from which the new object record inherits attribute values. MDMS supplies default values if you specify none. All attributes may be inherited with the exception of the following:

Schedule Name

/MONTHS=(month[,...])
/NOMONTHS (D)
The /MONTHS qualifier specifies on which months of the year you wish the schedule to execute. Valid values use at least the first three letters of the months of the year (English only). You can enter a month, a list of months, a range of months and a list of ranges (e.g. JAN-MAR, JUL-SEP). /NOMONTHS indicates that all months are valid (JAN-DEC) and other criteria are used for scheduling. You can use the /ADD, /REMOVE and /REPLACE qualifiers to manipulate the months list.

The default is /NOMONTHS.

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username.

The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the cluster_name::username of the user entering the CREATE command on the object from a node in the cluster.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

/TIMES=(time[,...])
/NOTIMES (D)
The /TIMES qualifier specifies the times of the day you wish the schedule to execute. Enter from 1 to 100 times in OpenVMS format, separated by commas. For example (08:00, 10:00, 12:00, 14:00, 16:00). /NOTIMES clears out all times and effectively disables the schedule from execution. /TIMES=00:00 signifies midnight.

By default, no times are set.

/WEEKS=(week[,...])
/NOWEEKS (D)
The /WEEKS qualifier specifies on which weeks of the year you wish the schedule to execute.Valid values are 1-53. You can enter a week, a list of weeks, a range of weeks and a list of ranges (e.g. 1-7, 15-21, 31-53). /NOWEEKS indicates that all weeks are valid (1-53) and other criteria are used for scheduling. You can use the /ADD, /REMOVE and /REPLACE qualifiers to manipulate the weeks list.

The default is /NOWEEKS.

Examples:

```
$ MDMS CREATE SCHEDULE SCHED1 -

_$ /DAYS=SUN -

_$ /TIMES=20:00 -

_$ /COMMAND="@USER1:[SMITH]SCHED1.COM"
```

This command creates a schedule called SCHED1, that executes every Sunday at 20:00 by issuing the command procedure @USER1:[SMITH]SCHED1.COM.

```
$ MDMS CREATE SCHEDULE SCHED2 -

_$ /MONTHS=(JAN, APR, JUL, OCT) -

_$ /DATES=1

_$ /TIMES=00:00

_$ /COMMAND="MDMS DELETE SAVE *QUARTER*"
```

This command creates a schedule called SCHED2, that executes every three months on the first of January, April, July and October at midnight, and executes an MDMS command to delete saves.

MDMS CREATE SELECTION

The MDMS CREATE SELECTION command creates a new selection definition in the MDMS database. Selection is a new object type.

Equivalent ABS Command: None.

Format:

MDMS CREATE SELECTION selection_name

Parameters

selection_name

Specifies the name of the selection.

The maximum length of the selection name is 63 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of selection names may be entered.

Description

The MDMS CREATE SELECTION command creates a new selection definition in the MDMS database. Selections are used to specify the data to be saved or restored in those objects. Under most circumstances, you can specify the data to be saved or restored in the appropriate save or restore object, and MDMS will implicitly create a default selection. However, there may be times that you wish to create your own selections, and add them to the relevant save or restore object. This may be because you wish to specify a mixture of data select types in a save/restore, or specific file dates in a save.

You may modify both user-created and default selections using the SET SELECTION command.

Many of the qualifiers for selections map to the positional qualifiers on saves and restores with the pre-V4 ABS SAVE and RESTORE commands.

When creating a new object record, MDMS supplies default values on attributes you do not specify. Alternatively, they can be inherited from a specified SELECTION using the /INHERIT qualifier.

Privileges

The request requires MDMS_CREATE_ALL.

Restrictions

This command is restricted to nodes with an ABS license.

The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list. This is the default when specifying list items.

/AGENT_QUALIFIERS="string"
/NOAGENT_QUALIFIERS (D)
The /AGENT_QUALIFIERS qualifier allows you to specify a backup-agent specific qualifier or set of qualifiers. This qualifier is valid for all data select types. Specify up to 80 characters enclosed in quotes. /NOAGENT_QUALIFIERS removes all the agent qualifiers.

By default, no agent qualifiers are defined.

/BEFORE_DATE=date
/NOBEFORE_DATE (D)
The /BEFORE_DATE is used to select files that have a date before the specified date. The type of date in question is specified by the /DATE_TYPE qualifier. If /NOBEFORE_DATE is specified, files are not selected using a before date.

/BEFORE_DATE is applicable only to saves.

The default is that no before date is specified.

/CONFLICT_OPTIONS=option
The /CONFLICT_OPTIONS is used to determine the disposition of a file if an existing file already exists. This qualifier is applicable only to restores. Select one of the following:

- NEW_VERSION - Create a new version of the file
- OVERLAY_VERSION - Overlay the data in the current version of the file, but maintain the existing file header
- REPLACE_VERSION - Delete the existing version and replace it with the archive version
- RETAIN_VERSION (D) - Leave the existing version and do not restore the version from the archive

If not specified, the default is RETAIN_VERSION.

/DATA_SELECT_TYPE=keyword
The /DATA_SELECT_TYPE qualifier specifies the type of data to restore in the default selection. Select one of the following options:

- VMS_FILES
- VMS_SAVESET
- UNIX_FILES
- WINDOWS_FILES
- RDB_V42_DATABASE
- RDB_V42_STORAGE_AREA
- RDB_V51_DATABASE
- RDB_V51_STORAGE_AREA
- RDB_V60_DATABASE
- RDB_V60_STORAGE_AREA
- RDB_V61_DATABASE
- RDB_V61_STORAGE_AREA
- RDB_V70_DATABASE
- RDB_V70_STORAGE_AREA

If not specified, MDMS attempts to determine the data select type based on the include file syntax. If MDMS cannot determine this, VMS_FILES is used.

/DATE_TYPE
The /DATE_TYPE qualifier specifies which date in a file is used using the /BEFORE_DATE and/or /SINCE_DATE in a selection. Select one of the following date types:

- BACKUP - The BACKUP date is used for selection
- EXPIRED - The expiration date is used for selection. This can also be configured as last access date
- CREATED - The creation date is used for selection.
- MODIFIED (D) - The revision date is used for selection

If not specified, MODIFIED is the default.

/DESCRIPTION="text"
Comments about the object. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. To clear the description, specify "".

/EXCLUDE=(data_specification[,...])
/NOEXCLUDE (D)
The /EXCLUDE qualifier is used to exclude files that otherwise would be included with the /INCLUDE qualifier. This is used to exclude files for save or restore when a more general wildcard specification is specified for the include.

This qualifier is not valid for UNIX or WINDOWS operations.

By default, no files are excluded.

/INCLUDE=(data_specification[,...])
/NOINCLUDE
The /INCLUDE qualifier allows you to enter a list of up to 24 data_specifications to save or restore. The data specifications can be OpenVMS disks, files, Windows or UNIX path and file specifications, or Rdb databases or storage areas. However, all specifications must be of the same data select type, as specified in the /DATA_SELECT_TYPE qualifier. /NOINCLUDE clears the include specification.

/INHERIT=selection_name
This qualifier allows you to specify an existing selection record from which the new object record inherits attribute values. MDMS supplies default values if you specify none. All attributes may be inherited with the exception of the following:

Selection Name

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username.

The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the cluster_name::username of the user entering the CREATE command on the object from a node in the cluster.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

/SINCE_DATE=date
/NOSINCE_DATE
The /SINCE_DATE is used to select files that have a date after the specified date. The type of date in question is specified by the /DATE_TYPE qualifier. If /NOSINCE_DATE is specified, files are not selected using a since date.

You can specify date as an absolute date, as a combination of absolute and delta times, or as one of the following keywords: TODAY (default), TOMORROW, or YESTERDAY.

/SINCE_DATE is applicable only to saves.

The default is that no since date is specified.

/SOURCE_NODE=node_name
/NOSOURCE_NODE (D)
The /SOURCE_NODE qualifier specifies the node on which UNIX or WINDOWS files are saved and restored. This qualifier does not apply to VMS_FILES or Rdb databases, where the source node is the execution node.

By default, no source node is defined, but is required for a UNIX or WINDOWS save or restore to function correctly.

Examples:

```
$ MDMS CREATE SELECTION SEL1 -

_$ /INCLUDE=(USER1:[BACON]*.*;*) -

_$ /EXCLUDE=(USER1:[BACON]*.LOG;*, *.TMP;*) -

_$ /SINCE=24-MAY-2001 -

_$ /DATE_TYPE=MODIFIED -
```

This command creates a selection SEL1 that includes files USER1:[BACON]*.*;* that have been modified since 24-May-2001, but excluding all .LOG and .TMP files in that directory.

```
$ MDMS CREATE SELECTION SEL2 -

_$ /INCLUDE=(/usr/smith/) -

_$ /SOURCE_NODES=XTRIX
```

This command creates a selection SELs that includes files /usr/smith/ on node XTRIX.

MDMS CREATE VOLUME

The MDMS CREATE VOLUME command creates a new volume definition in the MDMS volume database.

Equivalent STORAGE Command: STORAGE ADD VOLUME

Format:

MDMS CREATE VOLUME [volume_id [,...]]

Parameters

volume_id

Specifies the volume ID of the volume to be added. The volume ID is the external label for the volume. Alternatively, a volume range, separated by a dash, may be specified. A volume range is a numeric range for up to the last five characters of the volume ID.

Example ranges are (ABC001-ABC250), (T20120-T20125).

The maximum length of the volume ID is 6 characters. Valid characters are " ,!,",%-?,A-Z,_".

There is a limit of 1000 volumes in a valid range, and ranges must be numerically increasing.

Either a volume ID or a volume range must be entered in the command, unless the /VISION qualifier is used to automatically determine volume identifiers in a jukebox.

A comma-separated list of volume IDs or ranges may be entered.

Description

The MDMS CREATE VOLUME command creates a new volume definition in the MDMS volume database. The external label will be used to track the volume in the database. The external label must match the on-tape internal volume label when the volume is initialized.

Privileges

The request requires MDMS_CREATE_ALL, MDMS_CREATE_VOLUME or MDMS_CREATE_POOL.

If the user is creating a volume in a named pool to which he is authorized, MDMS_CREATE_POOL is sufficient. The /POOL qualifier must be specified. Otherwise the request requires MDMS_CREATE_VOLUME or MDMS_CREATE_ALL.

Several protected qualifiers also require MDMS_SET_PROTECTED since these attributes are normally managed by MDMS and should not be modified by the user, unless in case of recovery from abnormal situations.

Restrictions

The /VISION qualifier is incompatible with the volume_id parameter.

The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/ACCOUNT="text"
Defines the account name of the volume. The account name may be up to 31 characters. If it contains spaces, it must be enclosed in quotation marks. Specify " " to clear the account name.

This qualifier requires the right MDMS_SET_PROTECTED.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list. This is the default when specifying list items.

/ALLOCATED_DATE=date
/NOALLOCATED_DATE
Specifies the date the volume was allocated. Normally this is set by MDMS. Specify a VMS absolute date and time. Specify /NOALLOCATED_DATE to clear the allocated date.

This qualifier requires the right MDMS_SET_PROTECTED.

/AVAILABLE
The /AVAILABLE qualifier moves a volume from the UNAVAILABLE state to the state it was previously in prior to the UNAVAILABLE state. The volume may then be moved into the TRANSITION or FREE state if the scratch date and/or transition time have expired.

/BLOCK_FACTOR=number
Specifies the block factor for the volume. The default is a block factor of zero.

/BRAND="text"
The media manufacturer. The maximum length of the brand name is 31 characters. If it contains spaces it must be contained in quotation marks. Specify "" to clear the brand.

/CLEANED_DATE=date
/NOCLEANED_DATE
This qualifier specifies the date the volume was last cleaned and is entered as a VMS absolute time. Specify /NOCLEANED_DATE to clear the cleaned date.The default cleaned date is the date/time the volume was created.

/CREATION_DATE=date
/NOCREATION_DATE
The date the volume is created. This attribute is set by MDMS, but may be overridden if necessary. The default creation date is the date/time the volume was created.

This qualifier requires the right MDMS_SET_PROTECTED.

/DEALLOCATED_DATE=date
/NODEALLOCATED_DATE
This qualifier specifies the actual deallocation date for the volume. Specify a VMS absolute time. This date is normally set by MDMS.

This qualifier requires the right MDMS_SET_PROTECTED.

/DESCRIPTION="text"
Comments about the volume. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. Specify "" to clear the description.

/DRIVE=drive_name
/NODRIVE
This is a protected field that should be modified only to recover on error. Use the LOAD and UNLOAD commands to manipulate the drive name under normal operation. This qualifier specifies the drive that the volume currently resides in or last resided in. This is normally set up by MDMS. To clear the drive, specify /NODRIVE.

This qualifier requires the right MDMS_SET_PROTECTED.

/FORMAT=keyword
Specifies the format of the tape. Possible values are:

ASCII

BACKUP

EBCDIC

NONE (D)

RMUBACKUP

/FREED_DATE=date
/NOFREED_DATE
Specifies the date the volume was last freed (i.e. put in the FREE state). Specify an OpenVMS absolute date and time. This is normally set up by MDMS. To clear the freed date, specify /NOFREED_DATE.

This qualifier requires the right MDMS_SET_PROTECTED.

/INHERIT=volume_id
This qualifier allows you to specify an existing volume record to inherit default attributes. The default is that MDMS supplies values you do not supply on creation. All attributes may be inherited with the exception of the following protected fields:

Account	Job name
Allocate date	Jukebox name
Accessed date	Magazine name
Available state	Owner
Creation date	Placement
Deallocated date	Slot
Drive name	State
Freed date	User name
Initialized date	Next and Previous Volumes (not settable)

/INITIALIZED_DATE=date
/NOINITIALIZED_DATE
Specifies the date the volume was last initialized. Specify a VMS absolute date and time. This is normally set up by MDMS. To clear the initialized date, specify /NOINITIALIZED_DATE.

This qualifier requires the right MDMS_SET_PROTECTED.

/IO_ERROR_COUNT=number
This qualifier allows you to set the number of I/O errors on the volume. The default value is zero.

/JOB_NAME="text"
This qualifier allows you to specify the last job that accessed the volume. The job name can be from 0 to 31 characters. If it contains spaces, it must be enclosed in quotation marks. Specify "" to clear the job name.

This qualifier requires the right MDMS_SET_PROTECTED.

/JUKEBOX=jukebox_name
/NOJUKEBOX
This is a protected field that should be modified only to recover on error. Use the MOVE VOLUME command to manipulate the jukebox name under normal operation. This qualifier allows you to specify that the volume is currently residing or last resided in the specified jukebox.

The maximum length of a jukebox name is 31 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

This is normally set up by MDMS. To clear the jukebox name, specify /NOJUKEBOX.

This qualifier requires the right MDMS_SET_PROTECTED.

/LAST_ACCESS_DATE=date
/NOLAST_ACCESS_DATE
Specifies the date the volume was last loaded by MDMS. Specify a VMS absolute date and time. This is normally set up by MDMS. To clear the last access date, specify /NOLAST_ACCESS_DATE.

This qualifier requires the right MDMS_SET_PROTECTED.

/MAGAZINE=magazine_name
/NOMAGAZINE
This is a protected field that should be modified only to recover on error. Use the MOVE VOLUME command to manipulate the magazine name under normal operation. This qualifier specifies the magazine name if the volume resides in a magazine. This is normally set up by MDMS. To clear the magazine name, specify /NOMAGAZINE.

This qualifier requires the right MDMS_SET_PROTECTED.

/MEDIA_TYPES=(media_type[,...])
/NOMEDIA_TYPES
The media type qualifier allows you to add the media type(s) that the volume can support. Multiple media types are supported prior to the volume being initialized. After initialization, a volume can only support one media type. The /REMOVE or /REPLACE qualifiers can be used to remove or replace objects in the list, rather than adding them by default. To specify the volume supports no media types, enter /NOMEDIA_TYPES. If a volume is created with no media types, the default media type from the domain record is used.

/MOUNT_COUNT=number
Specifies the number of times the volume has been loaded by MDMS. Normally set up by MDMS. The default mount count is zero.

/OFFSITE=([LOCATION=location][,[NO]DATE[=date]])
/NOOFFSITE
This qualifier specifies the date that the volume is to be taken offsite and the offsite location. The location field is required when using the /OFFSITE qualifier if no location has been previously specified. The LOCATION keyword cannot be negated and if specified must point to a valid location object. Specify a VMS absolute or delta time in the date field. The NODATE keyword may be used to remove the date. This has the effect of disabling the schedule for the volume, while retaining the location. To clear the offsite date specify /NOOFFSITE. If a volume is under magazine control, the /OFFSITE qualifier is not allowed. The volume uses the values in the magazine.

The default offsite location is that stored in thedomain object.

/ONSITE=([LOCATION=location][, [NO]DATE=date])
/NOONSITE
This qualifier specifies the date that the volume is to be brought back onsite and the onsite location. The location field is required when using the /ONSITE qualifier if no location has been previously specified. The LOCATION keyword cannot be negated and if specified must point to a valid location object. Specify a VMS absolute or delta time in the date field. The NODATE keyword may be used to remove the date. This has the effect of disabling the schedule for the volume, while retaining the location. To clear the onsite date specify /NOONSITE. If a volume is under magazine control, the /ONSITE qualifier is not allowed. The volume uses the values in the magazine.

The default onsite location is that stored in thedomain object.

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username.

The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the cluster_name::username of the user entering the CREATE command on the object from a node in the cluster.

/OWNER=[owner_name]
/NOOWNER
This qualifier specifies the owner UIC of a volume. The owner UIC field must be a UIC in the format [USER] or [group, user]. This is normally set up by MDMS on allocate volume. To clear the owner UIC field, specify /NOOWNER_NAME_UIC.

This qualifier requires the right MDMS_SET_PROTECTED.

/PLACEMENT=keyword
This is a protected field that should be modified only to recover on error. Use the MOVE, LOAD or UNLOAD commands to manipulate the placement field under normal operation. This qualifier defines the current placement of the volume. This is normally managed by MDMS. Select one of the following options:

DRIVE

ONSITE

MAGAZINE

JUKEBOX

OFFSITE

MOVING

If a magazine name is specified on the /MAGAZINE qualifier, the volume placement can be in one of three states:

MAGAZINE

DRIVE

MOVING

During a MOVE, LOAD or UNLOAD, a volume's placement may be set to MOVING indicating that the volume is being moved. If a volume is in a magazine, it is set to MOVING when the volume is being loaded or unloaded to/from a drive.

This qualifier requires the right MDMS_SET_PROTECTED.

/POOL=pool_name
/NOPOOL (D)
The pool in which the volume belongs. The maximum length of the pool name is 31 characters. Spaces are not allowed in the pool name. If no pool is specified, the volume is considered to be part of a scratch pool and can be allocated by any user.

/PREINITIALIZED
/NOPREINITIALIZED (D)
This qualifier specifies whether the volume has been initialized before creation.
If /PREINITIALIZED is specified, the volume is placed in the FREE state rather than the UNINITIALIZED state.

/PROTECTION=protection
The protection code for the volume. Use the standard OpenVMS protection code format. This protection is written to volumes when initialized by MDMS. If not specified, the default protection from the domain record is used.

/PURCHASED_DATE=date
/NOPURCHASED_DATE
The date when the volume was purchased. The date should be specified as an OpenVMS absolute time. Specify /NOPURCHASED_DATE to clear the purchased date. The default purchased date is the date/time that the volume was created.

/RECLENGTH=number
This qualifier specifies the record length used on the volume. The default record length is zero.

/RELEASE
This qualifier puts the volume into the FREE state from the TRANSITION state. It is not valid to release an allocated volume.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

/RETAIN
This qualifier puts the volume that is in the FREE state or TRANSITION state back into the allocated state with the former owner as the current owner.

/SCRATCH_DATE=date
/NOSCRATCH_DATE
The /SCRATCH_DATE qualifier specifies the planned date to return the volume from the ALLOCATED state to either the TRANSITION state or the FREE state. Specify /NOSCRATCH_DATE if the volume should not automatically transition from the ALLOCATED state.

/SLOTS=(range[,...])
/NOSLOTS
This qualifier specifies the jukebox or magazine slot that the volume currently resides in. Specify a number in the range of the jukebox or magazine. This is normally set up by MDMS. If the volume does not currently reside in a jukebox or magazine slot, specify /NOSLOTS.

If no volume ID is specified, or a volume range is specified, you can specify a slot range, and each volume will be placed in each slot in order. For a single volume, specify a single slot. This qualifier requires the right MDMS_SET_PROTECTED.

/SPACES=(range[,...])
/NOSPACES
This qualifier specifies the non-jukebox space in the specified location that the volume resides in. If the volume does not reside in a location space, specify /NOSPACES. Use a space range only when creating multiple volumes - each volume will be placed in each space in order. For a single volume, specify a single space.

/STATE=keyword
This is a protected field that should be modified only to recover on error. Use the ALLOCATE VOLUME or DEALLOCATE VOLUME command to manipulate the state field under normal operation. This qualifier allows you to modify the state of the volume. This is normally set up by MDMS and manual modification is not recommended. The keyword values are:

ALLOCATED

FREE

TRANSITION

UNAVAILABLE

UNINITIALIZED

This qualifier requires the right MDMS_SET_PROTECTED.

/TIMES_CLEANED=number
This qualifier allows you to specify the number of times the volume has been cleaned. The default is zero.

/TRANSITION_TIME=delta_time
/NOTRANSITION_TIME
The /TRANSITION_TIME qualifier specifies that the volume enters the TRANSITION state when the scratch date is reached, and is to stay in the TRANSITION state for the specified delta time. When the transition time has expired, the volume enters the FREE state. The /NOTRANSITION_TIME qualifier specifies that the volume enters the FREE state directly at the scratch date.

/UNAVAILABLE
Puts the volume in the UNAVAILABLE state. The previous state is retained for when the volume is made available again.

/USER_NAME=username
/NOUSER_NAME
Specifies the user for the volume. The username can be from 1-31 characters, and must reflect an authorized VMS username. To clear the username, enter /NOUSER_NAME.

This qualifier requires the right MDMS_SET_PROTECTED.

/VISION
This qualifier specifies that volume IDs are to be read using a vision system in a suitably-equipped jukebox. No volume ID or volume range should be specified when using this qualifier. Valid only for MRD jukeboxes equipped with a VISION system.

Examples

```
$ MDMS CREATE VOLUME ABC001 /MEDIA=TK85K -

/ONSITE=(LOCATION=SHELF2) /SPACES=1
```

This command creates a new volume definition for volume ABC001, of media type TK85K, which is stored in the location SHELF2, space 1.

```
$ MDMS CREATE VOLUME /INHERIT=DEF000 -

/JUKEBOX=JUKE_1 /SLOTS=(0-50) /VISION
```

This command creates volume records for the newly imported volumes in slots 0-50 of the jukebox JUKE_1, and the volume labels are generated using the vision system, and other attributes are inherited from volume DEF000.

```
$ MDMS CREATE VOLUME HS0001-HS0007 /INHERIT=TK85MG  -

/MAGAZINE=TX877A /SLOTS=(0-6)
```

This command creates seven volume records HS0001 HS0007, which are stored in magazine TX877A in slots 0-6 respectively, and other attributes are inherited from volume TK85MG.

MDMS DEALLOCATE DRIVE

The MDMS DEALLOCATE DRIVE command deallocates a drive.

Equivalent STORAGE Command: None

Format:

MDMS DEALLOCATE DRIVE drive_name

Parameters

drive_name

Specifies the drive name to be deallocated. Specify a drive name or the logical name previously defined in the allocate.

The maximum length of the drive name or logical name is 31 characters. Valid characters are "$,-,0-9,A-Z,_,a-z".

Description

The MDMS DEALLOCATE DRIVE command deallocates a drive. If a logical name is supplied for the drive_name parameter, the logical name will be deassigned.

Privileges

The request requires MDMS_DEALLOCATE_ALL or MDMS_DEALLOCATE_OWN.

Restrictions

Can only be issued by the process that allocated the drive. If that process terminates, the drive is automatically deallocated.

Qualifiers

None

Examples

```
$ MDMS DEALLOCATE DRIVE MYDRIVE
```

This command deallocates the drive assigned to the MYDRIVE logical and deasigns the logical name MYDRIVE.

```
$ MDMS DEALLOCATE DRIVE $1$MUA1
```

This command deallocates drive 1MUA1.

MDMS DEALLOCATE VOLUME

The MDMS DEALLOCATE VOLUME command puts an allocated volume in either the transition state or the free state, depending on volume attributes, which can be overridden in the command.

Equivalent STORAGE Command: STORAGE DEALLOCATE

Format:

MDMS DEALLOCATE VOLUME [volume_id]

Parameters

volume_id

Specifies the volume ID of the volume to deallocate. This parameter is required except when the /SCHEDULE qualifier is given, in which case it must be omitted.

The maximum length of a volume ID is 6 characters. Valid characters are " ,!,",%-?,A-Z,_".

Description

The MDMS DEALLOCATE VOLUME command puts an allocated volume in either the TRANSITION state or the FREE state, depending on volume attributes, which can be overridden in the command.

In addition, this command will update the state of the volume to FREE if the deallocated date plus transition time has expired, or if you issue a DEALLOCATE VOLUME/STATE=FREE command. If you deallocate a volume set, the volume set relationships are invalidated, but can be recovered on a SET VOLUME/REATIN. The volume set relationships are deleted on the next allocation of the volume.

Privileges

The request requires MDMS_DEALLOCATE_ALL or MDMS_DEALLOCATE_OWN.

If the user is deallocating a volume owned by him, MDMS_DEALLOCATE_OWN is sufficient. If the user is deallocating on behalf of another user with the /USER_NAME qualifier, then the request requires MDMS_DEALLOCATE_ALL.

If the /STATE or /TRANSITION_TIME qualifiers are entered, the user needs MDMS_SET_ALL if the /USER_NAME qualifier is specified, or MDMS_SET_OWN or MDMS_SET_POOL.

Restrictions

The /SCHEDULE and volume_id parameters are incompatible.

The /SCHEDULE and /NOVOLSET qualifiers are incompatible.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/SCHEDULE
The /SCHEDULE qualifier selects volumes whose scratch dates or freed dates have expired, and moves them into the TRANSITION state or FREE state respectively. No volume_id parameter is allowed when this qualifier is given.

/STATE=state
Specifies the state in which to place the deallocated volume. The valid state values are FREE and TRANSITION. If the state is not specified and no transition time is specified, the deallocation state in the domain record is used.

This qualifier requires the right MDMS_SET_OWN or MDMS_SET_POOL, or MDMS_SET_ALL if the /USER_NAME qualifier is used.

/TRANSITION_TIME=delta_time
/NOTRANSITION_TIME
Modifies the amount of time, as a delta time, that a volume will remain in the TRANSITION state before moving to the FREE state. Use the standard OpenVMS delta time format to specify a delta time for the transition duration. If not specified, the existing transition time in the volume record is used, and if none, the default transition time in the domain record is used.

This qualifier requires the right MDMS_SET_OWN or MDMS_SET_POOL, or MDMS_SET_ALL if the /USER_NAME qualifier is used.

/USER_NAME=username
Deallocate a volume which is owned by the specified user. The maximum length of the user-name is 31characters.

This qualifier requires the right MDMS_DEALLOCATE_ALL.

/VOLSET (D)
/NOVOLSET
Indicates that the entire volume set which contains the volume ID is to be deallocated. The default of /VOLSET deallocates all volumes in the volume set. If /NOVOLSET is specified, the specified volume is deallocated. This qualifier is ignored if the volume is not in a set. You cannot deallocate the first volume in a volume set using /NOVOLSET.

Examples

```
$ MDMS DEALLOCATE VOLUME VOL008 /NOVOLSET /STATE=FREE
```

This command deallocates volume VOL008 for the current user and places the volume in the FREE state.

```
$ MDMS DEALLOCATE VOLUME ACF342 /USER_NAME=SMITH
```

This command deallocates volume ACF342 which was allocated to user SMITH.

```
$ MDMS DEALLOCATE VOLUME VOL002 /VOLSET
```

This command deallocates all volumes in the set that contains volume VOL002 for the current user. The volumes are also unbound from the volume set.

```
$ MDMS DEALLOCATE VOLUME VOL3 /NOVOLSET
```

A volume set contains volumes VOL1, VOL2, VOL3, VOL4, VOL5. This command deallocates volume VOL2 for the current user and leaves two volume sets:
VOL1, VOL2 and VOL4, VOL5.

```
$ MDMS DEALLOCATE VOLUME/SCHEDULE
```

Deallocates all volumes whose scratch date has expired. Also, moves volumes into the FREE state if the freed date has expired.

MDMS DELETE ARCHIVE

The MDMS DELETE ARCHIVE command deletes a specified archive definition from the MDMS database.

Equivalent ABS Command: DELETE STORAGE_CLASS

Format:

MDMS DELETE ARCHIVE archive_name [,...]

Parameters

archive_name

Specifies the name of the archive.

The maximum length of the archive name is 63 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of archive names may be entered.

Description

The MDMS DELETE ARCHIVE command deletes a specified archive definition from the MDMS database.

Privileges

The request requires MDMS_DELETE_ALL.

Restrictions

This command is restricted to nodes with an ABS license.

Qualifiers

/OVERRIDE
The /OVERRIDE qualifier allows you to delete the archive even with outstanding references to it. This is not recommended unless you are sure that the archive will no longer be needed.

Example

```
$ MDMS DELETE ARCHIVE SYSTEM_BACKUPS_SPEC
```

This command deletes the archive definition for SYSTEM_BACKUPS_SPEC.

MDMS DELETE CATALOG

The MDMS DELETE CATALOG command deletes a specified catalog definition from the local ABS database.

Equivalent ABS Command: RUN SYS$SYSTEM:ABS$CATALOG_OBJECT

Format:

MDMS DELETE CATALOG catalog_name [,...]

Parameters

catalog_name

Specifies the name of the catalog.

The maximum length of the catalog name is 26 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of catalog names may be entered.

Description

The MDMS DELETE CATALOG command deletes a specified catalog definition from the local ABS database and deletes the releated catalog files.

Privileges

The request requires MDMS_DELETE_ALL.

Restrictions

This command is restricted to nodes with an ABS license.

Qualifiers

/NODE=node_name
The /NODE qualifier specifies on which node the catalog will be deleted.

The default is the node on which the DELETE CATALOG command is entered.

/OVERRIDE
The /OVERRIDE qualifier allows you to delete the catalog even with outstanding references to it. This is not recommended unless you are sure that the catalog will no longer be needed.

Example

```
$ MDMS DELETE CATALOG SYSTEM_CATALOG/OVERRIDE
```

This command deletes the catalog definition for SYSTEM_CATALOG, and performs the delete even if there are references to this catalog.

MDMS DELETE DRIVE

The MDMS DELETE DRIVE command deletes a specified drive definition from the MDMS database. The drive must be deallocated prior to being deleted.

Equivalent STORAGE Command: None

Format:

MDMS DELETE DRIVE drive_name [,...]

Parameters

drive_name

Specifies the name of the drive.

The maximum length of the drive name is 31 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of drive names may be entered.

Description

The MDMS DELETE DRIVE command deletes a specified drive definition from the MDMS database.

Privileges

The request requires MDMS_DELETE_ALL.

Restrictions

None

Qualifiers

None

Example

```
$ MDMS DELETE DRIVE $1$MUA5
```

This command deletes the drive definition for 1MUA5.

MDMS DELETE ENVIRONMENT

The MDMS DELETE ENVIRONMENT command deletes a specified environment definition from the MDMS database.

Equivalent ABS Command: DELETE ENVIRONMENT

Format:

MDMS DELETE ENVIRONMENT environment_name [,...]

Parameters

environment_name

Specifies the name of the environment.

The maximum length of the environment name is 63 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of environment names may be entered.

Description

The MDMS DELETE ENVIRONMENT command deletes a specified environment definition from the MDMS database.

Privileges

The request requires MDMS_DELETE_ALL.

Restrictions

This command is restricted to nodes with an ABS license.

Qualifiers

/OVERRIDE
The /OVERRIDE qualifier allows you to delete the environment even with outstanding references to it. This is not recommended unless you are sure that the environment will no longer be needed.

Example

```
$ MDMS DELETE ENVIRONMENT KELLIE_ENV
```

This command deletes the ENVIRONMENT definition for KELLIE_ENV.

MDMS DELETE GROUP

The MDMS DELETE GROUP command deletes a specified group definition from the MDMS database.

Equivalent STORAGE Command: None

Format:

MDMS DELETE GROUP group_name [,...]

Parameters

group_name

Specifies the name of the group.

The maximum length of the group name is 31 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of group names may be entered.

Description

The MDMS DELETE GROUP command deletes a specified group definition from the MDMS database.

Privileges

The request requires MDMS_DELETE_ALL.

Restrictions

None

Qualifiers

None

Example

```
$ MDMS DELETE GROUP HOSER
```

This command deletes the group definition for HOSER.

MDMS DELETE JUKEBOX

The MDMS DELETE JUKEBOX command deletes a specified jukebox definition from the MDMS database.

Before deleting a jukebox, it is highly recommended that any drives defined as being in the jukebox are also deleted (or modified), and volumes and magazines are moved out of the jukebox.

Equivalent STORAGE Command: None

Format:

MDMS DELETE JUKEBOX jukebox_name [,...]

Parameters

jukebox_name

Specifies the name of the jukebox.

The maximum length of the jukebox name is 31 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of jukebox names may be entered.

Description

The MDMS DELETE JUKEBOX command deletes a specified jukebox definition from the MDMS database. Before deleting a jukebox, it is highly recommended that any drives defined as being in the jukebox are also deleted (or modified), and volumes and magazines are moved out of the jukebox.

Privileges

The request requires MDMS_DELETE_ALL.

Restrictions

None

Qualifiers

None

Example

```
$ MDMS DELETE JUKEBOX JUKE_1
```

This command deletes the definition for jukebox JUKE_1.

MDMS DELETE LOCATION

The MDMS DELETE LOCATION command deletes a specified location definition from the MDMS database.

Equivalent STORAGE Command: None

Format:

MDMS DELETE LOCATION location [,...]

Parameters

location

Specifies the name of the location.

The maximum length of the location is 31 characters. Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of locations may be entered.

Description

The MDMS DELETE LOCATION command deletes a specified location definition from the MDMS database.

Privileges

The request requires MDMS_DELETE_ALL.

Restrictions

None

Qualifiers

None

Example

```
$ MDMS DELETE LOCATION ROOM_1
```

This command deletes the location definition for ROOM_1.

MDMS DELETE MAGAZINE

The MDMS DELETE MAGAZINE command deletes a specified magazine from the MDMS database.

Equivalent STORAGE Command: STORAGE REMOVE MAGAZINE

Format:

MDMS DELETE MAGAZINE magazine_name [,...]

Parameters

magazine_name

Specifies the name of the magazine.

The maximum length of the magazine name is 31 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of magazine names may be entered.

Description

The MDMS DELETE MAGAZINE command deletes a specified magazine definition from the MDMS database.

Privileges

The request requires MDMS_DELETE_ALL.

Restrictions

None

Qualifiers

None

Example

```
$ MDMS DELETE MAGAZINE MAG001
```

This command deletes the magazine MAG001.

MDMS DELETE MEDIA_TYPE

The MDMS DELETE MEDIA_TYPE command deletes a specified media type definition from the MDMS database.

Equivalent STORAGE Command: None

Format:

MDMS DELETE MEDIA_TYPE media_type [,...]

Parameters

media_type

Specifies the name of the media type.

The maximum length of the media type name is 31 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of media types may be entered.

Description

The MDMS DELETE MEDIA_TYPE command deletes a specified media type definition from the MDMS database.

Privileges

The request requires MDMS_DELETE_ALL.

Restrictions

None

Qualifiers

None

Example

```
$ MDMS DELETE MEDIA_TYPE TK87K
```

This command deletes the definition for media type TK87K.

MDMS DELETE NODE

The MDMS DELETE NODE command deletes a specified node definition from the MDMS database.

Equivalent STORAGE Command: None

Format:

MDMS DELETE NODE node_name [,...]

Parameters

node_name

Specifies the name of the node.

The maximum length of the node name is 31 characters. Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of node names may be entered.

Description

The MDMS DELETE NODE command deletes a specified node definition from the MDMS database.

Privileges

The request requires MDMS_DELETE_ALL.

Restrictions

None

Qualifiers

None

Example

```
$ MDMS DELETE NODE FUDGE
```

This command deletes the node name FUDGE.

MDMS DELETE POOL

The MDMS DELETE POOL command deletes a specified pool definition from the MDMS database.

Equivalent STORAGE Command: None

Format:

MDMS DELETE POOL pool_name [,...]

Parameters

pool_name

Specifies the name of the volume pool.

The maximum length of the pool name is 31 characters. Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of pool names may be entered.

Description

The MDMS DELETE POOL command deletes a specified pool definition from the MDMS database.

Privileges

The request requires MDMS_DELETE_ALL.

Restrictions

None

Qualifiers

None

Example

```
$ MDMS DELETE POOL SLSPOOL
```

This command deletes pool SLSPOOL.

MDMS DELETE RESTORE

The MDMS DELETE RESTORE command deletes a specified restore definition from the MDMS database.

Equivalent STORAGE Command: DELETE RESTORE

Format:

MDMS DELETE RESTORE restore_name [,...]

Parameters

restore_name

Specifies the name of the restore.

The maximum length of the restore name is 39 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of restore names may be entered. If /SCHEDULE is entered, a wildcard restore name may be specified.

Description

The MDMS DELETE RESTORE command deletes a specified restore definition from the MDMS database.

Privileges

The request requires MDMS_DELETE_ALL.

Restrictions

This command is restricted to nodes with an ABS license.

Qualifiers

/OVERRIDE
The /OVERRIDE qualifier allows you to delete the restore even with outstanding references to it. This is not recommended unless you are sure that the restore will no longer be needed.

/SCHEDULE
Deletes the restore request only if its frequency is marked as ONE_TIME_ONLY, and its delete interval has expired. Usable with a wildcard restore name.

Example

```
$ MDMS DELETE RESTORE BOBS_FILES_REST
```

This command deletes the restore definition for BOBS_FILES_REST.

MDMS DELETE SAVE

The MDMS DELETE SAVE command deletes a specified save definition from the MDMS database.

Equivalent STORAGE Command: DELETE SAVE

Format:

MDMS DELETE SAVE save_name [,...]

Parameters

save_name

Specifies the name of the save.

The maximum length of the save name is 39 characters. Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of save names may be entered.

If /SCHEDULE is entered, a wildcard save name may be specified.

Description

The MDMS DELETE SAVE command deletes a specified save definition from the MDMS database.

Privileges

The request requires MDMS_DELETE_ALL.

Restrictions

This command is restricted to nodes with an ABS license.

Qualifiers

/OVERRIDE
The /OVERRIDE qualifier allows you to delete the save even with outstanding references to it. This is not recommended unless you are sure that the save will no longer be needed.

/SCHEDULE
Deletes the save request only if its frequency is marked as ONE_TIME_ONLY, and its delete interval has expired. Usable with a wildcard save name.

Example

```
$ MDMS DELETE SAVE DENNIS_SAVE
```

This command deletes the SAVE definition for DENNIS_SAVE.

MDMS DELETE SCHEDULE

The MDMS DELETE SCHEDULE command deletes a specified schedule definition from the MDMS database.

Equivalent STORAGE Command: None

Format:

MDMS DELETE SCHEDULE schedule_name [,...]

Parameters

schedule_name

Specifies the name of the SCHEDULE.

The maximum length of the schedule name is 63 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of schedule names may be entered.

Description

The MDMS DELETE SCHEDULE command deletes a specified schedule definition from the MDMS database.

Privileges

The request requires MDMS_DELETE_ALL.

Restrictions

None

Qualifiers

/OVERRIDE
The /OVERRIDE qualifier allows you to delete the schedule even with outstanding references to it. This is not recommended unless you are sure that the schedule will no longer be needed.

Example

```
$ MDMS DELETE SCHEDULE RICHS_SCHEDULE
```

This command deletes the schedule definition for RICHS_SCHEDULE.

MDMS DELETE SELECTION

The MDMS DELETE SELECTION command deletes a specified selection definition from the MDMS database.

Equivalent STORAGE Command: None

Format:

MDMS DELETE SELECTION selection_name [,...]

Parameters

selection_name

Specifies the name of the selection.

The maximum length of the selection name is 63 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of selection names may be entered.

Description

The MDMS DELETE SELECTION command deletes a specified selection definition from the MDMS database.

Privileges

The request requires MDMS_DELETE_ALL.

Restrictions

This command is restricted to nodes with an ABS license.

Qualifiers

/OVERRIDE
The /OVERRIDE qualifier allows you to delete the selection even with outstanding references to it. This is not recommended unless you are sure that the selection will no longer be needed.

None

Example

```
$ MDMS DELETE SELECTION KASIES_SELECTION
```

This command deletes the SELECTION definition for KASIES_SELECTION.

MDMS DELETE VOLUME

The MDMS DELETE VOLUME command deletes a specified volume definition from the MDMS volume database.

Equivalent STORAGE Command: STORAGE REMOVE VOLUME

Format:

MDMS DELETE VOLUME volume_id [,...]

Parameters

volume_id

Specifies the name of the volume. Alternatively, a volume range, separated by a dash, may be specified. is a numeric range for up to the last five characters of the volume ID.

Example ranges are (ABC001-ABC250), (T20120-T20125).

The maximum length of the volume ID is 6 characters. Valid characters are " ,!,",%-?,A-Z,_".

A comma-separated list of volume IDs or ranges may be entered.

Description

The MDMS DELETE VOLUME command deletes a specified volume definition from the MDMS volume database. Volumes must be in the UNINITIALIZED or FREE states prior to being deleted.

Privileges

The request requires MDMS_DELETE_ALL, MDMS_DELETE_VOLUME or MDMS_DELETE_POOL.

If the user is deleting a volume that is in a pool to which he is authorized, MDMS_DELETE_POOL is sufficient. All other volume deletes require MDMS_DELETE_VOLUME or MDMS_DELETE_ALL.

Restrictions

None

Qualifiers

None

Example

```
$ MDMS DELETE VOLUME ABC001-ABC099
```

This command deletes the records for volumes ABC001 to ABC099.

MDMS INITIALIZE VOLUME

The MDMS INITIALIZE VOLUME command initializes a volume or a range of volumes by writing the volume ID to tape as the tape label.

Equivalent STORAGE Command: None

Format:

MDMS INITIALIZE VOLUME [volume_id]

Parameters

volume_id

Specifies the name(s) of the volume(s) to initialize. Alternatively, a volume range, separated by a dash, may be specified. A volume range is a numeric range for up to the last five characters of the volume ID. Example ranges are (ABC001-ABC250), (T20120-T20125).

There is a maximum of 1000 volumes in a range.

The maximum length of the volume ID is 6 characters. Valid characters are " ,!,",%-?,A-Z,_".

This parameter is required except when /JUKEBOX and /SLOTS are specified. The /JUKEBOX and /SLOTS option is valid only for MRD-controlled jukeboxes equipped with a vision system. For all other jukeboxes, the volume_id parameter is required.

Description

The MDMS INITIALIZE VOLUME command initializes a volume or a range of volumes by writing the volume ID to tape as the tape label. The volume records must be created prior to the initialization. In addition, the volumes must be in the FREE or UNINITIALIZED states in order to be initialized.

If the volume(s) are contained in a jukebox, MDMS automatically loads and unloads the volumes. Otherwise, operator assistance is required.

In order to initialize volumes, the MDMS database server allocates a free drive that can handle the volumes. All volumes in a single command must support the specified media type (or the media type already in the volume record). Do not allocate a drive or load a volume for the initialization - this must be done by MDMS.

Each initialize volume command utilizes a single tape drive for all volumes. To utilize multiple drives, issue multiple initialize volume commands specifying a different volume or slot range, and use the /NOWAIT qualifier.

By default, volumes that have a different label than expected and have data written on them are not initialized. However, you can override this check and allow the initialization with the /OVERRIDE qualifier. Note that volumes with labels that are flagged as allocated or in the transition state cannot be initialized under any circumstances.

Privileges

The request requires MDMS_INITIALIZE_ALL or MDMS_INITIALIZE_POOL.

If the user is initializing a volume that is in a pool to which he is authorized, MDMS_INITIALIZE_POOL is sufficient. All other initializations require MDMS_INITIALIZE_ALL.

MDMS_ASSIST is required unless /NOASSIST is specified.

Restrictions

The /JUKEBOX and /SLOTS qualifiers must be used together, and are incompatible with the volume_id parameter.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ASSIST (D)
/NOASSIST
The default /ASSIST qualifier is used to output an operator message if the volume requires operator intervention. You can use /ASSIST even if no assistance is needed - MDMS will perform the operation automatically if it can. If you specify /NOASSIST and assistance is needed, the operation fails.

This qualifier requires the right MDMS_ASSIST.

/DRIVE=drive_name
This qualifier indicates the volume to be initialized is already in the specified drive and should not be loaded or unloaded. This supports an initialize in place. Only one volume may be specified with this option.

/JUKEBOX=jukebox_name
This qualifier indicates the volumes to be initialized are in the specified jukebox. A slot range should also be specified with this qualifier.Valid only for MRD jukeboxes equipped with a vision system.

/MEDIA_TYPE=media_type
This qualifier modifies the volume record to support only this media type. The volume must already support this media type, but may support others as well. After the initialization, the other media types are removed.

/OVERWRITE
/NOOVERWRITE (D)
The /OVERWRITE qualifier allows initialization if the requested volume label is different from the current label, and the volume has already been initialized and contains data. The default /NOOVERWRITE qualifier indicates that the volume should not be initialized if it the label does not match and the volume contains data. Under no circumstances will the volume be initialized if the volume (according to the current label) is allocated or in the transition state.

/REPLY=symbol
The name of the symbol to receive the operator's reply when operator intervention is needed. The symbol will contain the operator reply to the DCL REPLY/TO or DCL REPLY/ABORT commands.

/SLOTS=(range[,...])
This qualifier specifies the slots containing volumes to initialize, when used with the /JUKEBOX qualifier. Valid only for MRD jukeboxes equipped with a vision system.

/USER=username
This qualifier specifies that the volume should be initialized on behalf of this user. The user's UIC is written to the volume label. If the volume is allocated to a user, the allocated user must match the requested user. If /USER is not specified, then the username of the calling process is used by default.

This qualifier requires the right MDMS_INITIALIZE_ALL.

/WAIT (D)
/NOWAIT
The /NOWAIT qualifier returns an informational message indicating that the initialize is being queued. The /WAIT qualifier causes the MDMS INITIALIZE VOLUME command to wait until the initialization is complete.

Examples

```
$ MDMS INITIALIZE VOLUME WOR001 /MEDIA_TYPE=TK85K
```

This command loads, initializes and unloads volume WOR001 and modifies the volume records to set media type TK85K only.

```
$ MDMS INITIALIZE VOLUME/JUKEBOX=JUKE_1 -

/SLOTS=(0-10)/OVERWRITE
```

This command loads, initializes and unloads the volumes contained in slots 0-10 of jukebox JUKE_1, and allows initialization even if the tapes have unexpected labels and have already been written.

```
$ MDMS INITIALIZE VOLUME ABC001-ABC050
```

This command loads, initializes and unloads all 50 volumes in the range ABC001 to ABC050

MDMS INVENTORY JUKEBOX

The MDMS INVENTORY JUKEBOX command verifies the contents of a jukebox. This command is used for both MRD and DCSC controlled jukeboxes.

Equivalent STORAGE Command: STORAGE INVENTORY JUKEBOX and STORAGE INVENTORY ACS

Format:

MDMS INVENTORY JUKEBOX jukebox_name

Parameters

jukebox_name

Specifies the name of the jukebox.

The maximum length of the jukebox name is 31 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

Description

The MDMS INVENTORY JUKEBOX command verifies the contents of a jukebox. This command is used for both MRD and DCSC controlled jukeboxes.

For MRD controlled jukeboxes:

- Both the volume range and slot range options are supported, but only one per command.
- If a volume range is specified, all volumes in the range will be inventoried and their slot positions verified and updated as needed. If the volume is not detected in the jukebox, the volume's placement will be according to the /MISSING qualifier(or placed in the onsite location by default). The volume range option is only available on jukeboxes supporting a VISION system, and /VISION is specified or defaulted in the command.
- If a slot range is specified, all volumes found in the specified slots are verified and the slot position updated as needed. No other volume records are modified.
- For systems with vision systems, the inventory is performed by querying the jukebox firmware as to slot/drive/port contents. A physical inventory is not performed. Volumes detected in ports will be considered missing (not in the jukebox). It is recommended that all ports are empty during an inventory.
- For small, single-magazine jukeboxes, like the TZ877, each volume is loaded, mounted, examined and unloaded in order to read the volume label. This can be very time consuming depending on the hardware involved. Inventoring a 7-slot TZ877 jukebox takes about 20 minutes.
- Full or partial inventories are supported.

For DCSC controlled jukeboxes:

- Only the volume range option is supported.
- The inventory simply checks to see if the specified volumes are in the jukebox. This is slightly different behavior than the inventory performed on an MRD-controlled jukebox. If a volume is not in the jukebox, the volume's placement will be according to the /MISSING qualifier (or placed in the onsite location by default).

Privileges

The request requires MDMS_INVENTORY_ALL.

Restrictions

/SLOTS and /VOLUME_RANGE are mutually exclusive.

/SLOTS is unsupported for DCSC jukeboxes - /VOLUME_RANGE is required.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/CREATE
This qualifier specifies that any volume that is found that is not defined is created using either the /INHERIT, and/or /MEDIA_TYPES qualifiers.

/INHERIT=volume_id
When creating volumes, this qualifier specifies a volume_id from which to inherit attributes. The same attributes can be inherited as for the CREATE VOLUME command.

/MEDIA_TYPE=media_type
When creating volumes, this qualifier specifies the media type to be used for the volume records.

/MISSING=keyword
This qualifier defines the action to be taken when a volume is missing in the jukebox, when it was defined to be either in a drive or slot in the jukebox. The allowable actions are:

DELETE - Delete the volume record (only valid if volume is in the FREE state)

IGNORE - Do nothing

MOVE (D) - Move the volume to its apparent location - either the onsite location or another jukebox

/PREINITIALIZED
/NOPREINITIALIZED (D)
When creating volumes, the volumes are placed in the FREE state if /PREINITIALZED is specified. The default is to place them in the UNINITIALIZED state.

/SLOTS=(range[,...])
The slots or range of slots to inventory within the jukebox.

/VISION (D)
/NOVISION
Specifies whether the inventory should be performed with the Vision system on jukeboxes so equipped. A vision inventory reads the internal memory of the jukebox to perform the inventory; a physical inventory is not performed. If /NOVISION is specified, inventory is performed by loading and mounting the volumes. Applicable to MRD jukeboxes equipped with a VISIONsystem only.

/VOLUME_RANGE=(start_id-end_id)
This qualifier specifies the volume range to inventory. A volume range is a numeric range for up to the last five characters of the volume ID.

Example ranges are (ABC001-ABC250), (T20120-T20125).

/WAIT (D)
/NOWAIT
The /NOWAIT qualifier returns an informational message indicating that the inventory is being queued. The /WAIT qualifier causes the MDMS IVENTORY JUKEBOX command to wait until the inventory is complete.

Examples

```
$ MDMS INVENTORY JUKEBOX TESTJUKE /CREATE -

/MEDIA_TYPE=TK85K /NOWAIT
```

This command inventories the entire jukebox TESTJUKE. Any volumes not in the MDMS volume database will be created with a media type of TK85K. The command prompt is returned after the inventory is queued.

```
$ MDMS INVENTORY JUKEBOX TESTJUKE /CREATE -

/MEDIA_TYPE=TK85K /SLOTS=(0-9)
```

This command inventories the first 10 slots of jukebox TESTJUKE. Any volumes not in the MDMS volume database will be created with a media type of TK85K.

```
$ MDMS INVENTORY JUKEBOX SILO_JUKE -

/VOLUME_RANGE=(SQ0800-SQ0900) /MISSING=MOVE /CREATE
```

This command verifies that volumes SQ0800 through SQ0900 exist in the StorageTek silo. Any volumes found in the silo, but not in the MDMS volume database will be created, with default values. Any volumes found in the MDMS database but not in the silo will be marked in the onsite location of the volume

MDMS LOAD DRIVE

The MDMS LOAD DRIVE command loads a volume into the specified drive.

Equivalent STORAGE Command: None

Format:

MDMS LOAD DRIVE drive_name

Parameters

drive_name

Specify a drive name, or a logical name.

The maximum length of the drive name or logical name is 31 characters. Valid characters are "$,-,0-9,A-Z,_,a-z".

Description

The MDMS LOAD DRIVE command loads a volume into the specified drive. The command is used primarily for scratch loads when the volume ID is not important - only that a FREE volume is loaded into the drive. The volume may or may not already be created in the MDMS volume database. If it is not created, it may be created using the attributes using the /INHERIT or /MEDIA_TYPE qualifiers.

Privileges

The request requires MDMS_LOAD_ALL or MDMS_LOAD_SCRATCH.

MDMS_ASSIST is also required unless /NOASSIST is specified.

The /CREATE qualifier requires MDMS_CREATE_POOL if the /POOL qualifier is specified and the user is authorized to the pool. All other uses of the /CREATE qualifier require MDMS_CREATE_ALL.

Restrictions

The /NOCHECK qualifier cannot be used with /MOUNT.

/MOUNT and /NOWAIT are mutually exclusive.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ASSIST (D)
/NOASSIST
The default /ASSIST qualifier is used to output an operator message if the volume requires operator intervention. You can use /ASSIST even if no assistance is needed - MDMS will perform the operation automatically if it can. If you specify /NOASSIST and assistance is needed, the operation fails.

This qualifier requires the right MDMS_ASSIST

/CREATE
This qualifier specifies that a volume that is not in the MDMS volume database is created in the database. You can also use the /INHERIT or /MEDIA_TYPE qualifiers to specify the volume's attributes.

This qualifier requires the right MDMS_CREATE_ALL or MDMS_CREATE_POOL if the volume is in a pool owned by the user.

/INHERIT=volume_id
If /CREATE is specified, this qualifier allows you to specify an existing volume record to inherit default attributes. The default is that MDMS supplies attribute values you do not on creation.

/MEDIA_TYPE=media_type
Specifies the media type assigned to a volume being created with the /CREATE qualifier. The media type must be supported by the drive.

/MESSAGE="message"
This qualifier allows the application to specify directions to the operator in the OPCOM message associated with the load request. By default MDMS puts out an appropriate message.

/MOUNT["mount_qualifiers"]
Will cause MDMS to issue a DCL MOUNT command once the volume is loaded and the label verified. DCL MOUNT qualifiers can also be provided by specifying the qualifiers in a quoted string. By default, the volume is not mounted.

/POOL=pool_name
Specifies the volume pool the volume is to be placed in. This qualifier must be specified if the /CREATE command is specified and the user only has MDMS_CREATE_POOL privilege, unless a pool is specified in a volume used with /INHERIT.

/REPLY=symbol
The name of the symbol to receive the operator's reply when operator intervention is needed. The symbol will contain the operator reply to the DCL REPLY/TO or DCL REPLY/ABORT commands. The maximum length of a symbol name is 31 characters.

/WAIT (D)
/NOWAIT
The /NOWAIT qualifier returns an informational message indicating that the load is being queued. The /WAIT qualifier causes the MDMS LOAD DRIVE command to wait until a volume is loaded.

/WRITE (D)
/NOWRITE
The default /WRITE qualifier specifies that the volume must be write-enabled when loaded, otherwise a warning is issued after the load. The /NOWRITE qualifier specifies that a volume can be successfully loaded with the write protect set on or off.

Example

```
$ MDMS LOAD DRIVE $1$MUA1: /MOUNT="/NOUNLOAD /FOREIGN"
```

This command loads a volume into drive 1MUA1 and mounts the volume with "/NOUNLOAD and /FOREIGN" qualifiers. The quotes are required.

MDMS LOAD VOLUME

The MDMS LOAD VOLUME command loads the specified volume into a drive.

Equivalent STORAGE Command: STORAGE LOAD

Format:

MDMS LOAD VOLUME volume_id

Parameters

volume_id

The maximum length of the volume ID is 6 characters. Valid characters are " ,!,",%-?,A-Z,_".

This parameter is required.

Description

The MDMS LOAD VOLUME command loads the specified volume into a drive. The volume must already be created in the MDMS database.

If a drive was allocated based on the volume ID, then that drive is chosen for the load. You can also specify a drive on this command, and the volume will be loaded into that drive. The LOAD VOLUME command does not allocate the drive to the requesting process

Privileges

The request requires MDMS_LOAD_ALL, MDMS_LOAD_POOL or MDMS_LOAD_OWN.

If the user is loading a volume for which he is the owner, MDMS_LOAD_OWN is sufficient. If the user is loading a volume in a pool to which he is authorized, MDMS_LOAD_POOL is required. For all other loads, MDMS_LOAD_ALL is required.

MDMS_ASSIST is also required unless /NOASSIST is specified.

The /MOVE qualifier requires MDMS_MOVE_OWN, MDMS_MOVE_POOL or MDMS_MOVE_ALL according to the MOVE command.

Restrictions

The /NOCHECK qualifier cannot be used with /MOUNT.

The /MOUNT and /WAIT qualifiers are mutually exclusive.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ASSIST (D)
/NOASSIST
The default /ASSIST qualifier is used to output an operator message if the volume requires operator intervention. You can use /ASSIST even if no assistance is needed - MDMS will perform the operation automatically if it can. If you specify /NOASSIST and assistance is needed, the operation fails.

This qualifier requires the right MDMS_ASSIST.

/CHECK (D)
/NOCHECK
Compares the physical ANSI label on the tape against the label for the volume ID. If the physical ANSI label does not match the label for the volume ID, operator intervention is required to resolve the conflict. The default is /CHECK.

/DRIVE=drive_name
This qualifier specifies the name of the drive in which to load the volume. This qualifier is required unless a drive has been allocated for this volume (i.e. ALLOCATE DRIVE/VOLUME=volume_id).

/MESSAGE="message"
This qualifier allows the application to specify directions to the operator in the OPCOM message associated with the load request.

/MOUNT["mount_qualifiers"]
Will cause MDMS to issue a DCL MOUNT command once the volume is loaded and the label verified. DCL MOUNT qualifiers can also be provided by specifying the qualifiers in a quoted string. By default, the volume is not mounted.

/MOVE (D)
/NOMOVE
The default /MOVE qualifier, used with /ASSIST, allows the load request to generate a move request to move a volume from a remote location to the drive or associated jukebox. The move will generate an OPCOM move request which that must be satisfied before the load request can continue. If /NOMOVE is specified and a move is required, the load request fails with an error.

/REPLY=symbol
The name of the symbol to receive the operator's reply when operator intervention is needed. The symbol will contain the operator reply to the DCL REPLY/TO or DCL REPLY/ABORT commands. The maximum length of a symbol name is 31 characters. Used with /ASSIST only.

/WAIT (D)
/NOWAIT
The /NOWAIT qualifier returns an informational message indicating that the load is being queued. The /WAIT qualifier causes the MDMS LOAD VOLUME command to wait until the volume is loaded.

/WRITE (D)
/NOWRITE
The default /WRITE qualifier specifies that the volume must be write-enabled when loaded, otherwise a warning is issued after the load. The /NOWRITE qualifier specifies that a volume can be successfully loaded with the write protect set on or off.

Examples

```
$ MDMS LOAD VOLUME ABC010 /MOUNT="/NOUNLOAD"
```

This command loads volume ABC010 into a previously- allocated drive and mounts the volume with "/NOUNLOAD" qualifier and verifies the volume label. The quotes are required.

```
$ MDMS LOAD VOLUME ABC020 /NOCHECK /DRIVE=$1$MUA1:
```

This command loads volume ABC020 into drive1MUA1: and does not check the on-tape volume label.

```
$ MDMS LOAD VOLUME ABC020 /NOWAIT
```

This command loads volume ABC020 into an allocated drive, checks the on-tape volume label, but does not wait for the load to complete before returning the command prompt.

MDMS MOVE MAGAZINE

The MDMS MOVE MAGAZINE command moves a magazine from one location to another. The magazine must be created prior to the move.

Equivalent STORAGE Commands: STORAGE EXPORT MAGAZINE, STORAGE IMPORT MAGAZINE

Format:

MDMS MOVE MAGAZINE magazine_name [destination]

Parameters

magazine_name

Defines the name of the magazine to move. Only one magazine may be moved per command. If the /SCHEDULE qualifier is specified, the magazine_name may be the wildcard *, which means all scheduled magazines.

The maximum length of the magazine name is 31 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

destination

Specifies the name of the destination object. The destination object can be a location or a jukebox. The destination is optional when the /SCHEDULE is entered, but required for commands when /SCHEDULE is not entered. The default destination is the appropriate offsite or onsite location specified in the magazine object.

Description

The MDMS MOVE MAGAZINE moves a magazine from one location to another. Magazines can be moved between outside locations, and from an outside location to and from a jukebox.

When /ASSIST is specified, a series of OPCOM messages may be displayed asking the operator to move magazines between locations, or in and out of the jukebox. No slots or spaces are displayed in the OPCOM message, but the operator should issue SHOW MAGAZINE/FULL for the associated magazine(s) to determine slots, spaces or positions involved in the move. These are shown in the placement field.

Privileges

The request requires MDMS_MOVE_ALL.

MDMS_ASSIST is also required unless /NOASSIST is specified.

Restrictions

The /POSITION and /START_SLOT qualifiers are mutually exclusive.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ASSIST (D)
/NOASSIST
The default /ASSIST qualifier is used when the magazine has not been physically moved, and an operator needs to physically move the magazine. Use /NOASSIST if the magazine has already been physically moved, or if you plan to move it yourself.

This qualifier requires the right MDMS_ASSIST.

/OFFSITE
When moving to a location that is not already specified in the magazine record, this qualifier specifies that the location is an offsite location, and the magazine placement is offsite, following the move. By default, an unspecified location is onsite.

/POSITION=(position)
The /POSITION qualifier specifies that the magazine is being moved into a jukebox, and specifying the jukebox position that the magazine is being moved to. The /POSITION qualifier or /START_SLOT qualifier must be specified when moving a magazine into a multi-magazine jukebox.

In addition, the /POSITION qualifier can be used to transfer a magazine between positions inside a jukebox (if physically possible). The position parameter is in the format (tower, face, level).

The 'tower, face and level' specification, represents the relative number of the tower, face and level, starting from 0.

So for the absolute jukebox slot of zero, the corresponding position is (0,0,0). The next position in the jukebox would be (0,0,1) and so and, according to the topology defined for the jukebox. Valid for MRD-controlled jukeboxes only.

/REPLY=symbol
The name of the symbol to receive the operator's reply when operator intervention is needed. The symbol will contain the operator reply to the DCL REPLY/TO or DCL REPLY/ABORT commands. The maximum length of a symbol name is 31 characters. This qualifier is only applicable when /ASSIST is specified.

/SCHEDULE[=keyword]
The /SCHEDULE qualifier selects magazines whose offsite or onsite date has "expired" and the magazine is not in the new location. If both dates have expired, the later of the two dates is used. The optional keywords on the /SCHEDULE qualifier may be:

OFFSITE

ONSITE

If the OFFSITE keyword is used, then only those magazines scheduled to be moved offsite are selected. If the ONSITE keyword is used, then only those magazines scheduled to be moved onsite are selected. If the keyword is omitted, then the magazines scheduled to be moved onsite and offsite are selected.

/START_SLOT=number
This qualifier specifies the starting jukebox slot when the magazine is placed in a jukebox. The default is zero. Valid for MRD-controlled jukeboxes only.

/SPACES=(range[,...]
The /SPACES qualifier specifies the space(s) in a non-jukebox location to move the magazine to. You should specify a single space if you are moving a single magazine. If you issue /SCHEDULE, each magazine will bemoved to the next space in the range in order.

/WAIT (D)
/NOWAIT
The /NOWAIT qualifier returns an informational message indicating that the move is being queued. The /WAIT qualifier causes the MDMS MOVE MAGAZINE command to wait until the magazine is moved.

Examples

```
$ MDMS MOVE MAGAZINE MYMAG01 JUKE_1
```

This command moves magazine MYMAG01 from its current location into jukebox JUKE_1 at start slot of zero.

```
$ MDMS MOVE MAGAZINE MYMAG01 JUKE_2 /POSITION=(2, 0, 1)
```

This command moves magazine MYMAG01 from its current location into jukebox JUKE_2 in position (2, 0, 1) - (i.e. Tower 2, face 0, level 1).

```
$ MDMS MOVE MAGAZINE MYMAG02 ROOM_100 /SPACES=23
```

This command moves magazine MYMAG02 from its current position out of the jukebox to location ROOM_100 in space 23.

```
$ MDMS MOVE MAGAZINE MAG002 JUKE_1 /START_SLOT=11
```

This command moves magazine MAG002 from its current location into jukebox JUKE_1 in start slot of 11.

```
$ MDMS MOVE MAGAZINE * /SCHEDULE=OFFSITE
```

This command moves all magazines whose offsite date has expired to the magazine's offsite location.

```
$ MDMS MOVE MAGAZINE * /SCHEDULE
```

This command moves all magazines whose offsite and onsite dates have expired to the magazine's offsite and onsite locations respectively.

MDMS MOVE VOLUME

The MDMS MOVE VOLUME command moves a volume or volumes(s) from one location to another. The volume(s) must be created prior to the move.

Equivalent STORAGE Commands: STORAGE BIND, STORAGE EXPORT ACS, STORAGE EXPORT VOLUME, STORAGE IMPORT ACS, STORAGE IMPORT VOLUME, STORAGE UNBIND

Format:

MDMS MOVE VOLUME volume_id [destination]

Parameters

volume_id

Defines the name of the volume to move. A volume_id may be a single volume, a list of volumes, a volume range, separated by a dash, or a list of volume ranges. A volume range is a numeric range for up to the last five characters of the volume ID. Example ranges are (ABC001-ABC250), (T20120-T20125). A volume_id may also be a wildcard *, which means all scheduled volumes. The wildcard is only valid when the /SCHEDULE qualifier is specified. This parameter is required.

The maximum length of the volume ID is 6 characters. Valid characters are " ,!,",%-?,A-Z,_".

destination

Specifies the name of the destination object. The destination object can be a location, magazine or a jukebox. The destination is optional when /SCHEDULE is entered, but required for commands when /SCHEDULE is not entered. For /SCHEDULE, the default destination is the appropriate offsite or onsite location specified in the volume object.

Description

The MDMS MOVE VOLUME command moves a volume or volumes from one location to another. The volume(s) must be created prior to the move. Multiple volumes can be moved, where appropriate, in a single command.

When /ASSIST is specified, a series of OPCOM messages may be displayed asking the operator to move volumes between locations, or in and out of a jukebox or magazine. No slots or spaces are displayed in the OPCOM message, but the operator should issue SHOW VOLUME/FULL for the associated volumes to determine slots or spaces involved in the move. These are shown in the placement field.

When moving volumes into a jukebox, the specification of slots is optional. If not supplied, MDMS will apply default values and move the volumes into empty slots.

This command is not used to load volumes into or out of drives.

Privileges

The request requires MDMS_MOVE_ALL, MDMS_MOVE_POOL or MDMS_MOVE_OWN.

If the user is moving a volume for which he is the owner, MDMS_MOVE_OWN is sufficient. If the user is moving a volume in a pool to which he is authorized, MDMS_MOVE_POOL is required. All other moves require MDMS_MOVE_ALL.

MDMS_ASSIST is also required unless /NOASSIST is specified.

The /DESCRIPTION qualifier requires MDMS_SET_ALL, MDMS_SET_POOL or MDMS_SET_OWN.

Restrictions

None

Qualifiers

/ASSIST (D)
/NOASSIST
The default /ASSIST qualifier is used to output an operator message if the volume requires operator intervention. You can use /ASSIST even if no assistance is needed - MDMS will perform the operation automatically if it can. If you specify /NOASSIST and assistance is needed, the operation fails.

This qualifier requires the right MDMS_ASSIST.

/CAP=cap_id
If moving to a volume to/from a silo, this qualifier specifies the Cartridge Access Port identifier into which the volume is being physically injected or ejected. Required when moving a volume into or out of a silo. Valid for DCSC-controlled jukeboxes only.

/DESCRIPTION="text"
Modifies comments about the object in the volume record. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. To clear the existing description, specify "".

This qualifier requires the right MDMS_SET_OWN, MDMS_SET_POOL or MDMS_SET_ALL, depending on the user's ownership of the volume.

/NOPHYSICAL
This qualifier requests that no internal jukebox calls (through DCSC or MRD) are made to implement the move. When used with /NOASSIST, the effect of the MOVE VOLUME command is to simply update the database to the new location. When used with the default of /ASSIST, a single OPCOM message is displayed to move the volumes, but when the message expires, the database is automatically updated.

/OFFSITE
When moving to a location that is not already specified in the volume record, this qualifier specifies that the location is an offsite location, and the volume placement is offsite following the move. By default, an unspecified location is onsite.

/REPLY=symbol
The name of the symbol to receive the operator's reply when operator intervention is needed. The symbol will contain the operator reply to the DCL REPLY/TO or DCL REPLY/ABORT commands. The maximum length of a symbol name is 31 characters. This qualifier is only applicable when /ASSIST is specified.

/SCHEDULE[=keyword]
The /SCHEDULE qualifier selects volumes whose offsite or onsite date has "expired" and the volumes are not in the new location. If both dates have expired, the later of the two dates is used. The optional keywords on the schedule qualifier may be:

OFFSITE

ONSITE

If the OFFSITE keyword is used, then only those volumes scheduled to be moved offsite are selected. If the ONSITE keyword is used, then only those volumes scheduled to be moved onsite are selected. If the keyword is omitted, then volumes scheduled to be moved onsite and offsite are selected.

/SLOTS=(range[,...])
The /SLOTS qualifier specifies that the volume is being moved into a jukebox or magazine and specifying the slot range, or slot list, that the volumes are being moved to. If not specified, MDMS selects free slot locations for the volume(s). In addition, the /SLOTS qualifier can be used to transfer volumes between slot locations inside a jukebox or magazine. If moving a single volume, specify a single slot. If moving multiple volumes, the slots in the range are assigned in order. If any of the specified slots are full, MDMS selects alternate slots. Valid for MRD-controlled jukeboxes only.

/SPACES=(range[,...])
The SPACES qualifier specifies the space(s) in a non-jukebox location to move the volume(s) to.

/WAIT (D)
/NOWAIT
The /NOWAIT qualifier returns an informational message indicating that the move is being queued. The /WAIT qualifier causes the MDMS MOVE VOLUME command to wait until the command is complete.

Examples

```
$ MDMS MOVE VOLUME ABC001 JUKE_2 /SLOTS=20
```

This command moves volume ABC001 from its current location to jukebox JUKE_2 at slot 20.

```
$ MDMS MOVE VOLUME AGW081 SHELF /SPACES=42
```

This command moves the volume AGW081 to location SHELF at space 42.

```
$ MDMS MOVE VOLUME FLI050-FLI056 MAG001 /SLOTS=(0-6)
```

This command moves volumes FLI050 to FLI056 into magazine MAG001 at slots (0-6). Note that this replaces the old STORAGE BIND command.

```
$ MDMS MOVE VOLUME * /SCHEDULE=OFFSITE
```

This command moves all volumes whose offsite date has expired to the volume's offsite location.

```
$ MDMS MOVE VOLUME ABC001-ABC100 ARGUS_VAULT /SCHEDULE=OFFSITE
```

This command moves all volumes in the range ABC001-ABC100 whose offsite date has expired to the volume's location ARGUS_VAULT.

```
$ MDMS MOVE VOLUME * /SCHEDULE
```

This command moves all volumes whose offsite and onsite dates have expired to the default off-site and onsite locations respectively.

```
$ MDMS MOVE VOLUME ALS100-ALS150 WOLFCREEK /CAP=1
```

This command moves volumes ALS100-ALS150 to DCSC jukebox WOLFCREEK using CAP 1.

MDMS REPORT VOLUME

The MDMS REPORT VOLUME command reports on volume objects.

Equivalent STORAGE Command: REPORT VOLUME

Format:

MDMS REPORT VOLUME field[=value] [,...]

Parameters

Field

The field parameter selects attributes to display for the object.

For any string value, you can use a wildcard character. The * character provides a wild card for any number/length of characters. The % character is a wild card character for one character.

For date and numeric values, a range may be specified by entering a two value list in parentheses. For example:

SCRATCH_DATE=(01-Jun-2002, 01-Jul-2002)

MOUNT_COUNT=(100,9999)

The first value is interpreted as a low value, and the second value is interpreted as a high value. All values in the range are selected for display.

At least one field must be defined for a report to be generated, except when /FORECAST or /SUMMARY is entered.

Field	Meaning	Value Format	Example Output
ACCOUNT	Owner's account	String	ENGINEERING
ALLOCATION_DATE	Last allocation	Date	18-MAY-2001
AVAILABLE_STATE	State the volume will be put in when it becomes available	Keyword	ALLOCATED
BLOCK_FACTOR	Number of records in one block	Numeric	20
BRAND	Brand name of a volume	String	hp
CLEANED_DATE	Last date the volume was cleaned	Date DD-MMM-YYY	18-MAY-2001
CREATION_DATE	Date volume was entered in the database	Date DD-MMM-YYY	18-MAY-2001
DEALLOCATION_DATE	Date volume was last deallocated	Date DD-MMM-YYY	18-MAY-2001
DESCRIPTION	Description	String	DRA2 BACKUP
DRIVE	Name of tape drive	String	1MUA560

Field	Meaning	Value Format	Example Output
ERROR_COUNT	Number of I/O errors since a volume was last cleaned	Numeric	20
FORMAT	Recording format	Keyword	BACKUP
FREED_DATE	Date volume was last freed	Date DD-MMM-YYY	18-MAY-2001
INITIALIZED_DATE	Date volume was initialized	Date DD-MMM-YYY	18-MAY-2001
JOB	Name of the job that wrote the volume	String	ABS
JUKEBOX	Name of the jukebox	String	TL812_JUKE
LAST_ACCESS_DATE	Date volume was last accessed	Date DD-MMM-YYY	18-MAY-2001
MAGAZINE	Name of magazine	String	ENG_MAG
MEDIA_TYPE	Type of media	String	TK89
MOUNT_COUNT	Number of times a volume has been loaded by MDMS	Numeric	20
NEXT_VOLUME	Next volume in a set	String	AGW200
OFFSITE_DATE	Date a volume is to be taken offsite	Date DD-MMM-YYY	18-MAY-2001
OFFSITE_LOCATION	Location where volume resides when it is offsite	String	VAULT
ONSITE_DATE	Date a volume is to be returned on site	Date DD-MMM-YYY	18-MAY-2001
ONSITE_LOCATION	Location where the volume resides when it is onsite	String	ROOM_256
OWNER_UIC	Owner's user identification code	Standard OpenVMS UIC format	[311,311][ABS]
PLACEMENT	Current placement of the volume	Keyword	JUKEBOX
PLACENAME	Curent placement name of the volume	String	NODE01_JUKE
POOL	Volume's pool name	String	ENGINEERING
PREVIOUS_VOLUME	Previous volume in a volume set	String	AGW201
PURCHASED_DATE	Volume's purchase date	Date DD-MMM-YYY	18-MAY-2001
PROTECTION	Access protection code	Standard OpenVMS protection codes	"S:RWED, O:RWED, G:E, W:E"

Field	Meaning	Value Format	Example Output
ERROR_COUNT	Number of I/O errors since a volume was last cleaned	Numeric	20
FORMAT	Recording format	Keyword	BACKUP
FREED_DATE	Date volume was last freed	Date DD-MMM-YYY	18-MAY-2001
INITIALIZED_DATE	Date volume was initialized	Date DD-MMM-YYY	18-MAY-2001
JOB	Name of the job that wrote the volume	String	ABS
JUKEBOX	Name of the jukebox	String	TL812_JUKE
LAST_ACCESS_DATE	Date volume was last accessed	Date DD-MMM-YYY	18-MAY-2001
MAGAZINE	Name of magazine	String	ENG_MAG
MEDIA_TYPE	Type of media	String	TK89
MOUNT_COUNT	Number of times a volume has been loaded by MDMS	Numeric	20
NEXT_VOLUME	Next volume in a set	String	AGW200
OFFSITE_DATE	Date a volume is to be taken offsite	Date DD-MMM-YYY	18-MAY-2001
OFFSITE_LOCATION	Location where volume resides when it is offsite	String	VAULT
ONSITE_DATE	Date a volume is to be returned on site	Date DD-MMM-YYY	18-MAY-2001
ONSITE_LOCATION	Location where the volume resides when it is onsite	String	ROOM_256
OWNER_UIC	Owner's user identification code	Standard OpenVMS UIC format	[311,311][ABS]
PLACEMENT	Current placement of the volume	Keyword	JUKEBOX
PLACENAME	Curent placement name of the volume	String	NODE01_JUKE
POOL	Volume's pool name	String	ENGINEERING
PREVIOUS_VOLUME	Previous volume in a volume set	String	AGW201
PURCHASED_DATE	Volume's purchase date	Date DD-MMM-YYY	18-MAY-2001
PROTECTION	Access protection code	Standard OpenVMS protection codes	"S:RWED, O:RWED, G:E, W:E"

Field	Meaning	Value Format	Example Output
SCRATCH_DATE	Date volume is to be freed	Date DD-MMM-YYY	18-MAY-2001
SLOT	Number of the jukebox slot in which the volume resides	Numeric	20
SPACE	A non-jukebox space in the specified location where the volume resides	String	A120
STATE	The state of the volume	Keyword	ALLOCATED
TIMES_CLEANED	Number of times the volume has been cleaned	Numeric	10
TRANSITION_TIME	The time a volume stays in the transition state before going to the free state	Time DDDD-HH:MM:SS	15-00:00:00
USER	Owner's user name	String	SMITH
VOLUME	Volume ID	String	AGW200

Description

The MDMS REPORT VOLUME command generates a report on the selected volumes. The contents of the report contain fields as specified in the field parameters. Each selected field is displayed unless the /NOPRINT field qualifier is specified. The report can be sorted on the field by using the /SORT qualifier on a single field (only one sort key supported per command). In addition, the width of each field can be specified with the /WIDTH qualifier - the default width is specific for each field size.

Privileges

The request requires MDMS_SHOW_ALL, MDMS_SHOW_POOL or MDMS_SHOW_OWN. If the user only has MDMS_SHOW_OWN, only those allocated volumes owned by the user will be included in the report. If the user has MDMS_SHOW_POOL, only those volumes in pool(s) for which the user is authorized will be displayed. If the user has MDMS_SHOW_ALL, all potential volumes matching the selection criteria will be displayed.

Restrictions

The /USER_NAME qualifier can only be used with the /FORECAST and /SUMMARY qualifiers. For all other types of report use the selection value of the USER field.

Fields cannot be used with the /FORECAST and /SUMMARY qualifiers.

The /FORECAST and /SUMMARY qualifiers are mutually exclusive.

Fields must be specified with the /SCHEDULE qualifier.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/FORECAST
Displays all volumes allocated to a user sorted by their scratch date. If the /USER_NAME qualifier is not specified, only those volumes allocated to you are displayed. Do not specify any fields.

/HEADER (D)
/NOHEADER

The /HEADER qualifier specfies that the report should contain header information. This is the default. If you do not wish to have header information, then specify /NOHEADER.

/OUTPUT=file_spec
Directs the report output to the specified file instead of SYS$OUTPUT, which is usually the command screen.

/NOPRINT
The /NOPRINT field qualifier specifies that a field defined as a selection criteria is not included in the report.

SCHEDULE[=keyword]
The /SCHEDULE qualifier selects volumes whose offsite or onsite date has "expired" and the volumes are not in the new location. If both dates have expired, the later of the two dates is used.

The optional keyword on the schedule qualifier may be:

OFFSITE

ONSITE

If The OFFSITE keyword is used, then only those volumes scheduled to be moved offsite are selected. If the ONSITE keyword is used, then only those volumes scheduled to be moved onsite are selected. If the keyword is omitted, then volumes scheduled to be moved onsite and offsite are selected

/SORT
This is a field qualifier, and is used as a sort key. Only one field can be used as a sort key, and no value may be specified.

/SUMMARY
Displays all volumes allocated to a user and sorted by volume ID. If the /USER_NAME qualifier is not specified, only those volumes allocated to you are displayed. Do not specify any fields.

/TITLE=text
Specifies the title of the report. If the text contains spaces, it must be enclosed in quotation marks. The maximum length of the title is 80 characters.

/USER_NAME=username
Selects volumes owned by this user. This qualifier can only be used with the /FORECAST and /SUMMARY qualifiers. If /USER_NAME is not specified, only those volumes for the present user are selected.

/WIDTH=number
A field qualifier, this specifies the number of characters to display for a field. If not specified, a default width is applied to each field type, and excess characters may be truncated.

Examples

```
$ MDMS REPORT VOLUME VOLUME, POOL=ABS_POOL, STATE, -

SCRATCH_DATE
```

This command prints a report for all volumes in pool ABS_POOL, and prints out the volume_id, pool name, allocation state and scratch date.

```
$ MDMS REPORT VOLUME VOLUME, STATE=ALLOCATED/NOPRINT, -

SCRATCH_DATE
```

This command prints a report for all allocated volumes, and prints out the volume id and scratch date.

```
$ MDMS REPORT VOLUME VOLUME, STATE=ALLOCATED, -

OWNER/SORT/WIDTH=10
```

This command prints a report for all allocated volumes, and prints out the volume id, allocation state and owner (maximum of 10 characters), and the report is sorted by owner.

```
$ MDMS REPORT VOLUME /FORECAST /USER_NAME=SMITH
```

This command prints a report for all volumes allocated to user SMITH, and prints out the volume id, allocation date, scratch date, format and description fields, sorted by scratch date.

MDMS SET ARCHIVE

The MDMS SET ARCHIVE command modifies an existing archive definition in the MDMS database. Archives were formerly known as storage classes, archive classes and storage policies. Archive is the new common name.

Equivalent ABS Command: SET STORAGE_CLASS

Format:

MDMS SET ARCHIVE archive_name [,...]

Parameters

archive_name

Specifies the name of the archive.

The maximum length of the archive name is 63 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of archive names may be entered.

Description

The MDMS SET ARCHIVE command modifies an existing archive definition in the MDMS database. An archive describes where data is saved and its catalog information.

Privileges

The request requires MDMS_SET_ALL.

The /VOLUME_SETS qualifier also requires MDMS_SET_PROTECTED since this attribute is normally managed by MDMS. You should not modify this attribute unless you are trying to recover from an abnormal situation.

Restrictions

This command is restricted to nodes with an ABS license.

The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default.

The /EXPIRATION_DATE and /RETENTION_DAYS qualifiers are mutually exclusive.

The following combinations of qualifiers are not allowed based on the archive type:

DISK:	/CONSOLIDATION	TAPE:	/DESTINATION
	/DRIVES		
	/LOCATION		
	/MEDIA_TYPE		
	/POOL		
	/VOLUME_SETS		

:The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list. This is the default when specifying list items.

/ARCHIVE_TYPE=keyword
The archive type specifies the type of archive media associated with the archive. The options are:

- DISK - Files are saved to or restored from a disk. The destination may be filled in to specify the disk and directory where the archive data resides.
- TAPE - Files are saved to or restored from a tape volume and MDMS is used to manage the tape volume.

The default is TAPE.

/CATALOG=(NAME=catalog_name, [NO]NODES=(node[,...]))
The /CATALOG qualifier specifies the name of the catalog used by the archive, and a list of nodes and/or groups that can directly access the catalog. Specify a local catalog name representing a catalog object in the MDMS database. With the NODES keyword, you may specify nodes, groups or a combination thereof.

If you specify NONODES, the local execution node on which a save or restore is performed is used as the catalog node.

By default, the catalog name "ABS_CATALOG" is used. For an archive named "DISASTER_RECOVERY" you may specify an empty name using "".

The default for nodes is NONODES.

/CONSOLIDATION=(option[,...])
The /CONSOLIDATION qualifier specifies the criteria under which new volume sets are created for this archive. You may specify one or more of the following options:

- INTERVAL=delta_time - The time to elapse from the creation of the last volume set to the creation of a new volume set. To specify an unlimited consolidation interval, specify NOINTERVAL.
- SAVESETS=number - The maximum number of savesets to exist on a volume set before a new volume set is created. Zero means no limit.
- VOLUMES=number - The maximum number of volumes which may be added to the current volume set. Zero means no limit.

A new volume set is created when any one of the consolidation criteria expire. By default, the consolidation criteria is set to:

INTERVAL=7-00:00:00, SAVESETS=0, VOLUMES=0

If no consolidation criteria are specified, new volume sets are not created unless an error occurs. This qualifier is allowed only with archive type TAPE.

/DESCRIPTION="text"
Comments about the object. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. To clear the description, specify "".

/DESTINATION=disk:[dir]
If the archive type is DISK, the /DESTINATION qualifier specifies the disk and directory wherethe archive data resides. If no destination is specified for archive type DISK, the following is used by default:

ABS$ROOT:[000000]

This qualifier is allowed only with archive type DISK.

/DRIVES=(drive_name[,...])
/NODRIVES (D)
The /DRIVES qualifier specifies a list of tape drives to be used by the archive. Specify one or more drive names. By default, no drives are specified, meaning that any drive satisfying other compatibility criteria may be used.

This qualifier is allowed only with archive type TAPE.

/EXPIRATION_DATE=absolute_time
/NOEXPIRATION_DATE
The /EXPIRATION_DATE qualifier specifies the date that saved data will expire. Specify an absolute or delta date/time, or a reserved word such as TODAY or TOMORROW. Alternatively, use the relative /RETENTION_DAYS qualifier to specify the number of days the saved data should be retained. /NOEXPIRATION_DATE means that the data is retained indefinitely.

By default, data is retained for 365 days.

/LOCATION=location_name
/NOLOCATION
The /LOCATION qualifier specifies the location to be used to allocate a drive to load a scratch volume (s. HELP MDMS ALLOCATE DRIVE/LOCATION). Specify a location name specified in the database. This qualifier is applicable only for archive type TAPE. /NOLOCATION removes location as a selection criterion for volume allocation.

By default, the domain default onsite location is used.

/MAXIMUM_SAVES=number
The /MAXIMUM_SAVES qualifier specifies the maximum number of save operations that can execute simultaneously using this archive. For example, you can create three save requests and schedule them to run simultaneously, assuming that there are enough resources (e.g. drives) available. Valid values are 1 - 36. The default is 1.

/MEDIA_TYPE=media_type
The /MEDIA_TYPE qualifier specifies the media type of tape volumes used for this archive.

By default, the domain default media type is used if the archive type is TAPE, otherwise none.

This qualifier is allowed only with archive type TAPE.

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username.

The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the group_name::username of the user entering the CREATE command on the object from a node in the group.

/POOL=pool_name
/NOPOOL (D)
The /POOL qualifier specifies the pool from which volumes will be allocated. Specify a pool name that exists in the database. If you specify /NOPOOL, then only volumes with no pool definition may be used (equivalent to the SCRATCH pool).

By default, no pool is defined.

This qualifier is allowed only with archive type TAPE.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

/RETENTION_DAYS=number
The /RETENTION_DAYS qualifier specifies the number of days to retain data for this archive. Either this qualifier or /EXPIRATION_DATE may be used to specify this information. If neither an expiration date nor retention days are specified, then the data is retained indefinitely.

By default, a retention of 365 days is used.

/VOLUME_SETS=(volume_id[,volume_id])
/NOVOLUME_SETS
The /VOLUME_SETS qualifier specifies the active volume set(s) being used (for write) by the archive. Each volume_id should represent the first volume in the volume set.

/NOVOLUME_SETS clears the volume sets, and forces a new volume set to be allocated when the archive is next used.

Setting of volume sets is not recommended as ABS normally assigns volume sets to archives. This is a protected field.

This qualifier requires the right MDMS_SET_PROTECTED.

This qualifier is allowed only with archive type TAPE.

Example

```
$ MDMS SET ARCHIVE USER_BACKUPS -

$_ /ACCESS_CONTROL=(USER=*::SMITH/REMOVE -

$_ /CONSOLIDATION=SAVESETS=100 -

$_ EXPIRATION_DATE=01-JUL-2001
```

This command modifies an archive USER_BACKUPS, removing access control for user SMITH on all nodes and user JONES on node NOD001 and modifying the consolidation criterion to 100 savesets per volume set, and an expiration date of 01-JUL-2001.

MDMS SET CATALOG

The MDMS SET CATALOG command modifies an existing catalog definition in the loacl ABS database.

Equivalent ABS Command: RUN SYS$SYSTEM:ABS$CATALOG_OBJECT

Format:

MDMS SET CATALOG catalog_name [,...]

Parameters

catalog_name
Specifies the name of the catalog.

The maximum length of the catalog name is 26 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of catalog names may be entered.

Description

The MDMS SET CATALOG command modifies an existing catalog definition in the MDMS database. A catalog describes how, where and what information about saved data is recorded.

Privileges

The request requires MDMS_SET_ALL.

Restrictions

This command is restricted to nodes with an ABS license.

The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node,group and username portions. Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list. This is the default when specifying list items.

/NODE=node_name
The /NODE qualifier specifies on which node the catalog will be modified.

The default is the node on which the SET CATALOG command is entered.

/OWNER_NAME
/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username.The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the group_name::username of the user entering the CREATE command on the object from a node in the group.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

/STAGING (D)
/NOSTAGING
The /STAGING qualifier turns on the use of a staging catalog during saves. Using a staging catalog can greatly speed up a save operation, and deferring update of the full catalog to an off-line operation.

However, a restore cannot be performed until the full catalog is updated. Use of staging is highly recommended. The /NOSTAGING qualifier turns off use of a staging catalog. Staging is only used on catalog types FILES and VOLUME_SETS.

Example

```
$ MDMS SET CATALOG JOE_CATALOG /NOSTAGING /NODE=MYJOE
```

This command disables staging on catalog JOE_CATALOG on node MYJOE.

MDMS SET DOMAIN

The MDMS SET DOMAIN command modifies the MDMS Domain object. The MDMS domain contains attributes affecting all nodes, devices and locations that comprise an MDMS domain.

Equivalent STORAGE Command: None

Format:

MDMS SET DOMAIN

Parameters

None.

Description

The MDMS SET DOMAIN command modifies the MDMS domain. The MDMS domain contains attributes affecting all nodes, devices and locations that comprise an MDMS domain.

Privileges

The request requires MDMS_SET_ALL. The qualifiers associated with setting of privilege rights also require MDMS_SET_RIGHTS.

Restrictions

The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ABS_RIGHTS
/NOABS_RIGHTS (D)
The /ABS_RIGHTS qualifier enables a certain set of MDMS rights when users have an ABS right set in the UAF record. The default /NOABS_RIGHTS qualifier does not give a users with ABS rights any additional MDMS rights.

This qualifier requires the right MDMS_SET_RIGHTS.

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object

- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command.

However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list. This is the default when specifying list items.

/APPLICATION_RIGHTS[=(right[,...])
/NOAPPLICATION_RIGHTS
The /APPLICATION_RIGHTS qualifier sets the low-level rights associated with the high-level right MDMS_APPLICATION. If the qualifier is specified with no value, a default set of rights is set. The /REMOVE or /REPLACE qualifiers can be used to remove or replace rights in the list, rather than adding them by default. Use /NOAPPLICATION_RIGHTS to remove all rights.

This qualifier requires the right MDMS_SET_RIGHTS.

/CHECK_ACCESS
/NOCHECK_ACCESS (D)
The /CHECK_ACCESS qualifier enables access control validation for all MDMS requests. When enabled, MDMS validates access to objects according to the operation being requested. If there are no access control entries on the object, access is either granted or rejected depending on the default access state.

The default /NOCHECK_ACCESS does not perform any access control validation in MDMS regardless of the default access state or whether there are any access control entries on an object. As always, appropriate MDMS rights are also checked for each request, and setting /NOCHECK_ACCESS does not disabled rights validation.

The default is /NOCHECK_ACCESS.

This qualifier requires the right MDMS_SET_RIGHTS.

/DEALLOCATE_STATE=state
This attribute stores a text string stating the deallocation state of volumes. Allowable values are FREE and TRANSITION. This state is applied to volumes that are deallocated when no specific state is specified on the deallocate request and the volume record does not have a transition time defined.

/DEFAULT_RIGHTS[=(right[,...])
/NODEFAULT_RIGHTS
The /DEFAULT_RIGHTS qualifier sets the low-level rights associated with users with no MDMS rights in their UAF record. If the qualifier is specified with no value, a default set of rights (i.e. no rights) are set. The /REMOVE or /REPLACE qualifiers can be used to remove or replace rights in the list, rather than adding them by default. Use /NODEFAULT_RIGHTS to remove all default rights.

This qualifier requires the right MDMS_SET_RIGHTS.

/DESCRIPTION="text"
Comments about the domain. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. To clear the description, specify "".

/MAIL_USERS=(user[,...])
/NOMAIL_USERS
This attribute is a list of OpenVMS system users who should receive notification when volumes are deallocated. The default is user SYSTEM.

/MAXIMUM_SCRATCH_TIME=delta_time
The maximum scratch time is an OpenVMS delta time that specifies the greatest allocation time allowed.

/MEDIA_TYPE=media_type
This qualifier specifies the default MDMS media type, which is applied to drives and volumes if they are created without a media type definition.

/OFFSITE_LOCATION=location
/NOOFFSITE_LOCATION (D)
This attribute stores a text string identifying the name of the Location object representing your default offsite storage location.This location is applied to all volumes and magazines that do not have an explicit offsite location specified.

/ONSITE_LOCATION=location
/NOONSITE_LOCATION (D)
This attribute stores a text string identifying the name of the Location object representing your default onsite storage location. This location is applied to all volumes and magazines that do not have an explicit onsite location specified.

/OPCOM_CLASSES=(class[,...])
Use this attribute to list the OpenVMS OPCOM classes to which MDMS OPCOM messages are directed.These OPCOM classes are applied to all nodes that do not have explicit OPCOM classes specified. The following classes are supported:

CARDS	NETWORK	OPER6	OPER12
CENTRAL	OPER1	OPER7	PRINTER
CLUSTER	OPER2	OPER8	REPLY
DEVICES	OPER3	OPER9	SECURITY
DISKS	OPER4	OPER10	SOFTWARE
LICENSE	OPER5	OPER11	TAPES

/OPERATOR_RIGHTS[=(right[,...])
/NOOPERATOR_RIGHTS
The /OPERATOR_RIGHTS qualifier sets the low-level rights associated with the high-level right MDMS_OPERATOR. If the qualifier is specified with no value, a default set of rights is set. The /REMOVE or /REPLACE qualifiers can be used to remove or replace rights in the list, rather than adding them by default. Use /NOOPERATOR_RIGHTS to remove all rights.

This qualifier requires the right MDMS_SET_RIGHTS.

/PROTECTION=protection
Assign the default volume protection for all volumes with this attribute. Use the standard OpenVMS protection format. This protection is applied to all volumes that do not have an explicit protection specified.

/RELAXED_ACCESS (D)
/NORELAXED_ACCESS
The domain /[NO]RELAXED_ACCESS qualifier determines the default user access to an object if no access control entries exist for the object. If at least one access control entry exists for the object, then the default access is not used and access is controlled by the entries.

If /RELAXED_ACCESS is set, then all users have access to the object, if the object contains no access control entries. This option allows for a more liberal usage of access control: only use it on objects requiring it, and allow users access to all other objects. This is designed for normal environments, and those whose domain-scope is centrally organized.

If /NORELAXED_ACCESS is set, then no users have access to the object, if the object contains no access control entries, with the exception of:

- The owner of the object, who always has full access
- Users with domain access control have the same level of access on all objects as they do the domain
- The "Last Updated By" user of the domain has full access to the domain and all objects

/NORELAXED_ACCESS is a more conservative approach to access control: don't allow anyone access to an object unless they have specifically been granted access with an access control entry. This is designed for secure environments, or those whose domain-scope crosses organizational boundaries.

Note that access control is an object-specific method of controlling access. It is in addition to the normal MDMS rights required to perform operations. Having access control without the associated rights is not enough to operate on an object - both are required.

The default is /RELAXED_ACCESS.

This qualifier requires the right MDMS_SET_RIGHTS.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

/REQUEST_ID=number
Changes the request identifier for the next MDMS request in the domain.

/SCHEDULER_TYPE
When using the integrated ABS and MDMS scheduler functions, the /SCHEDULER_TYPE qualifier defines the type of scheduler used for save and restore operations. Select from one of the following options:

- INTERNAL (D)

  MDMS internal scheduler using OpenVMS batch queues. This is the default option, and is recommended for normal backup and restore scenarios.

- EXTERNAL

  MDMS scheduler access via command procedure. This provides more flexibility on how saves and restores are submitted to the batch queues.

- SCHEDULER

  External scheduler access via command procedures. This is the required option when using an external scheduler product to schedule saves and restores. You should use this option if you are using the DECScheduler V2.1B that was shipped with previous versions of ABS.

  The default is INTERNAL.

/SCRATCH_TIME=delta_time
Assign the default scratch date to volumes by applying the delta time specified with attribute to the allocation date of the volume. This scratch time is applied to all volumes that do not have an explicit scratch date defined.

/SYSPRV (D)
/NOSYSPRV
The default /SYSPRV qualifier enables user with OpenVMS privilege SYSPRV the low-level right MDMS_ALL_RIGHTS, which allows all operations. The /NOSYSPRV qualifier does not give users with SYSPRV any additional MDMS rights.

If you set the domain to /NOSYSPRV, it is highly recommended that you grant MDMS_ALL_RIGHTS in all accounts that require unconditional access to MDMS. This includes the system administrators' accounts and specifically the SYSTEM account.

The MDMS IVP requires unconditional access from the SYSTEM account during installation using either SYSPRV (if enabled) or MDMS_ALL_RIGHTS.

The default is SYSPRV.

/TRANSITION_TIME=delta_time
Defines the default transition time to be applied to volumes that do not have an explicit transition time defined.

/USER_RIGHTS[=(right[,...])
/NOUSER_RIGHTS
The /USER_RIGHTS qualifier sets the low-level rights associated with the high-level right MDMS_USER. If the qualifier is specified with no value, a default set of rights is set. The /REMOVE or /REPLACE qualifiers can be used to remove or replace rights in the list, rather than adding them by default. Use /NOUSER_RIGHTS to remove all rights.

This qualifier requires the right MDMS_SET_RIGHTS.

Examples

```
$ MDMS SET DOMAIN /OFFSITE_LOCATION=XCYX
```

This command sets the name of the domain offsite location to XCYX.

```
$ MDMS SET DOMAIN /MAIL_USERS=(NORTON,CRANDLE) /REPLACE
```

This command specifies that OpenVMS Cluster users Norton and Crandle are to be the only users notified on the mail distribution. They will be notified when volumes are deallocated.

```
$ MDMS SET DOMAIN /OPCOM_CLASSES=(OPER4) /REMOVE
```

This command prevents the further display of OPCOM messages on terminals enabled for the OPER4 OPCOM class.

```
$ MDMS SET DOMAIN /OPERATOR_RIGHTS=(MDMS_SET_ALL, - MDMS_SET_PROTECTED)
```

This command adds the low-level rights MDMS_SET_ALL and MDMS_SET_PROTECTED to the high-level right MDMS_OPERATOR.

MDMS SET DRIVE

The MDMS SET DRIVE command modifies a drive definition in the MDMS database.

Equivalent STORAGE Command: None

Format:

MDMS SET DRIVE drive_name [,...]

Parameters

drive_name
Specifies the name of the drive. Specify a drive name or a logical name.

The maximum length of the drive name or logical name is 31 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of drive names may be entered.

Description

The MDMS SET DRIVE command modifies a drive definition in the MDMS database.

Privileges

The request requires MDMS_SET_ALL.

Restrictions

The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default.

The /JUKEBOX and /STACKER qualifiers are mutually exclusive.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ACCESS=keyword
This qualifier defines the type of access to the drive, which can be one of the following keywords:

ALL (D)- supports local node/cluster/fibre access and remote (RDF) access

LOCAL - supports local node/cluster/fibre access only

REMOTE - supports remote (RDF) access only Access to drives is restricted on allocate requests - for example, it is not possible to allocate a drive designated as local access remotely using RDF. However, with the proper rights, it is possible to issue other MDMS commands (such as LOAD) both locally and remotely.

The default is ALL.

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list.

This is the default when specifying list items.

/AUTOMATIC_REPLY (D)
/NOAUTOMATIC_REPLY
Specifies that MDMS automatically replies to all OPCOM messages that can be polled for completion on requests for this particular drive.

The default is /AUTOMATIC_REPLY.

/DESCRIPTION="text"
Comments about the drive. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. To clear the description, specify "".

/DEVICE=vms_device_name
Specifies the OpenVMS device name of the drive. This qualifier is required if the OpenVMS device name is different from the drive name. Do not specify a node specification (NODE::name) in the vms_device_name. Instead use the /NODES or /GROUPS qualifier.

The default device name is the drive name.

/DISABLED
Places the drive in the disabled state. This prevents the drive from being selected and allocated for use. This takes effect immediately. However, if the drive is already in use, operations on that drive will continue until the drive is deallocated.

The default is /ENABLED.

/DRIVE_NUMBER=number
This qualifier defines the drive number for robot commands if the drive is in a jukebox. This qualifier must be specified for multi-drive MRD-controlled jukeboxes.

The default is drive number 0.

/ENABLED (D)
Places the drive in the enabled state. This allows the drive to be selected and allocated for use. This takes effect immediately.

The default is /ENABLED.

/GROUPS=(group_name[,...])
/NOGROUPS
Specifies the names of groups of nodes that share common access to this device. Usually, only one group is specified. If neither /NODES or /GROUPS are specified, the node from which the command was issued is used as the node name. Groups can also be specified with the /NODES qualifier.

/JUKEBOX=jukebox_name
If the drive is in a jukebox, this qualifier specifies the jukebox name.

/MEDIA_TYPE=(media_type[,...])
/NOMEDIA_TYPE
Specifies one or more distinct media types that the drive can support for read-write access. The /REMOVE or /REPLACE qualifiers can be used to remove or replace objects in the list, rather than adding them by default. The /NOMEDIA_TYPES qualifier removes all media types. When a drive is created with no media types, the default media type from the domain is used.

/NODES=(node_name[,...])
/NONODES
Specifies one or more distinct nodes that have direct access to the drive. The /REMOVE or /REPLACE qualifiers can be used to remove or replace objects in the list, rather than adding them by default. The /NONODE qualifier removes all nodes. If neither /NODES nor /GROUPS is specified, the node from which the command was issued is used as the node name.

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username. The node, group and username portions may be wild-carded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the group_name::username of the user entering the CREATE command on the object from a node in the group.

/READONLY=(media_type[,...])
/NOREADONLY
Specifies one or more distinct media types that the drive can support for read-only access. The /REMOVE or /REPLACE qualifiers can be used to remove or replace objects in the list, rather than adding them by default. The /NOREADONLY qualifier removes all read-only media types.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

/SHARED
/NOSHARED (D)
The /SHARED qualifier defines that the drive may be used by non-MDMS clients and that the drive is only partially managed. If the drive is set to the default /NOSHARED, the MDMS server allocates the drive at all times it is not used by an application or user. Setting the drive to /SHARED clears this allocation.

The default is /NOSHARED.

/STACKER
/NOSTACKER (D)
The /STACKER qualifier indicates that the drive is to be treated as a stacker gravity loader. The default /NOSTACKER indicates that the drive is to be treated as a standalone drive, or a robotically-controlled jukebox, as appropriate.

The default is /NOSTACKER.

/STATE=state
This is a protected field that should be modified only to recover on error. Use the LOAD and UNLOAD commands to manipulate the state field under normal operation. The /STATE qualifier sets the current drive state. The valid keywords are:

Empty

Full

Loading

Unloading

This qualifier requires the right MDMS_SET_PROTECTED.

Example

```
$ MDMS SET DRIVE FRED /NODES=(JOHN, PAUL)
```

This command adds nodes JOHN and PAUL for direct access to the drive with drive name or logical name of FRED.

MDMS SET ENVIRONMENT

The MDMS SET ENVIRONMENT command modifies an existing environment definition in the MDMS database. Environments were formerly known as execution environments or environment policies. Environment is the new common name.

Equivalent ABS Command: SET ENVIRONMENT

Format:

MDMS SET ENVIRONMENT environment_name [,...]

Parameters

environment_name
Specifies the name of the environment.

The maximum length of the environment name is 63 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of environment names may be entered.

Description

The MDMS SET ENVIRONMENT command modifies an existing environment definition in the MDMS database. An environment describes how data is saved and restored during execution.

Privileges

The request requires MDMS_SET_ALL.

Restrictions

This command is restricted to nodes with an ABS license. The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default. The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/ACTION=keyword
The /ACTION qualifier specifies an operation to perform on files or data being saved using this environment. Select one of the following options:

- RECORD_DATE Modifies the BACKUP date on files being saved (VMS_FILES only)
- NO_CHANGE Does not perform any operation on the data being saved
- DELETE_OBJECT Deletes the data being saved - this is typically used for long-term archive operations

If not specified, the default is RECORD_DATE.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list.

This is the default when specifying list items.

/ASSIST (D)
/NOASSIST
The /ASSIST qualifier specifies whether saves and restores using this environment utilize operator assistance (using OPCOM) when needed to continue the operation. If /ASSIST is specified and operator intervention is needed an OPCOM message will be output.

If /NOASSIST is specified and an operator intervention is needed, the operation will fail and the next operation will be performed (if possible).

The default is /ASSIST.

/COMPRESSION=keyword
The /COMPRESSION qualifier specifies the type of compression to be used during save operations using this environment. This option is only applicable to UNIX client operations. Select one of the following options:

- GZIP_COMPRESSION
- UNIX_COMPRESSION
- NONE (D)

The default is NONE.

/DATA_SAFETY=(keyword[,...])
/NODATA_SAFETY
The /DATA_SAFETY qualifier specifies one or more options that the backup agent uses to ensure the integrity of the data being saved. The qualifier is applicable to archive type TAPE and when using OpenVMS Backup as the backup agent. Select one or more of the following options:

•	CRC	Performs a Cyclic Redundancy check and writes it for each data block on a tape volume
•	FULL_VERIFY	Rereads all saved data and compares to what is on disk
•	XOR	If the CRC check detects a bad block during a restore operation, the XOR mechanism allows recovery of the block

By default, data safety options are added. However, you can use the /REMOVE qualifier to remove any option, and the /REPLACE qualifier to replace the option list. If you specify /NODATA_SAFETY, then all options are removed.

If not specified, the default options are: (CRC, FULL_VERIFY, XOR)

/DESCRIPTION="text"
Comments about the object. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. To clear the description, specify "".

/DRIVE_COUNT=number
The /DRIVE_COUNT qualifier specifies the number of drives to use for each save or restore using this environment. If there are at least as many drives available as the drive count, that number of drives are allocated for each save and restore request. If not, a reduced number of drives are allocated.

The default and highly recommended value is 1. The number of drives may range from 1 to 32.

/EPILOGUE="string"
/NOEPILOGUE (D)
The /EPILOGUE qualifier specifies a string to execute after an entire save or restore operations completes. The string may be up to 80 characters and must be enclosed in quotes.

By default, no epilogue command is executed.

/INTERVAL=delta_time
The /INTERVAL qualifier specifies the time between retries if a save or restore operation fails. This is used in association with the /RETRY_LIMIT qualifier. The interval range must be between 1 - 60 minutes.

If /RETRY_LIMIT is greater than zero, the default interval applied is 00:15:00 (15 minutes).

/LINKS_ONLY (D)
/NOLINKS_ONLY
The /LINKS_ONLY qualifier specifies that only UNIX symbolic links are backed up. The /NOLINKS_ONLY qualifier specifies that UNIX symbolic links are followed and the data is backed up as well. This qualifier is applicable to UNIX client backups only.

The default is LINKS_ONLY.

/LISTING_OPTION=keyword
The /LISTING_OPTION qualifier specifies the level of detail in the list file for a save or restore operation. Select one of the following options:

- NONE (D) No listing file is generated
- BRIEF Generates a brief listing file
- FULL Generates a full listing file including full file names and file information provided by the backup agent

If not specified, the default is NONE.

/LOCK
/NOLOCK (D)
The /LOCK qualifier specifies the action to take when data usage conflicts occur. If /LOCK is specified, data is saved even if other applications have the data locked for write access. If /NOLOCK is specified, the data is not saved if other applications have the data locked for write access.

The default is /NOLOCK.

/NOTIFICATION=(option[,...])
/NONOTIFICATION
The /NOTIFICATION qualifier specifies options to use for notifying mail user or OPCOM classes when using this environment. Select one or more of the following options:

- MAIL=(username[,...])

  Specifies one or more mail users to receive mail on completion of an operation. The username may include a node name (node::username) or group name (group::username). By default the mail is sent to the user on the node on which the request executes.

- OPCOM=(class[,...])

  Specifies one or more OPCOM classes to receive an OPCOM on completion of an operation. The class names must be valid OpenVMS OPCOM class names (TAPES etc).

- TYPE=keyword

  Specifies the level of detail included in the notification. This keyword is applicable to MAIL users only. Select one of the following options:

  – BRIEF
  – FULL
  – NORMAL

- WHEN=(option[,...])

  Specifies when the notification is sent and under what circumstances. Select one or more of the following options:

  – COMPLETE
    Sends notification at the completion of a request with any status
  – ERROR
    Sends notification at the completion of a request with error or fatal status
  – FATAL
    Sends notification at the completion of a request with fatal status

– START
  Sends notification at the start of a request

– WARNING
  Sends notification at the completion of a request with warning, error or fatal status

Only one notification entry can be entered per command. Use the /ADD, /REMOVE and /REPLACE qualifiers to add, remove or replace mail users, OPCOM classes or when definitions. The username(s) in an entry must match exactly to successfully modify or remove an entry.

If not specified, the default is:

```
(OPCOM=TAPES, TYPE=BRIEF, WHEN=FATAL)/OWNER_NAME=node::username
```

/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username. The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the group_name::username of the user entering the CREATE command on the object from a node in the group.

/PROFILE=(USER=username, option[,...])
The /PROFILE specifies the execution user context when running saves or restore in this environment. A profile must contain a username, and one or more of the following options:

- CLUSTER=cluster_name

  A name of a cluster (group). This is used together with the username to identify the user account on the cluster. Specify "*" for all clusters.

- NODE=node_name

  A name of a node. This is used together with the username to identify the user account on the node. Specify "*" for all nodes.

- PRIVILEGES=(privileges[,...])

  A list of OpenVMS privileges. If specified, this overrides the default privileges obtained from the user's UAF record on the node or cluster.

- RIGHTS=(right[,...])

  A list of rights names. If specified, this overrides the default rights obtained from the user's UAF record on the node or cluster.

If the username is not specified, the existing username in the profile is assumed. The username must not contain a node or cluster name, and must be a valid OpenVMS user on the node or cluster specified.

If the profile is not specified, the following defaults are applied:

USER=ABS
CLUSTER=*
NODE=*

PRIVILEGES=NONE (will use ABS privileges on execution node)
RIGHTS=NONE (will use ABS rights on execution node)

If just a username is provided, the default node is the node in which the command is entered. The privileges and rights are obtained from the UAF file for the specified user on the specified node (or the command node if none).

User name can also be specified as a special keyword <REQUESTER>. This means that the user profile in the associated save or restore request is used. This is the normal situation for user backups. The other profile fields are not used in this case.

/PROLOGUE="string"
/NOPROLOGUE (D)
The /PROLOGUE qualifier specifies a string to execute before an entire save or restore operations starts. The string may be up to 80 characters and must be enclosed in quotes.

By default, no prologue command is executed.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

/RETRY_LIMIT=number
/NORETRY_LIMIT
The /RETRY_LIMIT qualifier specifies the number of retries performed if a save or restore operation fails. If you specify a retry limit of 0, no retries are attempted. /NORETRY_LIMIT means that there is no limit on the number of retries.

If not specified, the default value is 3.

/SPAN_FILESYSTEMS
/NOSPAN_FILESYSTEMS (D)
The /SPAN_FILESYSTEMS qualifier specifies that a save operation backs up the entire file system if the file system spans physical devices. The /NOSPAN_FILESYSTEMS qualifier backs up only the root file system. Applicable only to UNIX client backup operations.

If not specified, the default is /NOSPAN_FILESYSTEMS.

Example:

```
$ MDMS SET ENVIRONMENT USER_SAVE_ENV -
$_ /ACTION=NO_CHANGE -
$_ /PROFILE=(USER=ABS, CLUSTER=*, NODE=*) -
$_ /NOTIFICATION=(OPCOM=(CENTRAL,TAPES),WHEN=ERROR)/REPLACE
```

This command modifies environment USER_SAVE_ENV, specifying an action to not modify files on saves, changing the user profile to ABS on any node or cluster, and replacing notification for OPCOM classes CENTRAL and TAPES to use a WHEN of ERROR.

MDMS SET GROUP

The MDMS SET GROUP command modifies a group definition in the MDMS database.

Equivalent STORAGE Command: None

Format:

MDMS SET GROUP group_name [,...]

Parameters

group_name
Specifies the name of the group.

The maximum length of the drive name is 31 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of group names may be entered.

Description

The MDMS SET GROUP command modifies a group definition in the MDMS database.

Privileges

The request requires MDMS_SET_ALL.

Restrictions

The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list. This is the default when specifying list items.

/DESCRIPTION="text"
Comments about the group. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. To clear the description, specify "".

/NODES=(node_name[,...])
/NONODES
Specifies one or more nodes that comprise the group. The /REMOVE or /REPLACE qualifiers can be used to remove or replace objects in the list, rather than adding them by default. The /NONODES qualifier removes all nodes.

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username.The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the group_name::username of the user entering the CREATE command on the object from a node in the group.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

Example

```
$ MDMS SET GROUP HOSER /NODE=TOOKUS /REMOVE
```

This command removes node TOOKUS from the group HOSER

MDMS SET JUKEBOX

The MDMS SET JUKEBOX command modifies a jukebox definition in the MDMS database.

Equivalent STORAGE Command: None

Format:

MDMS SET JUKEBOX jukebox_name [,...]

Parameters

jukebox_name
Specifies the name of the jukebox.

The maximum length of the jukebox name is 31 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of jukebox names may be entered.

Description

The MDMS SET JUKEBOX command modifies a jukebox definition in the MDMS database.

Privileges

The request requires MDMS_SET_ALL.

Restrictions

The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ACCESS=keyword
This qualifier defines the type of access to the jukebox, which can be one of the following keywords:

ALL (D) - supports local node/access and remote access

LOCAL - supports local node/cluster access only

REMOTE - supports remote access only

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object

- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/ACS=acs_id
The /ACS qualifier specifies the Automated Cartridge System (ACS) identifier. The default value is zero. Each MDMS jukebox maps to one Library Storage Module (LSM), and requires the specification of the library, ACS and LSM identifiers. Valid for DCSC-controlled jukeboxes only.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list. This is the default when specifying list items.

/AUTOMATIC_REPLY (D)
/NOAUTOMATIC_REPLY
Specifies that MDMS automatically replies to all OPCOM messages that can be polled for completion on requests for this particular jukebox.

/CAP_SIZE=(number[,...])
For DCSC-controlled jukeboxes equipped with Cartridge Access Points (CAPs), this attribute specifies the number of cells for each CAP. The first number is the size for CAP 0, the next for CAP 1 etc. If a size is not specified for a CAP, a default value of 40 is used. Specifying the CAP size optimizes the movement of volumes to and from the jukebox by filling the CAP to capacity for each move operation. When specifying CAP sizes, the specified numbers always replace any previous sizes in the database. Valid for DCSC-controlled jukeboxes only.

/CONTROL=keyword
This qualifier specifies the robot control facility used to control the jukebox's robot. The valid keywords are:

MRD (D) - The robot is controlled with the MRD facility

DCSC - The jukebox is a silo controlled by the DCSC
facility - for StorageTek(R) Silos only. This option is not available when running with the ABS-OMT license: control is hard-coded to MRD.

/DESCRIPTION="text"
Defines comments about the object in the record. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. To clear the existing description, specify "".

/DISABLED
Places the jukebox in the disabled state. This prevents all drives in the jukebox from being selected and allocated for use. This takes effect immediately. However, any drives in use will continue to be used until they are deselected.

/ENABLED (D)
Places the drive in the enabled state. This allows drives in the jukebox to be selected and allocated for use. This takes effect immediately. This is the default.

/GROUPS=(group_name[,...]
/NOGROUPS
Specifies the names of groups of nodes that share common access to this device. Normally, only one group is specified. The /REMOVE or /REPLACE qualifiers can than adding them by default. The /NOGROUPS qualifier removes all groups.

/LIBRARY=library_id
This qualifier specifies the library identifier for a silo. Valid values are 1,2,3,4, and the default is 1 when the jukebox is controlled by DCSC and 0 (not applicable) when controlled by MRD. Each MDMS jukebox maps to one Library Storage Module (LSM), and requires specification of the library, ACS and LSM identifiers.

/LOCATION=location_name
/NOLOCATION
This qualifier specifies the location of the jukebox, which is used when moving volumes into and out of the jukebox. If not specified, or /NOLOCATION is specified, the default onsite location from the domain record is used as the jukebox location.

/LSM=lsm_id
The /LSM qualifier specifies the Library Storage Module (LSM) identifier. The default value is zero. Each MDMS jukebox maps to one Library Storage Module (LSM), and requires the specification of the library, ACS and LSM identifiers. Valid for DCSC-controlled jukeboxes only.

/NODES=(node_name[,...])
/NONODES
Specifies one or more nodes that can directly access the jukebox. The /REMOVE or /REPLACE qualifiers can be used to remove or replace objects in the list, rather than adding them by default. The /NONODES qualifier removes all nodes.

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username.The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the group_name::username of the user entering the CREATE command on the object from a node in the group.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

/ROBOT=robot_name
/NOROBOT
The /ROBOT qualifier defines the OpenVMS device name of the robot. Required for, and applicable to MRD-controlled jukeboxes only.

Do not specify a node name in the robot name.

/SLOT_COUNT=number
The /SLOT_COUNT qualifier specifies the total number of slots in the entire jukebox. For any MRD jukebox, either the slot count or topology must be specified. Valid for MRD-controlled jukeboxes only.

/STATE=keyword
This is a protected field that should be modified only to recover on error. Use the LOAD, UNLOAD or MOVE commands to manipulate the state field under normal operation. The /STATE qualifier specifies the usage state of the jukebox. The keyword values are:

Available - The jukebox is available for use

In_use - The jukebox is in use

This qualifier requires the right MDMS_SET_PROTECTED.

/THRESHOLD=number
Specifies that an OPCOM message is output when the number of free volumes in the jukebox falls below the specified number. The default value is zero, which disables the feature. The OPCOM message is output on a node that can directly access the jukebox.

/TOPOLOGY=(TOWERS=(number[,...]), FACES=(number[,...]), LEVELS=(number[,...]), SLOTS=(number[,...]))
Specifies topology of jukebox, when a TL820-class jukebox is being used as a magazine. Valid for MRD-controlled jukeboxes only. The topology specification allows OPCOM messages to move magazines to be specified with TOWER, FACE, LEVEL rather than slot range. The specification of topology is optional. For each tower in the configuration, a corresponding entry must also be placed in FACES LEVELS and SLOTS that reflects the configuration of that tower.

The tower numbers start at zero, and additional towers must be the next number in sequence (i.e. 0,1,2 etc). Other specifications are absolute counts of the entity being specified for each tower (i.e. the total number of faces, levels and slots in each tower).

For example, for a three-tower jukebox, each tower having 8 faces, the first tower having two levels and the other two towers having three levels, and support of 11-slot bin-packs, the topology specification would be:

/TOPOLOGY=(TOWERS=(0,1,2), /FACES=(8,8,8), LEVELS=(2,3,3), SLOTS=(11,11,11)

/USAGE=[NO]MAGAZINE
The /USAGE=MAGAZINE qualifier specifies that the jukebox is configured for magazines, and that the movement of volumes may be performed using magazines. The /USAGE=NOMAGAZINE qualifier does not support magazine use. The default is NOMAGAZINE.

You must specify /USAGE=MAGAZINE when defining the /TOPOLOGY attribute. Note that you can use the jukebox for non-magazine moves even when the usage is magazine, but the reverse is not true. Valid for MRD-controlled jukeboxes only.

Examples

```
$ MDMS SET JUKEBOX JUKE_1 /DESCRIPTION="Design Data Backup"
```

This command modifies the description for jukebox JUKE_1.

```
$ MDMS SET JUKEBOX JUKE_2 /USAGE=MAGAZINE /SLOTS=(0-100)
```

This command modifies the jukebox JUKE_2 to support magazines, and slots 0-100.

MDMS SET LOCATION

The MDMS SET LOCATION command modifies a location definition in the MDMS database.

Equivalent STORAGE Command: None

Format:

MDMS SET LOCATION location [,...]

Parameters

location
Specifies the name of the location.

The maximum length of the location is 31 characters. Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of locations may be entered.

Description

The MDMS SET LOCATION command modifies a location definition in the MDMS database.

Privileges

The request requires MDMS_SET_ALL.

Restrictions

None

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/DESCRIPTION="text"
Defines comments about the object in the record. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. To clear the existing description, specify "".

/LOCATION=location
/NOLOCATION (D)
The /LOCATION qualifier allows you to specify a parent location, thus creating a location hierarchy. If there is no parent location, specify /NOLOCATION. Use parent locations to allow selection of volumes or drives in compatible locations. One location is compatible with another if it has a common parent location in the hierarchy. If you do not wish to utilize the compatible location feature, do not specify parent locations. Locations with common parents are most useful where the parents and siblings are in close proximity to one another (e.g. rooms 101 and 102, with parent location floor 1), and selection of volumes or drives from any of the locations is desired. Do not use parent locations across larger distances.

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username.The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the group_name::username of the user entering the CREATE command on the object from a node in the group.

/SPACES=(range)
/NOSPACES
The /SPACES qualifier defines individual spaces for volumes or magazines at the location. Spaces are alphanumeric strings of up to 8 characters. The spaces can be specified as a range - only a single range is supported. The /NOSPACES qualifier removes all spaces.

Example

```
$ MDMS SET LOCATION SHELF_100 /SPACES=(300-500)
```

This command modifies the location called SHELF_100 and supports spaces 300 - 500.

MDMS SET MAGAZINE

The MDMS SET MAGAZINE command modifies a magazine definition in the MDMS database.

Equivalent STORAGE Command: None.

Format:

MDMS SET MAGAZINE magazine_name [,...]

Parameters

magazine_name
Specifies the name of the magazine.

The maximum length of the magazine name is 31 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of magazine names may be entered.

Description

The MDMS SET MAGAZINE command modifies a magazine definition in the MDMS database.

Privileges

The request requires MDMS_SET_ALL.

The /JUKEBOX, /PLACEMENT, /POSITION and /START_SLOT qualifiers also require MDMS_SET_PROTECTED.

Restrictions

None

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/DESCRIPTION="text"
Defines comments about the object in the record. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. To clear the existing description, specify "".

/JUKEBOX=jukebox_name
This is a protected field that should only be modified to recover on error. Use the MOVE MAGAZINE command to set up the jukebox name under normal operations. This qualifier specifies the name of the jukebox in which the magazine resides. The maximum length of the jukebox name is 31 characters.

This qualifier requires the right MDMS_SET_PROTECTED.

/OFFSITE=([LOCATION=location][,[NO]DATE[=date]])
/NOOFFSITE
This qualifier specifies the date that the magazine is to be taken offsite and the offsite location. The location field is required when using the /OFFSITE qualifier if no location has been previously specified. The LOCATION keyword cannot be negated and if specified must point to a valid location object. Specify a VMS absolute or delta time in the date field. The NODATE keyword may be used to remove the date. This has the effect of disabling the schedule for the magazine, while retaining the location. To clear the offsite date specify /NOOFFSITE.

The default offsite location is that stored in the domain object.

/ONSITE=([LOCATION=location][,[NO]DATE[=date]])
/NOONSITE
This qualifier specifies the date that the magazine is to be brought back onsite and the onsite location. The location field is required when using the /ONSITE qualifier if no location has been previously specified. The LOCATION keyword cannot be negated and if specified must point to a valid location object. Specify a VMS absolute or delta time in the date field. The NODATE keyword may be used to remove the date. This has the effect of disabling the schedule for the magazine, while retaining the location. To clear the onsite date, specify /NOONSITE.

The default onsite location is that stored in the domain object.

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username. The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the group_name::username of the user entering the CREATE command on the object from a node in the group.

/PLACEMENT=keyword
This is a protected field that should only be modified to recover on error. Use the MOVE MAGAZINE command to set up the placement under normal operation. This qualifier defines the current placement of the magazine. Select one of following options:

JUKEBOX

OFFSITE

ONSITE

MOVING

This qualifier requires the right MDMS_SET_PROTECTED.

/POSITION=position=(tower,face,level)
This is a protected field that should only be modified to recover on error. Use the MOVE MAGAZINE command to set up the position under normal operation. The /POSITION qualifier specifies the position in the jukebox that the magazine resides.

The tower, face and level specification represent the relative number of the tower, face and level, starting from 0. So for absolute jukebox slot of zero, the corresponding position is (0,0,0). The next position in the jukebox would be (0,0,1) and so on, according to the topology defined for the jukebox.

This qualifier requires the right MDMS_SET_PROTECTED.

/SLOT_COUNT=number
The /SLOT_COUNT qualifier specifies the number of slots in a magazine to store volumes.

/SPACES=(range)
/NOSPACES
This qualifier specifies the space(s) in a location in which the magazine is stored when not in a jukebox. Spaces are alphanumeric strings of up to 8 characters. The /NOSPACES qualifier removes all spaces.

/START_SLOT=(number)
This is a protected field that should only be modified to recover on error. Use the MOVE MAGAZINE command to set up the start slot under normal operation. This qualifier specifies the starting jukebox slot when the magazine is placed in a jukebox.

This qualifier requires the right MDMS_SET_PROTECTED.

Example

```
$ MDMS SET MAGAZINE MYMAG01 /ONSITE=(LOCATION=SHELF_20) - /SPACES=S4
```

This command modifies the non-jukebox location of magazine MYMAG01 to "space S4 in shelf_20".

MDMS SET MEDIA_TYPE

The MDMS SET MEDIA_TYPE command modifies a media type definition in the MDMS database.

Equivalent STORAGE Command: None

Format:

MDMS SET MEDIA_TYPE media_type [,...]

Parameters

media_type
Specifies the name of the media type.

The maximum length of the media type name is 31 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of media types may be entered.

Description

The MDMS SET MEDIA_TYPE command modifies a media type definition in the MDMS database. A media type definition consists of a density, compaction option and capacity, if applicable.

Privileges

The request requires MDMS_SET_ALL.

Restrictions

None

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/CAPACITY=number
The /CAPACITY qualifier specifies the capacity in megabytes of the tape. This is used by some MDMS clients to estimate end-of-tape conditions. By default, capacity is set to zero.

/COMPACTION (D)
/NOCOMPACTION
The /COMPACTION qualifier specifies that the media type should use compaction when writing to tape. This is the default. If you do not wish to use compaction, then specify /NOCOMPACTION.

/DENSITY=density
Specifies a density string between 1 and 31 characters in length that the media type supports.

Note that the COMP keyword for compaction should be specified in the /COMPACTION attribute, not density.

/DESCRIPTION="text"
Defines comments about the media type. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description is can range from 0 to 255 characters. Specify "" to clear the description.

/LENGTH=length
The /LENGTH qualifier specifies the length of a 9-track magnetic tape, and is expressed in feet. By default, length is set to zero.

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username.The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the group_name::username of the user entering the CREATE command on the object from a node in the group.

Example

```
$ MDMS SET MEDIA_TYPE TAPE_9T /DENSITY=1600 /LENGTH=3600
```

This command modifies a media type called TAPE_9T to use density of 1600 and length of 3600.

MDMS SET NODE

The MDMS SET NODE command modifies a node definition in the MDMS database.

Equivalent STORAGE Command: None

Format:

MDMS SET NODE node_name [,...]

Parameters

node_name
Specifies the name of the node. Do not append colons to the node name. The node name should be the DECnet (Phase IV) node name (i.e.SYS$NODE) if DECnet (Phase IV) is supported on the node - otherwise it should be a unique name chosen by the MDMS administrator. If DECnet-Plus (Phase V) and/or TCP/IP are supported, the appropriate fullnames should be stored as attributes of the node. Do not use the node name to specify fullnames.

The maximum length of the node name is 31 characters. Valid characters are "$,-,0-9,A-Z,_,a-z".

Description

The MDMS SET NODE command modifies a node definition in the MDMS database.

Privileges

The request requires MDMS_SET_ALL.

Restrictions

The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list. This is the default when specifying list items.

/DATABASE_SERVER (D)
/NODATABASE_SERVER
The /DATABASE_SERVER qualifier means the node can be a database server, supporting failover operations. To be a database server, the node must have direct access to the MDMS database files.

/DECNET_PLUS_FULLNAME=node_fullname
This qualifier allows you to specify the DECnet-Plus (Phase V) fullname for a node. The fullname may be up to 255 characters. If this node has a DECnet-Plus name defined bylogical name "SYS$NODE_FULLNAME" then the DECNET_PLUS_FULLNAME has to be defined for this node and has to exactly match the DECnet-Plus (Phase V) name. The DECNET_PLUS_FULLNAME has to be defined in order for this node to be fully enabled when the DECnet transport has been enabled and DECnet-Plus is running on the system. The fullname can be specified in upper or lower case.

/DESCRIPTION="text"
Defines comments about the node. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. Specify "" to clear the description.

/DISABLED
Places the node in the disabled state. This prevents the node from participating in the MDMS domain as either a server or a client. This takes effect immediately.

/ENABLED (D)
Places the node in the enabled state. This allows the node to participate in MDMS operations. This takes effect immediately. This is the default.

/LOCATION=location
/NOLOCATION
The /LOCATION qualifier specifies the location of the node, which is used when allocating volumes and drives. If not specified, or /NOLOCATION is specified, the default onsite location from the domain record is used as the node location.

/OPCOM=(class[,...])
/NOOPCOM
The /OPCOM qualifier adds the specified classes used for notifying operators. All OPCOM for devices on the node are sent to all specified classes on the node. The /REMOVE or /REPLACE qualifiers can be used to remove or replace classes in the list, rather than adding them by default. Specify /NOOPCOM to disable OPCOM notification. By default, the node acquires OPCOM classes from the domain record.

The following classes are valid:

CARDS	NETWORK	OPER6	OPER12
CENTRAL	OPER1	OPER7	PRINTER
CLUSTER	OPER2	OPER8	REPLY
DEVICES	OPER3	OPER9	SECURITY
DISKS	OPER4	OPER10	SOFTWARE
LICENSE	OPER5	OPER11	TAPES

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username. The node, group and username portions may be wild-carded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the group_name::username of the user entering the CREATE command on the object from a node in the group.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

/TCPIP_FULLNAME=node_fullname[:low_port-high_port]
This qualifier allows you to specify the TCP/IP full name for a node. The full name may be up to 255 characters. If this node has a TCP/IP name defined by logical name "*INET_HOST" the TCPIP_FULLNAME has to be defined and has to exactly match the full IP name as "<INET_HOST>.<INET_DOMAIN>". For INET_DOMAIN see logical name "*INET_DOMAIN". The TCPIP_FULLNAME has to be defined in order for this node to be fully enabled when the TCPIP transport has been enabled. The fullname can be specified in upper or lower case.

The low_port and high_port numbers specify the range of TCP/IP port numbers used by the server to listen for incoming requests. The default is 2501-2510. If this conflicts with other applications, a new range above 1023 can be specified. The range should contain at least 10 port numbers for the MDMS server to select one at a time.

Note that the MDMS GUI requires TCP/IP running on all GUI nodes, and on the MDMS server nodes to which the GUI may connect.

/TRANSPORT=(keyword[,...])
Specifies the transport protocol(s) to be used when communicating with other MDMS facilities on other nodes, as a prioritized ordered list. The /REMOVE or /REPLACE qualifiers can be used to remove or replace objects in the list, rather than adding them by default. Enter one or more of:

Specifies the network transports to be used, as a prioritized ordered list. The /REMOVE or /REPLACE qualifiers can be used to remove or replace transports in the list, rather than adding them by default.

Enter one or more of:

- DECNET - listen to incoming requests from other MDMS servers on DECnet (Phase IV) and DECnet-Plus (Phase V)
- TCPIP - listen to incoming requests from other MDMS servers on TCP/IP

Setting a new transport will automatically start the listener for this transport on the database server node. Likewise, removing a transport will take place within 10 seconds on the database server node. For client nodes, transport changes will take place the next time network connections time out (usually within 10 minutes). If the change needs to take place immediately, the client node server process must be restarted.

The node name and/or the node full names have to be set accordingly for a transport to work correctly.

Example

```
$ MDMS SET NODE COOKIE /OPCOM=(TAPES, OPER1)
```

This command modifies a node definition named "COOKIE", by adding OPCOM classes TAPES and OPER1 to the current list of OPCOM classes.

MDMS SET POOL

The MDMS SET POOL command modifies a pool definition in the MDMS database.

Equivalent STORAGE Command: None

Format:

MDMS SET POOL pool_name [,...]

Parameters

pool_name
Specifies the name of the pool.

The maximum length of the pool name is 31 characters. Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of pool names may be entered.

Description

The MDMS SET POOL command modifies a pool definition in the MDMS database.

Privileges

The request requires MDMS_SET_ALL.

Restrictions

The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list.

This is the default when specifying list items.

/AUTHORIZED_USERS=(node/group_name::username[,...])
/NOAUTHORIZED_USERS
Specifies one or more distinct users to the pool specified by node or group name and user name. Only authorized or default users can allocate volumes belonging to the pool. The /REMOVE or /REPLACE qualifiers can be used to remove or replace users in the list, rather than adding them by default.

/DEFAULT_USERS=(node/group_name::username[,...])
/NODEFAULT_USERS
Specifies one or more distinct users to the pool as the users default pool. Only authorized or default users can allocate volumes belonging to the pool. The /REMOVE or /REPLACE qualifiers can be used to remove or replace users in the list, rather than adding them by default. A particular node /group::user combination should only be defined with the /DEFAULT qualifier for one pool.

/DESCRIPTION="text"
Defines comments about the pool. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. Specify "" to clear the description.

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username. The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the group_name::username of the user entering the CREATE command on the object from a node in the group.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

/THRESHOLD=number
Specifies that an OPCOM message is output when the number of free volumes in the pool falls below the specified number. The default value is zero, which disables the feature. The OPCOM message is output on the database server node.

Example

```
$ MDMS SET POOL TEST_POOL/AUTHORIZE=(COOKIE::ABS, COOKIE::HSM)
```

This command adds authorized users COOKIE::ABS and COOKIE::HSM to a pool called TEST_POOL.

MDMS SET RESTORE

The MDMS SET RESTORE command modifies an existing restore definition in the MDMS database. Restores were formerly known as restore requests or restore transactions. Restore is the new common name.

Equivalent ABS Command: SET RESTORE

Format:

MDMS SET RESTORE restore_name [,...]

Parameters

restore_name
Specifies the name of the restore.

The maximum length of the restore name is 39 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of restore names may be entered.

Description

The MDMS SET RESTORE command modifies an existing restore definition in the MDMS database. Restores are used to copy previously-saved data from an archive back to online disk storage.

The data specifications for restores can be supplied in one of two ways:

- Using the /INCLUDE, /EXCLUDE, /DATA_SELECT_TYPE and /SOURCE_NODE qualifiers. These qualifiers can be used to specify a set of data specifications of a single data select type that can be restored. These are not positional qualifiers. This option is recommended for most restores, and this information is stored in a default selection that is mapped to the restore by MDMS. The default selection name is:

  restore_name_REST_SEL_DEF

- For more complex data specifications, you can create your own selections and map them to the restore using the /SELECTIONS qualifier. This options gives you more granularity in data selection, and allows you to have mixed data select types in a single restore.

Most restores are ONE_TIME_ONLY (the default) and do not need to be scheduled. However, restores can also be regularly scheduled in the same way as saves. If you wish to use one of the supplied frequency options, MDMS creates a schedule and initializes it to appropriate values. The schedule for any restore is called

restore_name_REST_SCHED

Alternatively, if you wish to define a schedule not handled in the supplied frequencies, you can use one of the following options:

- For scheduler types INTERNAL and EXTERNAL, you can define /FREQUENCY=CUSTOM, and modify the schedule to your own specification.
- For scheduler type SCHEDULER, you can define /FREQUENCY=EXPLICIT, and define a string to pass the explicit schedule to the scheduler in the qualifier /EXPLICIT_INTERVAL.

Privileges

The request requires MDMS_SET_ALL.

Restrictions

This command is restricted to nodes with an ABS license.

The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default.

The /DELETE_INTERVAL and /KEEP qualifiers are mutually exclusive.

The /BEFORE_DATE, /DATE_ARCHIVE and /SINCE_DATE qualifiers are mutually exclusive.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list. This is the default when specifying list items.

/ARCHIVE=(archive_name[,archive_name])
The /ARCHIVE qualifier allows you to specify one or two archives associated with the restore. The first archive name is applicable to full and selective threads in restores. If specified, the second archive name is associated with incremental threads in restores. If a second name is not specified, incremental threads use the first archive name. For any thread, the catalog name from the first archive is always used. At least one archive name must be supplied for a restore.

If an archive is not specified, the archive "SYSTEM_BACKUPS" is used by default.

/BASE_DATE=date
/NOBASE_DATE
The base date is used as a starting point for restores that have a repeating schedule frequency. Subsequent schedules are applied by adding the multiples of the frequency to the base date. If the restore is not to be repeated, then no base date is needed.

By default, if a base date is not specified but a start date is, the base date is set to the start date. If neither is specified, the base date is not set and the restore is not scheduled for execution.

/BEFORE_DATE=date
/NOBEFORE_DATE
You can select files for restore based on the date archived before a certain date. If specified, the restore will apply to the latest date archived before the specified date. /NOBEFORE_DATE clears the before date and uses other date criteria to select files, as follows:

- DATE_ARCHIVED - The latest file saved on the specified date
- SINCE_DATE - The first file saved after the specified date
- No date - The latest copy of the file

/CATALOG=(NAME=catalog_name, [NO]NODES=(node[,...]))
/NOCATALOG (D)
The /CATALOG qualifier specifies the name of the catalog used by the restore, and a list of nodes and groups that can directly access the catalog. This catalog overrides the catalog defined in the first archive specified in the restore. If you specify /NOCATALOG, then the catalog in the first restore archive is used.

Specify a local catalog name representing a catalog object in the MDMS database. With the NODES keyword, you may specify nodes, groups or a combination thereof. If you specify NONODES, the local execution node on which the restore is performed is used as the catalog node.

The default is /NOCATALOG.

/DATA_SELECT_TYPE=keyword
The /DATA_SELECT_TYPE qualifier specifies the type of data to restore in the default selection. Select one of the following options:

- VMS_FILES
- VMS_SAVESET
- UNIX_FILES
- WINDOWS_FILES
- RDB_V42_DATABASE
- RDB_V42_STORAGE_AREA
- RDB_V51_DATABASE
- RDB_V51_STORAGE_AREA
- RDB_V60_DATABASE
- RDB_V60_STORAGE_AREA
- RDB_V61_DATABASE
- RDB_V61_STORAGE_AREA

- RDB_V70_DATABASE
- RDB_V70_STORAGE_AREA

If not specified, MDMS attempts to determine the data select type based on the include file syntax. If MDMS cannot determine this, VMS_FILES is used. The data select type specification is stored in the default selection.

/DATE_ARCHIVED=date
/NODATE_ARCHIVED
You can select files for restore based on the date archived. If specified, the restore will apply to the latest copy of the data on the date archived. /NODATE_ARCHIVED clears the date archived and uses other date criteria to select files, as follows:

- BEFORE_DATE - The latest file saved before the specified date
- SINCE_DATE - The first file saved after the specified date
- No date - The latest copy of the file

/DELETE_INTERVAL=delta_time
The /DELETE_INTERVAL qualifier specifies the duration of certain restore requests after their start of execution. The qualifier is applicable only to restores with a scheduling frequency of ONE_TIME_ONLY. For these restores, the restore object (and any associated schedules and selections) are deleted after the delete interval has passed following the start of the restore execution. If you do not wish the restore to be deleted, specify /KEEP.

If not specified, the delete interval is 03-00:00:00 (3 days) for restores of frequency ONE_TIME_ONLY, and 0 for all other frequencies.

/DESCRIPTION="text"
Comments about the object. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. To clear the description, specify "".

/DESTINATION=disk:[dir]
The /DESTINATION qualifier specifies the target destination disk/directory location for the restore. Specify a disk and directory combination. If destination is not specified, the restore data is restored to the original disk location from where the data was saved.

The default is that no destination is specified, and the original save destination is used.

/ENVIRONMENT=environment_name
The /ENVIRONMENT qualifier specifies the environment object to use for the restore. Specify an environment name in the MDMS database.

If no environment is specified, one of the following defaults is used:

- The first archive name suffixed by "_ENV", if it exists
- Otherwise "DEFAULT_ENV"

/EPILOGUE="string"
/NOEPILOGUE (D)
The /EPILOGUE qualifier specifies a string to execute after each restore thread (i.e. each include list item specification in the restore). The string may be up to 80 characters and must be enclosed in quotes.

By default, no epilogue command is executed.

/EXCLUDE=(data_specification[,...])
/NOEXCLUDE (D)
The /EXCLUDE qualifier is used to exclude files that otherwise would be included with the /INCLUDE qualifier. This is used to exclude files for save or restore when a more general wild-card specification is specified for the include. The exclude specification is stored in the default selection.

This qualifier is not valid for UNIX or WINDOWS operations.

By default, no files are excluded.

/EXECUTION_NODES=(node_name[,...])
The /EXECUTION_NODES qualifier specifies one or more node names on which the restore request can be executed. Any one of the nodes can be the execution node for the request. /GROUPS may also be specified.

If no nodes or groups are specified, the include specification uses the node on which the restore was created.

/EXPLICIT_INTERVAL="string"
/NOEXPLICIT_INTERVAL (D)
When using scheduler type SCHEDULER, you can specify the scheduling frequency using /EXPLICIT_INTERVAL. Enter a string in a format known to the external scheduler. /NOEXPLICIT_INTERVAL clears the explicit interval. This qualifier is only applicable when /FREQUENCY=EXPLICIT.

By default, no explicit interval is defined.

/FREQUENCY=keyword
The /FREQUENCY qualifier specifies the scheduling frequency for this restore. Select one of the following options:

- ONE_TIME_ONLY (D)

  Scheduled one time only based on the base date or start date. This restore cannot be rescheduled, and the restore will automatically be deleted when the delete interval expires. This is the default.

- ON_DEMAND

  Scheduled on demand when a start date (or base date) is entered. Can be rescheduled by entering a new start date (or base date).

- DAILY

  Scheduled on a daily basis at the time contained within the base date.
  Example: 21-JAN-2001, 22-JAN-2001...

- WEEKLY

  Scheduled on a weekly basis on anniversaries of the base date day (MON-FRI) and time.
  Example: 21-JAN-2001, 28-JAN-2001...

- BIWEEKLY

  Scheduled on a biweekly (once every two weeks) basis on anniversaries of the base date day (MON-FRI) and time.
  Example: 21-JAN-2001, 04-FEB-2001...

- SEMI_MONTHLY

  Scheduled twice a month based on the base date (1-31) and time, and either two weeks before or after the date.
  Example: 21-JAN-2001, 07-FEB-2001... ++CHECK++

- MONTHLY

  Scheduled monthly based on the base date (1-31) and time and subsequent monthly anniversaries.
  Example: 21-JAN-2001, 21-FEB-2001...

- QUARTERLY

  Scheduled once every three months on the base date (1-31) and time, and three-month anniversaries thereafter.
  Example: 21-JAN-2001, 21-APR-2001...

- SEMI_ANNUALLY

  Scheduled once every six months on the base date (1-31) and time, and six-month anniversaries thereafter.
  Example: 21-JAN-2001, 21-JUL-2001...

- ANNUALLY

  Scheduled once every year on the base date (1-31) and time, and twelve-month anniversaries thereafter.
  Example: 21-JAN-2001, 21-JAN-2002...

- NEVER

  Cannot be scheduled. This option can be used as a placeholder. The frequency must be changed to something else before the restore can execute.

- EXPLICIT

  When using scheduler type SCHEDULER, this option utilizes the string in EXPLICIT_INTERVAL to determine the scheduling frequency.

- CUSTOM

  When using scheduler types INTERNAL or EXTERNAL, this option utilizes a user-defined schedule object, which has the frequency defined internally. Use this option if none of the above scheduling frequencies is appropriate.

/GROUPS=(group_name[,...])
/NOGROUPS
Specifies the names of groups of execution nodes on which this restore can be run. Usually, only one group is specified. If neither /EXECUTION_NODES nor /GROUPS are specified, the node from which the command was issued is used as the node name.

/INCLUDE=(data_specification[,...])
/NOINCLUDE (D)
The /INCLUDE qualifier allows you to enter a list of up to 24 data_specifications to restore. The data specifications can be OpenVMS disks, files, Windows or UNIX path and file specifications, or Rdb databases or storage areas. However, all specifications must be of the same data select type, as specified in the /DATA_SELECT_TYPE qualifier. The include specification is stored in the default selection.

The include specification, together with the data select type, exclude and source_node specifications are stored in a default selection object which has the name:

restore_name_REST_SEL_DEF

This selection object can be modified independently to add such refinements as exclude lists, and additional selections can be added to any restore. /NOINCLUDE removes the include file specification.

By default, there is no include specification.

/INCREMENTAL
/NOINCREMENTAL (D)
The /INCREMENTAL qualifier specifies that the restore should be an incremental restore. If not specified, the restore will be a full restore or selective restore based on the data_specification in the associated include specification or selections.

The default is /NOINCREMENTAL.

/KEEP
The /KEEP qualifier indicates that the restore is not to be automatically deleted, and clears the delete interval.

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username.The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the group_name::username of the user entering the CREATE command on the object from a node in the group.

/PROLOGUE="string"
/NOPROLOGUE (D)
The /PROLOGUE qualifier specifies a string to execute before each restore thread (i.e. each include list item specification in the restore). The string may be up to 80 characters and must be enclosed in quotes.

By default, no prologue command is executed.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

/RESCHEDULE
The /RESCHEDULE qualifier is used with scheduler type SCHEDULER to force MDMS to reschedule the restore with the external scheduler. This is used when it is known that the scheduling job for this restore is no longer present in the scheduler and you wish to add it.

/SELECTIONS=(selection[,...])
/NOSELECTIONS
When using the default selection, this qualifier is not needed, as MDMS adds it automatically. However, if you want to add your own selections to this restore, you add them with the /SELECTION qualifier. By default a selection is added, but you can also remove selections with the /REMOVE qualifier, and replace selections with the /REPLACE qualifier. /NOSELECTIONS removes all selections from the restore.

/SEQUENCE_OPTION=keyword
The /SEQUENCE_OPTION qualifier defines the type of sequencing used during the restore operation. Select one of the following options:

- SEQUENTIAL

  Performs each restore thread sequentially. Each restore thread must fully complete before the next one starts.

- OVERLAPPED

  Starts the next restore thread as soon as the backup drive or device is available for use.

The default is SEQUENTIAL.

/SINCE_DATE=date
/NOSINCE_DATE
You can select files for restore based on the date archived after a certain date. If specified, the restore will apply to the first date archived after the specified date. You can specify date as an absolute date, as a combination of absolute and delta times, or as one of the following keywords: TODAY (default), TOMORROW, or YESTERDAY.

/NOSINCE_DATE clears the since date and uses other date criteria to select files, as follows:

- BEFORE_DATE - The latest file saved before the specified date
- DATE_ARCHIVED - The latest file saved on the specified date
- No date - The latest copy of the file

/SKIP_TIME=delta_time
/NOSKIP_TIME (D)
It is possible to run a restore at any time, including times when it is not normally scheduled. You may, for example, want to run a restore three hours early, or you may want to run an extra restore for some reason.

By default, if you run a restore at an unscheduled time,MDMS will also run it at its regularly scheduled time as well. If you do not want this, then enter a skip time when starting the restore at the non-scheduled time. The skip time will be added to the start time, and MDMS will not schedule the restore until at least after the skip_time value.

The default is /NOSKIP_TIME.

/SOURCE_NODE=node_name
/NOSOURCE_NODE (D)
The /SOURCE_NODE qualifier specifies the node to which UNIX or WINDOWS files are restored. This qualifier does not apply to VMS_FILES or Rdb databases, where the source node is the execution node. The source_node specification is stored in the default selection.

By default, no source node is defined, but is required for a UNIX or WINDOWS restore to function correctly.

/START_DATE[=date]
/NOSTART_DATE
The /START_DATE qualifier is used to schedule a restore to start at an unscheduled time. The /BASE_DATE is used to specify the normal scheduled times. By default, the start date is set to the base date if not separately specified.

The date value for the /START_DATE is optional. If not specified, the default is now. /NOSTART_DATE clears the next start date, and the restore will not be scheduled.

Examples

```
$ MDMS SET RESTORE REST1 -
_$ /INCLUDE=(USER1$:[SMITH...]*.*;*) -
_$ /EXECUTION_NODES=NOD002 -
_$ /DESTINATION=USER2$:[SMITH]
_$ /START/REPLACE
```

This commands modifies a restore REST1, which uses archive REST1_ARC and environment REST1_ENV. The data to restore is NOD002::USER1$:[SMITH...]*.*;* which will be restored to new destination USER2$:[SMITH]. The data select type is VMS_FILES by default. The /START qualifier starts the restore immediately, and the restore is a ONE_TIME_ONLY.

```
$ MDMS SET RESTORE REST2 -
_$ /SELECTIONS=SELECT3/REMOVE -
_$ /FREQUENCY=SEMI_MONTHLY -
_$ /BASE_DATE=01-JUL-2001:01:00:00
```

This command modifies a restore REST2, whose data selections contained in SELECT3 are removed from the selection list. This restore is now regularly scheduled on a semi-monthly basis on the first and fifteenth of each month at 1:00 am.

MDMS SET SAVE

The MDMS SET SAVE command modifies an existing save definition in the MDMS database. Saves were formerly known as save requests, archive requests or archive transactions. Save is the new common name.

Equivalent ABS Command: SET SAVE

Format:

MDMS SET SAVE save_name [,...]

Parameters

save_name
Specifies the name of the save.

The maximum length of the save name is 39 characters. Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of save names may be entered.

Description

The MDMS SET SAVE command modifies an existing save definition in the MDMS database. Saves are used to copy online disk data to an archive for the purposes of data safety (backup), disaster recovery, or long term off-line archival.

The data specifications for saves can be supplied in one of two ways:

- Using the /INCLUDE, /EXCLUDE, /DATA_SELECT_TYPE and /SOURCE_NODE qualifiers. These qualifiers can be used to specify a set of data specifications of a single data select type that can be saved. These are not positional qualifiers. This option is recommended for most saves, and this information is stored in a default selection that is mapped to the save by MDMS. The default selection name is:
  save_name_SAVE_SEL_DEF
- For more complex data specifications, you can create your own selections and map them to the save using the /SELECTIONS qualifier. This options gives you more granularity in data selection, and allows you to have mixed data select types in a single save.

Saves are normally scheduled to execute at regular intervals according to your site-specific needs. If you wish to use one of the supplied frequency options, MDMS creates a schedule and initializes it to appropriate values. The schedule for any save is called

save_name_SAVE_SCHED

Alternatively, if you wish to define a schedule not handled in the supplied frequencies, you can use one of the following options:

- For scheduler types INTERNAL and EXTERNAL, you can define /FREQUENCY=CUSTOM, and modify the schedule to your own specification.
- For scheduler type SCHEDULER, you can define /FREQUENCY=EXPLICIT, and define a string to pass the explicit schedule to the scheduler in the qualifier /EXPLICIT_INTERVAL.

Privileges

The request requires MDMS_SET_ALL.

Restrictions

This command is restricted to nodes with an ABS license. The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default.

The /DELETE_INTERVAL and /KEEP qualifiers are mutually exclusive.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list. This is the default when specifying list items.

/ARCHIVE=(archive_name[,archive_name])
The /ARCHIVE qualifier allows you to specify one or two archives associated with the save. The first archive name is applicable to full and selective threads in saves. If specified, the second archive name is associated with incremental threads in saves. If a second name is not specified, incremental threads use the first archive name. For any thread, the catalog name from the first archive is always used. At least one archive name must be supplied for a save.

If an archive is not specified, the archive "SYSTEM_BACKUPS" is used by default.

/BASE_DATE=date
/NOBASE_DATE
The base date is used as a starting point for saves that have a repeating schedule frequency. Subsequent schedules are applied by adding the multiples of the frequency to the base date. If the save is not to be repeated, then no base date is needed.

By default, if a base date is not specified but a start date is, the base date is set to the start date. If neither is specified, the base date is not set and the save is not scheduled for execution.

/DATA_SELECT_TYPE=keyword
The /DATA_SELECT_TYPE qualifier specifies the type of data to save in the default selection. Select one of the following options:

- VMS_FILES
- VMS_SAVESET
- UNIX_FILES
- WINDOWS_FILES
- RDB_V42_DATABASE
- RDB_V42_STORAGE_AREA
- RDB_V51_DATABASE
- RDB_V51_STORAGE_AREA
- RDB_V60_DATABASE
- RDB_V60_STORAGE_AREA
- RDB_V61_DATABASE
- RDB_V61_STORAGE_AREA
- RDB_V70_DATABASE
- RDB_V70_STORAGE_AREA

If not specified, MDMS attempts to determine the data select type based on the include file syntax. If MDMS cannot determine this, VMS_FILES is used. The data select type specification is stored in the default selection.

/DELETE_INTERVAL=delta_time
The /DELETE_INTERVAL qualifier specifies the duration of certain saves after their start of execution. The qualifier is applicable only to saves with a with a scheduling frequency of ONE_TIME_ONLY. For these saves, the save object (and any associated schedules and selections) are deleted after the delete interval has passed following the start of the save execution. If you do not wish the save to be deleted, specify /KEEP.

If not specified, the delete interval is 03-00:00:00 (3 days) for saves of frequency ONE_TIME_ONLY, and 0 for all other frequencies.

/DESCRIPTION="text"
Comments about the object. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. To clear the description, specify "".

/ENVIRONMENT=environment_name
The /ENVIRONMENT qualifier specifies the environment object to use for the save. Specify an environment name in the MDMS database.

If no environment is specified, one of the following defaults is used:

- The first archive name suffixed by "_ENV", if it exists
- Otherwise "DEFAULT_ENV"

/EPILOGUE="string"
/NOEPILOGUE (D)
The /EPILOGUE qualifier specifies a string to execute after each save thread (i.e. each include list item specification in the save). The string may be up to 80 characters and must be enclosed in quotes.

By default, no epilogue command is executed.

/EXCLUDE=(data_specification[,...])
/NOEXCLUDE (D)
The /EXCLUDE qualifier is used to exclude files that otherwise would be included with the /INCLUDE qualifier. This is used to exclude files for save or restore when a more general wild-card specification is specified for the include. The exclude specification is stored in the default selection.

This qualifier is not valid for UNIX or WINDOWS operations.

By default, no files are excluded.

/EXECUTION_NODES=(node_name[,...])
The /EXECUTION_NODES qualifier specifies one or more node names on which the save request can be executed. Any one of the nodes can be the execution node for the request. /GROUPS may also be specified.

If no nodes or groups are specified, the include specification uses the node on which the save was created.

/EXPLICIT_INTERVAL="string"
/NOEXPLICIT_INTERVAL (D)
When using scheduler type SCHEDULER, you can specify the scheduling frequency using /EXPLICIT_INTERVAL. Enter a string in a format known to the external scheduler. /NOEXPLICIT_INTERVAL clears the explicit interval. This qualifier is only applicable when /FREQUENCY=EXPLICIT.

By default, no explicit interval is defined.

/FREQUENCY=keyword
The /FREQUENCY qualifier specifies the scheduling frequency for this save. Select one of the following options:

- ONE_TIME_ONLY (D)

  Scheduled one time only based on the base date or start date. This save cannot be rescheduled, and the save will automatically be deleted when the delete interval expires. This is the default.

- ON_DEMAND

  Scheduled on demand when a start date (or base date) is entered. Can be rescheduled by entering a new start date (or base date).

- DAILY

  Scheduled on a daily basis at the time contained within the base date. Example: 21-JAN-2001, 22-JAN-2001...

- DAILY_FULL_WEEKLY

  Scheduled on a daily basis, with a full save on the base date and weekly anniversaries, and incremental saves on other days. Example: 21-JAN-2001, 22-JAN-2001...

- WEEKLY

  Scheduled on a weekly basis on anniversaries of the base date day (MON-FRI) and time. Example: 21-JAN-2001, 28-JAN-2001...

- BIWEEKLY

  Scheduled on a biweekly (once every two weeks) basis on anniversaries of the base date day (MON-FRI) and time. Example: 21-JAN-2001, 04-FEB-2001...

- SEMI_MONTHLY

  Scheduled twice a month based on the base date (1-31) and time, and either two weeks before or after the date. Example: 21-JAN-2001, 07-FEB-2001... ++CHECK++

- MONTHLY

  Scheduled monthly based on the base date (1-31) and time and subsequent monthly anniversaries. Example: 21-JAN-2001, 21-FEB-2001...

- QUARTERLY

  Scheduled once every three months on the base date (1-31) and time, and three-month anniversaries thereafter. Example: 21-JAN-2001, 21-APR-2001...

- SEMI_ANNUALLY

  Scheduled once every six months on the base date (1-31) and time, and six-month anniversaries thereafter. Example: 21-JAN-2001, 21-JUL-2001...

- ANNUALLY

  Scheduled once every year on the base date (1-31) and time, and twelve-month anniversaries thereafter. Example: 21-JAN-2001, 21-JAN-2002...

- LOG_2

  Scheduled daily based on a full and incremental algorithm to optimize save/restore times (see Guide to Operations) Example: 21-JAN-2001, 22-JAN-2001...

- LOG_3

  Scheduled daily based on a full and incremental algorithm to optimize save/restore times (see Guide to Operations) Example: 21-JAN-2001, 22-JAN-2001...

- NEVER

  Cannot be scheduled. This option can be used as a placeholder. The frequency must be changed to something else before the save can execute.

- EXPLICIT

  When using scheduler type SCHEDULER, this option utilizes the string in EXPLICIT_INTERVAL to determine the scheduling frequency.

- CUSTOM

  When using scheduler types INTERNAL or EXTERNAL, this option utilizes a user-defined schedule object, which has the frequency defined internally. Use this option if none of the above scheduling frequencies is appropriate.

/GROUPS=(group_name[,...])
/NOGROUPS
Specifies the names of groups of execution nodes on which this save can be run. Usually, only one group is specified. If neither /EXECUTION_NODES nor /GROUPS are specified, the node from which the command was issued is used as the node name.

/INCLUDE=(data_specification[,...])
/NOINCLUDE (D)
The /INCLUDE qualifier allows you to enter a list of up to 24 data_specifications to save. The data specifications can be OpenVMS disks, files, Windows or UNIX path and file specifications, or Rdb databases or storage areas. However, all specifications must be of the same data select type, as specified in the /DATA_SELECT_TYPE qualifier.

The include specification, together with the data select type, exclude and source_node specifications are stored in a default selection object which has the name:

save_name_SAVE_SEL_DEF

This selection object can be modified independently to add such refinements as exclude lists, and additional selections can be added to any save. /NOINCLUDE removes the include file specification.

By default, there is no include specification.

/INCREMENTAL
/NOINCREMENTAL (D)
The /INCREMENTAL qualifier specifies that the save should be an incremental save. If not specified, the save will be a full save or selective save based on the data_specification in the associated include specification or selections.

The default is /NOINCREMENTAL.

/KEEP
The /KEEP qualifier indicates that the save is not to be automatically deleted, and clears the delete interval.

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username.The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the group_name::username of the user entering the CREATE command on the object from a node in the group.

/PROLOGUE="string"
/NOPROLOGUE (D)
The /PROLOGUE qualifier specifies a string to execute before each save thread (i.e. each include list item specification in the save). The string may be up to 80 characters and must be enclosed in quotes.

By default, no prologue command is executed.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

/RESCHEDULE
The /RESCHEDULE qualifier is used with scheduler type SCHEDULER to force MDMS to reschedule the save with the external scheduler. This is used when it is known that the scheduling job for this save is no longer present in the scheduler and you wish to add it.

/SELECTIONS=(selection[,...])
/NOSELECTIONS
When using the default selection, this qualifier is not needed, as MDMS adds it automatically. However, if you want to add your own selections to this save, you add them with the /SELECTION qualifier. By default a selection is added, but you can also remove selections with the /REMOVE qualifier, and replace selections with the /REPLACE qualifier. /NOSELECTIONS removes all selections from the save.

/SEQUENCE_OPTION=keyword
The /SEQUENCE_OPTION qualifier defines the type of sequencing used during the save operation. Select one of the following options:

- SEQUENTIAL

  Performs each save thread sequentially. Each save thread must fully complete before the next one starts.

- OVERLAPPED

  Starts the next save thread as soon as the backup drive or device is available for use.

The default is SEQUENTIAL.

/SKIP_TIME=delta_time
/NOSKIP_TIME (D)
It is possible to run a save at any time, including times when it is not normally scheduled. You may, for example, want to run a save three hours early, or you may want to run an extra save for some reason.

By default, if you run a save at an unscheduled time, MDMS will also run it at its regularly scheduled time as well. If you do not want this, then enter a skip time when starting the save at the non-scheduled time. The skip time will be added to the start time, and MDMS will not schedule the save until at least after the skip_time value.

The default is /NOSKIP_TIME.

/SOURCE_NODE=node_name
/NOSOURCE_NODE (D)
The /SOURCE_NODE qualifier specifies the node from which UNIX or WINDOWS files are saved. This qualifier does not apply to VMS_FILES or Rdb databases, where the source node is the execution node. The source_node specification is stored in the default selection.

By default, no source node is defined, but is required for a UNIX or WINDOWS save to function correctly.

/START_DATE[=date]
/NOSTART_DATE
The /START_DATE qualifier is used to schedule a save to start at an unscheduled time. The /BASE_DATE is used to specify the normal scheduled times. By default, the start date is set to the base date if not separately specified.

The date value for the /START_DATE is optional. If not specified, the default is now. /NOSTART_DATE clears the next start date, and the save will not be scheduled.

Examples

```
$ MDMS SET SAVE SAVE1 -
_$ /BASE_DATE=22-OCT-2001:01:00:00/RESCHEDULE -
_$ /PROLOGUE="@USER1:[ABS]SAVE1_PROLOGUE" -
_$ /EPILOGUE="@USER1:[ABS]SAVE1_EPILOGUE" -
_$ /SELECTIONS=SELECT4/ADD
```

This command modifies save SAVE1, to change the base date to 22-OCT-2001:01:00:00 and ask to reschedule the save. A prologue and epilogue are specified, and a new selection object is added.

```
$ MDMS SET SAVE SAVE2 -
_$ /ACCESS_CONTROL=(USER=NOD001::SMITH, ALLOW=(SET,SHOW)) -
_$ /START
```

This command modifies save SAVE2 and adds an access control for NOD001::SMITH to set and show this save, and requests the save for immediate execution.

MDMS SET SCHEDULE

The MDMS SET SCHEDULE command modifies an existing schedule definition in the MDMS database. Schedule is a new object type.

Equivalent ABS Command: None

Format:

MDMS SET SCHEDULE schedule_name [,...]

Parameters

schedule_name
Specifies the name of the schedule.

The maximum length of the schedule name is 63 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of schedule names may be entered.

Description

The MDMS SET SCHEDULE command modifies an existing schedule definition in the MDMS database. You can use schedules to execute any DCL command (including MDMS commands) at regular intervals.

Schedules are used by MDMS to execute saves and restores. You can modify only CUSTOM schedules using this command.

You can also modify any schedules that you specifically created.

Privileges

The request requires MDMS_SET_ALL.

Restrictions

The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object

- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list. This is the default when specifying list items.

/AFTER_SCHEDULE=(NAME=schedule_name, WHEN=option)
/NOAFTER_SCHEDULE
The /AFTER_SCHEDULE qualifiers specifies that this schedule is scheduled for execution after the AFTER_SCHEDULE name, under the circumstances defined in WHEN. This can be used to serialize a series of operations one after the other, and conditionally execute this schedule depending on the status of the AFTER_SCHEDULE.

The SCHEDULE should be a schedule name defined in the MDMS database. For WHEN, select one of the following:

ALL (D)	Unconditionally execute this schedule when the AFTER_SCHEDULE completes
ERROR	Execute this schedule if the AFTER_SCHEDULE completed with ERROR or FATAL status
FATAL	Execute this schedule if the AFTER_SCHEDULE completed with FATAL status
NONE	Do not execute this schedule (can be used as a placeholder)
SUCCESS	Execute this schedule if the AFTER_SCHEDULE completed with SUCCESS or INFORMATIONAL status
WARNING	Execute this schedule if the AFTER_SCHEDULE completed with WARNING, ERROR or FATAL status

If an /AFTER_SCHEDULE name is specified, the default WHEN option is ALL.

/NOAFTER_SCHEDULE removes the dependency to execute after another schedule.

/COMMAND="string"
The /COMMAND qualifier specifies the command to submit to DCL when the schedule executes. Specify a valid DCL command line in quotes. This qualifier must be entered for the schedule to do any useful work.

/DATES=(date[,...])
/NODATES (D)
The /DATES qualifier specifies on which days of the month you wish the schedule to execute. Valid values are 1-31. You can enter a date, a list of dates, a range of dates and a list of ranges (e.g. 1-7, 15-21). /NODATES indicates that all dates are valid (1-31) and other criteria are used for scheduling. You can use the /ADD, /REMOVE and /REPLACE qualifiers to manipulate the dates list.

The default is /NODATES.

/DAYS=(day[,...])
/NODAYS (D)
The /DAYS qualifier specifies on which days of the week you wish the schedule to execute. Valid values use at least the first three letters of the days of the week (English only). You can enter a day, a list of days, a range of days and a list of ranges (e.g. MON-WED, SAT-SUN). /NODAYS indicates that all day are valid (MON-SUN) and other criteria are used for scheduling. You can use the /ADD, /REMOVE and /REPLACE qualifiers to manipulate the days list.

The default is /NODAYS.

/DESCRIPTION="text"
Comments about the object. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. To clear the description, specify "".

/EXCLUDE=(date[,...])
/NOEXCLUDE (D)
The /EXCLUDE qualifier specifies specific dates that you wish to exclude from execution, even though the other scheduling parameters would normally schedule on that date. This can be used to exclude scheduled operations on holidays for example. Enter one or more dates in OpenVMS date format (04-JUL-2001), separated by commas. You can specify dates up to 9 years in the future. /NOEXCLUDE removes all dates from the exclude list.You can use the /ADD, /REMOVE and /REPLACE qualifiers to manipulate the exclude list.

By default, no exclude dates are defined.

/INCLUDE=(date[,...])
/NOINCLUDE (D)
The /INCLUDE qualifier specifies specific dates that you wish to include for execution, even though the other scheduling parameters would normally not schedule on that date. This can be used to include operations on special days that require special attention. Enter one or more dates in OpenVMS date format (31-DEC-2001), separated by commas. You can specify dates up to 9 years in the future. You can use the /ADD, /REMOVE and /REPLACE qualifiers to manipulate the include list.

By default, no include dates are defined.

/MONTHS=(month[,...])
/NOMONTHS (D)
The /MONTHS qualifier specifies on which months of the year you wish the schedule to execute. Valid values use at least the first three letters of the months of the year (English only). You can enter a month, a list of months, a range of months and a list of ranges (e.g. JAN-MAR, JUL-SEP). /NOMONTHS indicates that all months are valid (JAN-DEC) and other criteria are used for scheduling. You can use the /ADD, /REMOVE and /REPLACE qualifiers to manipulate the months list.

The default is /NOMONTHS.

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username. The node, group and username portions may be wild-carded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the group_name::username of the user entering the CREATE command on the object from a node in the group.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

/TIMES=(time[,...])
/NOTIMES (D)
The /TIMES qualifier specifies the times of the day you wish the schedule to execute. Enter from 1 to 100 times in OpenVMS format, separated by commas. For example (08:00, 10:00, 12:00, 14:00, 16:00). /NOTIMES clears out all times and effectively disables the schedule from execution. /TIMES=00:00 signifies midnight.

By default, no times are set.

/WEEKS=(week[,...])
/NOWEEKS (D)
The /WEEKS qualifier specifies on which weeks of the year you wish the schedule to execute.Valid values are 1-53. You can enter a week, a list of weeks, a range of weeks and a list of ranges (e.g. 1-7, 15-21, 31-53). /NOWEEKS indicates that all weeks are valid (1-53) and other criteria are used for scheduling. You can use the /ADD, /REMOVE and /REPLACE qualifiers to manipulate the weeks list.

The default is /NOWEEKS.

Examples:

```
$ MDMS SET SCHEDULE SCHED1 -
_$ /DAYS=SAT -
_$ /TIMES=21:00 -
_$ /COMMAND="@USER2:[SMITH]SCHED1.COM"
```

This command modifies schedule SCHED1 to run every Saturday at 21:00 by issuing the command procedure @USER2:[SMITH]SCHED1.COM.

```
$ MDMS SET SCHEDULE SCHED2 -
_$ /NOMONTHS -
_$ /DAYS=SUN -
_$ /DATES=(1-7) -
_$ /TIMES=12:00 -
_$ /COMMAND="MDMS DELETE SAVE *MONTH*"
```

This command modifies schedule SCHED2, to execute every month on the first Sunday of the month at noon, by issuing an MDMScommand to delete saves.

MDMS SET SELECTION

The MDMS SET SELECTION command modifies an existing selection definition in the MDMS database. Selection is a new object type.

Equivalent ABS Command: None.

Format:

MDMS SET SELECTION selection_name [,...]

Parameters

selection_name
Specifies the name of the selection.

The maximum length of the selection name is 63 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of selection names may be entered.

Description

The MDMS SET SELECTION command modifies an existing selection definition in the MDMS database. Selections are used to specify the data to be saved or restored in those objects.

Under most circumstances, you can specify the data to be saved or restored in the appropriate save or restore object, and MDMS will implicitly create a default selection. However, there may be times that you wish to create your own selections, and add them to the relevant save or restore object. This may be because you wish to specify a mixture of data select types in a save/restore, or specific file dates in a save.

You may modify both user-created and default selections using this command.

Many of the qualifiers for selections map to the positional qualifiers on saves and restores with the pre-V4 ABS SAVE and RESTORE commands.

Privileges

The request requires MDMS_SET_ALL.

Restrictions

This command is restricted to nodes with an ABS license.

The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list. This is the default when specifying list items.

/AGENT_QUALIFIERS="string"
/NOAGENT_QUALIFIERS (D)
The /AGENT_QUALIFIERS qualifier allows you to specify a backup-agent specific qualifier or set of qualifiers. This qualifier is valid for all data select types. Specify up to 80 characters enclosed in quotes. /NOAGENT_QUALIFIERS removes all the agent qualifiers.

By default, no agent qualifiers are defined.

/BEFORE_DATE=date
/NOBEFORE_DATE (D)
The /BEFORE_DATE is used to select files that have a date before the specified date. The type of date in question is specified by the /DATE_TYPE qualifier. If /NOBEFORE_DATE is specified, files are not selected using a before date.

/BEFORE_DATE is applicable only to saves.

The default is that no before date is specified.

/CONFLICT_OPTIONS=option
The /CONFLICT_OPTIONS is used to determine the disposition of a file if an existing file already exists. This qualifier is applicable only to restores. Select one of the following:

- NEW_VERSION - Create a new version of the file
- OVERLAY_VERSION - Overlay the data in the current version of the file, but maintain the existing file header

- REPLACE_VERSION - Delete the existing version and replace it with the archive version
- RETAIN_VERSION (D) - Leave the existing version and do not restore the version from the archive

If not specified, the default is RETAIN_VERSION.

/DATA_SELECT_TYPE=keyword
The /DATA_SELECT_TYPE qualifier specifies the type of data to restore in the default selection. Select one of the following options:

- VMS_FILES
- VMS_SAVESET
- UNIX_FILES
- WINDOWS_FILES
- RDB_V42_DATABASE
- RDB_V42_STORAGE_AREA
- RDB_V51_DATABASE
- RDB_V51_STORAGE_AREA
- RDB_V60_DATABASE
- RDB_V60_STORAGE_AREA
- RDB_V61_DATABASE
- RDB_V61_STORAGE_AREA
- RDB_V70_DATABASE
- RDB_V70_STORAGE_AREA

If not specified, MDMS attempts to determine the data select type based on the include file syntax. If MDMS cannot determine this, VMS_FILES is used.

/DATE_TYPE
The /DATE_TYPE qualifier specifies which date in a file is used using the /BEFORE_DATE and/or /SINCE_DATE in a selection. Select one of the following date types:

- BACKUP - The BACKUP date is used for selection
- EXPIRED - The expiration date is used for selection. This can also be configured as last access date
- CREATED - The creation date is used for selection.
- MODIFIED (D) - The revision date is used for selection

If not specified, MODIFIED is the default.

/DESCRIPTION="text"
Comments about the object. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. To clear the description, specify "".

/EXCLUDE=(data_specification[,...])
/NOEXCLUDE (D)
The /EXCLUDE qualifier is used to exclude files that otherwise would be included with the /INCLUDE qualifier. This is used to exclude files for save or restore when a more general wildcard specification is specified for the include.

This qualifier is not valid for UNIX or WINDOWS operations.

By default, no files are excluded.

/INCLUDE=(data_specification[,...])
/NOINCLUDE
The /INCLUDE qualifier allows you to enter a list of up to 24 data_specifications to save or restore. The data specifications can be OpenVMS disks, files, Windows or UNIX path and file specifications, or Rdb databases or storage areas. However, all specifications must be of the same data type, as specified in the /DATA_SELECT_TYPE qualifier. /NOINCLUDE clears the include specification.

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username. The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the group_name::username of the user entering the CREATE command on the object from a node in the group.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

/SINCE_DATE[=date]
/NOSINCE_DATE (D)
The /SINCE_DATE is used to select files that have a date after the specified date. The type of date in question is specified by the /DATE_TYPE qualifier. If /NOSINCE_DATE is specified, files are not selected using a since date.

/SINCE_DATE is applicable only to saves.

The default is that no since date is specified.

/SOURCE_NODE=node_name
/NOSOURCE_NODE (D)
The /SOURCE_NODE qualifier specifies the node on which UNIX or WINDOWS files are saved and restored. This qualifier does not apply to VMS_FILES or Rdb databases, where the source node is the execution node.

By default, no source node is defined, but is required for a UNIX or WINDOWS save or restore to function correctly.

Examples:

```
$ MDMS CREATE SELECTION SEL1 -
_$ /INCLUDE=(USER1:[BACON]*.*;*) -
_$ /EXCLUDE=(USER1:[BACON]*.LOG;*, *.TMP;*) -
_$ /SINCE=24-MAY-2001 -
_$ /DATE_TYPE=MODIFIED
```

This command creates a selection SEL1 that includes files USER1:[BACON]*.*;* that have been modified since 24-May-2001, but excluding all .LOG and .TMP files in that directory.

```
$ MDMS CREATE SELECTION SEL2 -
_$ /INCLUDE=(/usr/smith/) -
_$ /SOURCE_NODES=XTRIX
```

This command creates a selection SELs that includes files /usr/smith/ on node XTRIX.

MDMS SET SERVER

The MDMS SET SERVER command resets server conditions. Currently it only supports resetting the MDMS logging file.

Equivalent STORAGE Command: None

Format

MDMS SET SERVER /RESET_LOG

Parameters

None.

Restrictions

The /ALL, /DBSERVER and /NODE qualifiers are mutually exclusive. If none are specified, the log on the issuing (client) node is reset.

Description

The MDMS SET SERVER command resets server conditions. Currently it only supports resetting the MDMS logging file.

You can specify which node the reset is to apply, or all nodes in the domain, using qualifiers. If you do not specify any of the node-related qualifiers, the log file on the issuing client node is reset.

Privileges

The request requires MDMS_SET_ALL.

Qualifiers

/ALL
This qualifier specifies that you want to reset the log file on all nodes in the domain.

/DBSERVER
This qualifier specifies that you want to reset the database server's log file. This is the logfile that contains the most complete information.

/KEEP=number
This qualifier specifies that you wish to purge the associated log files, and keep the specified number of versions. If you omit the KEEP qualifier, then the logs are not purged.

/NODE=node_name
This qualifier specifies that you want to reset the log file on the specified node.

/RESET_LOG
This qualifier closes the current log file and opens a new one. This qualifier is required.

Example

```
$ MDMS SET SERVER /RESET_LOG/DBSERVER/KEEP=5
```

This command closes the current log file and opens a new version on the database server node. It also purges the MDMS log files on the database server node, so that 5 versions remain after the reset.

The new file(s) will be opened at the location designated by the logical name MDMS$LOGFILE_LOCATION on the affected node(s).

MDMS SET VOLUME

The MDMS SET VOLUME command modifies a volume definition in the MDMS volume database.

Equivalent STORAGE Command: STORAGE SET VOLUME

Format:

MDMS SET VOLUME volume_id [,...]

Parameters

volume_id
Specifies the volume ID of the volume to be added. The volume ID is the external label for the volume. Alternatively, a volume range, separated by a dash, may be specified. A volume range is a numeric range for up to the last n characters of the volume ID. While specifying the volume range make sure that:

1. Same number of characters are there on both sides of the dash.
2. The data type of the corresponding position on either side of the dash must be the same.

Example ranges are (A00001-A99999), (AB0001-AB9999).

The maximum length of the volume ID is 6 characters. Valid characters are " ,!,",%-?,A-Z,_".

A comma-separated list of volume IDs or ranges may be entered.

Description

The MDMS SET VOLUME command modifies a volume definition in the MDMS volume database.

Privileges

The request requires MDMS_SET_ALL, MDMS_SET_VOLUME, MDMS_SET_POOL or MDMS_SET_OWN.

If the user is modifying a volume that is allocated to him, MDMS_SET_OWN is sufficient. If the user is modifying a volume that belongs to a pool to which he is authorized, MDMS_SET_POOL is required. For any other volume, MDMS_SET_VOLUME or MDMS_SET_ALL is required.

Restrictions

The /ADD, /REMOVE and /REPLACE qualifiers are mutually exclusive. If none are specified, attributes are added to list attributes by default.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ACCESS_CONTROL=(USERNAME=user_id, ALLOW=(option[,...]))
/NOACCESS_CONTROL (D)
Access control allows the system administrator to restrict access to the object to all or specific users on specific nodes or groups. Select one or more of the following options to allow the operation:

- SET - Allows setting the attributes of the object
- SHOW - Allows showing the object
- DELETE - Allows deleting the object
- READ - Allows restoring data using the object
- WRITE - Allows saving data using the object
- EXECUTE - Allows execution operations using the object
- CONTROL - Allows setting the access control on the object

By default, access controls are added to the list of access controls - only one user can be added per command. However, you can remove users using the /REMOVE qualifier, and replace the entire access control using the /REPLACE qualifier. You can remove all access controls on the object by specifying /NOACCESS_CONTROL.

The user_id should be in the format node::username or group::username. Wildcards are supported in the node, group and username portions.

Access control restrictions are in addition to the normal MDMS rights allowing operations on an object. If no access control is defined, then the default domain access control is applied.

/ACCOUNT="text"
Defines the account name of the volume. The account name may be up to 31 characters. If it contains spaces, it must be enclosed in quotation marks. Specify " " to clear the account name.

This qualifier requires the right MDMS_SET_PROTECTED.

/ADD (D)
The /ADD qualifier works in conjunction with certain qualifiers that accept lists and adds the specified attributes to the existing list. This is the default when specifying list items.

/ALLOCATED_DATE=date
/NOALLOCATED_DATE
Specifies the date the volume was allocated. Normally this is set by MDMS. Specify a VMS absolute date and time. Specify /NOALLOCATED_DATE to clear the allocated date.

This qualifier requires the right MDMS_SET_PROTECTED.

/AVAILABLE
The /AVAILABLE qualifier moves a volume from the UNAVAILABLE state to the state it was previously in prior to the UNAVAILABLE state. The volume may then be moved into the TRANSITION or FREE state if the scratch date and/or transition time have expired.

/BLOCK_FACTOR=number
Specifies the block factor for the volume. The default is a block factor of zero.

/BRAND="text"
The media manufacturer. The maximum length of the brand name is 31 characters. If it contains spaces it must be contained in quotation marks. Specify "" to clear the brand.

/CLEANED_DATE=date
/NOCLEANED_DATE
This qualifier specifies the date the volume was last cleaned and is entered as a VMS absolute time. Specify /NOCLEANED_DATE to clear the cleaned date.

/CREATION_DATE=date
/NOCREATION_DATE
The date the volume is created. This attribute is set by MDMS, but may be overridden if necessary.

This qualifier requires the right MDMS_SET_PROTECTED.

/DEALLOCATED_DATE=date
/NODEALLOCATED_DATE
This qualifier specifies the actual deallocation date for the volume. Specify a VMS absolute time. This date is normally set by MDMS.

This qualifier requires the right MDMS_SET_PROTECTED.

/DESCRIPTION="text"
Comments about the volume. If the text contains spaces, then it must be enclosed within quotation marks. The length of the description can range from 0 to 255 characters. Specify "" to clear the description.

/DRIVE=drive_name
/NODRIVE
This is a protected field that should be modified only to recover on error. Use the LOAD and UNLOAD commands to manipulate the drive name under normal operation. This qualifier specifies the drive that the volume currently resides in or last resided in. This is normally set up by MDMS. To clear the drive, specify /NODRIVE.

This qualifier requires the right MDMS_SET_PROTECTED.

/FORMAT=keyword
Specifies the format of the tape. Possible values are:

ASCII

BACKUP

EBCDIC

NONE (D)

RMUBACKUP

/FREED_DATE=date
/NOFREED_DATE
Specifies the date the volume was last freed (i.e.put in the FREE state). Specify an OpenVMS absolute date and time. This is normally set up by MDMS. To clear the freed date, specify /NOFREED_DATE.

This qualifier requires the right MDMS_SET_PROTECTED.

/INITIALIZED_DATE=date
/NOINITIALIZED_DATE
Specifies the date the volume was last initialized. Specify a VMS absolute date and time. This is normally set up by MDMS. To clear the initialized date, specify /NOINITIALIZED_DATE.

This qualifier requires the right MDMS_SET_PROTECTED.

/IO_ERROR_COUNT=number
This qualifier allows you to set the number of I/O errors on the volume. The default value is zero.

/JOB_NAME="text"
This qualifier allows you to specify the last job that accessed the volume. The job name can be from 0 to 31 characters. If it contains spaces, it must be enclosed in quotation marks. Specify "" to clear the job name.

This qualifier requires the right MDMS_SET_PROTECTED.

/JUKEBOX=jukebox_name
/NOJUKEBOX
This is a protected field that should be modified only to recover on error. Use the MOVE VOLUME command to manipulate the jukebox name under normal operation. This qualifier allows you to specify that the volume is currently residing or last resided in the specified jukebox. The maximum length of a jukebox name is 31 characters. This is normally set up by MDMS. To clear the jukebox name, specify /NOJUKEBOX.

This qualifier requires the right MDMS_SET_PROTECTED.

/LAST_ACCESS_DATE=date
/NOLAST_ACCESS_DATE
Specifies the date the volume was last accessed. Specify a VMS absolute date and time. This is normally set up by MDMS. To clear the last access date, specify /NOLAST_ACCESS_DATE.

This qualifier requires the right MDMS_SET_PROTECTED.

/MAGAZINE=magazine_name
/NOMAGAZINE
This is a protected field that should be modified only to recover on error. Use the MOVE VOLUME command to manipulate the magazine name under normal operation. This qualifier specifies the magazine name if the volume resides in a magazine. This is normally set up by MDMS. To clear the magazine name, specify /NOMAGAZINE.

This qualifier requires the right MDMS_SET_PROTECTED.

/MEDIA_TYPES=(media_type[,...])
/NOMEDIA_TYPES
The media type qualifier allows you to add the media type(s) that the volume can support. Multiple media types are supported prior to the volume being initialized. After initialization, a volume can only support one media type. The /REMOVE or /REPLACE qualifiers can be used to remove or replace objects in the list, rather than adding them by default. To specify the volume supports no media types, enter /NOMEDIA_TYPES. If a volume is created with no media types, the default media type from the domain record is used.

/MOUNT_COUNT=number
Specifies the number of times the volume has been loaded by MDMS. Normally set up by MDMS. The default mount count is zero.

/OFFSITE=([LOCATION=location][,[NO]DATE[=date]])
/NOOFFSITE
This qualifier specifies the date that the volume is to be taken offsite and the offsite location. The location field is required when using the /OFFSITE qualifier if no location has been previously specified. The LOCATION keyword cannot be negated and if specified must point to a valid location object. Specify a VMS absolute or delta time in the date field. The NODATE keyword may be used to remove the date. This has the effect of disabling the schedule for the volume, while retaining the location. To clear the offsite date specify /NOOFFSITE. If a volume is under magazine control, the /OFFSITE qualifier is not allowed. The volume uses the values in the magazine. If /MAGAZINE is used on the SET VOLUME command when an existing /OFFSITE location and date are set, the values are cleared.

The default offsite location is that stored in the domain object.

/ONSITE=([LOCATION=location][, [NO]DATE=date]])
/NOONSITE
This qualifier specifies the date that the volume is to be brought back onsite and the onsite location. The location field is required when using the /ONSITE qualifier if no location has been previously specified. The LOCATION keyword cannot be negated and if specified must point to a valid location object. Specify a VMS absolute or delta time in the date field. The NODATE keyword may be used to remove the date. This has the effect of disabling the schedule for the volume, while retaining the location. To clear the onsite date specify /NOONSITE. If a volume is under magazine control, the /ONSITE qualifier is not allowed. The volume uses the values in the magazine. If /MAGAZINE is used on the SET VOLUME command when an existing /ONSITE location and date are set, the values are cleared.

The default onsite location is that stored in the domain object.

/OWNER_NAME=node::username
/OWNER_NAME=group::username
/NOOWNER_NAME
The /OWNER_NAME qualifier specifies the owner of the object. Specify an owner as node::username or group::username.The node, group and username portions may be wildcarded.

The owner of an object has default access control of all allowances to the object, regardless of whether a specific access control entry is present or the state of the default domain access control. If you wish to remove this unconditional owner access, specify /NOOWNER_NAME. Note that being an owner of an object overrides only the access control; the appropriate MDMS rights for a request on the object must still be honored.

By default, the owner of an object is the group_name::username of the user entering the CREATE command on the object from a node in the group. However, once the volume is allocated, the node::user performing the allocation becomes the owner.

/OWNER=[owner_name]
/NOOWNER
This qualifier specifies the owner UIC of a volume. The owner UIC field must be a UIC in the format [USER] or [group, user]. This is normally set up by MDMS on allocate volume. To clear the owner UIC field, specify /NOOWNER.

This qualifier requires the right MDMS_SET_PROTECTED.

/PLACEMENT=keyword
This is a protected field that should be modified only to recover on error. Use the MOVE, LOAD or UNLOAD commands to manipulate the placement field under normal operation. This qualifier defines the current placement of the volume. This is normally managed by MDMS. Select one of the following options:

DRIVE

ONSITE

MAGAZINE

JUKEBOX

OFFSITE

MOVING

If a magazine name is specified on the /MAGAZINE qualifier, the volume placement can be in one of three states:

MAGAZINE

DRIVE

MOVING

During a MOVE, LOAD or UNLOAD, a volume's placement may be set to MOVING indicating that the volume is being moved. If a volume is in a magazine, it is set to MOVING when the volume is being loaded or unloaded to/from a drive.

This qualifier requires the right MDMS_SET_PROTECTED.

/POOL=pool_name
/NOPOOL (D)
The pool to which the volume belongs. The maximum length of the pool name is 31 characters. Spaces are not allowed in the pool name.

/PREINITIALIZED
/NOPREINITIALIZED (D)
This qualifier specifies whether the volume has been initialized before creation. If /PREINITIALIZED is specified, the volume is placed in the FREE state rather than the UNINITIALIZED state.

/PROTECTION=protection
The protection code for the volume. Use the standard OpenVMS protection code format.

/PURCHASED_DATE=date
/NOPURCHASED_DATE
The date when the volume was purchased. The date should be specified as an OpenVMS absolute time. Specify /NOPURCHASED_DATE to clear the purchased date.

/RECLENGTH=number
This qualifier specifies the record length used on the volume. The default record length is zero.

/RELEASE
This qualifier puts the volume into the FREE state from the TRANSITION state. It is not valid to release an allocated volume. This qualifier always operates on volume sets and works only if all the volumes in the volume set are in TRANSITION state.

/REMOVE
The /REMOVE qualifier works in conjunction with certain qualifiers that accept lists and removes specified attributes from them.

/REPLACE
The /REPLACE qualifier works in conjunction with certain qualifiers that accept lists and replaces the existing attributes list with the specified list. By default, attributes are added to the existing list.

/RETAIN
This qualifier puts the volume that is in the FREE state or TRANSITION state back into the allocated state with the former owner as the current owner. This qualifier always operates on volume sets.

/SCRATCH_DATE=date
/NOSCRATCH_DATE
The /SCRATCH_DATE qualifier specifies the planned date to return the volume from the ALLOCATED state to either the TRANSITION state or the FREE state. Specify /NOSCRATCH_DATE if the volume should not automatically transition from the ALLOCATED state.

/SLOTS=(range[,...])
/NOSLOTS
This qualifier specifies the jukebox or magazine slot that the volume currently resides in. Specify a number in the range of the jukebox or magazine. This is normally set up by MDMS. If the volume does not currently reside in a jukebox or magazine slot, specify /NOSLOTS.

If a volume range is specified, you can specify a slot range, and each volume will be placed in each slot in order. For a single volume, specify a single slot. This qualifier requires the right MDMS_SET_PROTECTED.

/SPACES=(range[,...])
/NOSPACES
This qualifier specifies the non-jukebox space in the specified location that the volume resides in. If the volume does not reside in a location space, specify /NOSPACES. Use a space range only when creating multiple volumes - each volume will be placed in each space in order. For a single volume, specify a single space.

/STATE=keyword
This is a protected field that should be modified only to recover on error. Use the ALLOCATE VOLUME or DEALLOCATE VOLUME command to manipulate the state field under normal operation. This qualifier allows you to modify the state of the volume. This is normally set up by MDMS and manual modification is not recommended. The keyword values are:

ALLOCATED

FREE

TRANSITION

UNAVAILABLE

UNINITIALIZED

This qualifier requires the right MDMS_SET_PROTECTED.

/TIMES_CLEANED=number
This qualifier allows you to specify the number of times the volume has been cleaned. The default is zero.

/TRANSITION_TIME=delta_time
/NOTRANSITION_TIME
The /TRANSITION_TIME qualifier specifies that the volume enters the TRANSITION state when the scratch date is reached, and is to stay in the TRANSITION state for the specified delta time. When the transition time has expired, the volume enters the FREE state. The /NOTRANSITION_TIME qualifier specifies that the volume enters the FREE state directly at the scratch date.

/UNAVAILABLE
Puts the volume in the UNAVAILABLE state. The previous state is retained for when the volume is made available again.

/USER_NAME=username
/NOUSER_NAME
Specifies the user for the volume. The username can be from 1-31 characters, and must reflect an authorized VMS username. To clear the username, enter /NOUSER_NAME.

This qualifier requires the right MDMS_SET_PROTECTED.

/VOLSET
/NOVOLSET (D)
This qualifier specifies that all changes apply to the entire volume set. By default, attributes apply to a single volume or volume range specified. Exceptions to this are SET VOLUME/RETAIN and SET VOLUME/RELEASE, which always act on a volume set.

Examples

```
$ MDMS SET VOLUME ABC001 /ONSITE=(LOCATION=SHELF2) -
 /SPACES=AA4
```

This command modifies the onsite location of volume ABC001.

```
$ MDMS SET VOLUME SFR024 /SLOTS=24
```

This command modifies the jukebox slot location for volume SFR024 to slot 24.

```
$ MDMS SET VOLUME HS0001-HS0007 /MAGAZINE=TX877B -
/SLOTS=(0-6)
```

This command modifies the magazine and slot definition for the seven volume records HS0001 - HS0007.

MDMS SHOW ARCHIVE

The MDMS SHOW ARCHIVE command displays information about selected archives, or all archives defined in the MDMS database.

Equivalent ABS Command: SHOW STORAGE_CLASS

Format:

MDMS SHOW ARCHIVE [archive_name [,...]]

Parameters

archive_name
Specify the archive names. All archives are displayed if the archive_name parameter is omitted. Wildcard characters are allowed in the archive_name, where * represents a variable-length wildcard, and % represents a single character wildcard.

The maximum length of the archive name is 63 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of archive names may be entered.

Description

The MDMS SHOW ARCHIVE command displays information about specified archives in the MDMS database.

Privileges

The request requires MDMS_SHOW_ALL.

Restrictions

This command is restricted to nodes with an ABS license.

Qualifiers

/BRIEF
Display archive information in the brief 1-line format. This is the default display when a archive name is not specified.

/FULL
Display archive information in the full multi-line format. All attributes and status fields are displayed. This is the default display when a archive name is specified.

/OUTPUT=file_spec
Specifies the output file in which to send the archive information. The default is SYS$OUTPUT.

/SYMBOLS [=prefix]
Stores selected archive information in process symbols. If prefix is not specified the default prefix is MDMS_INQ. The maximum length of the prefix is 8 characters. This qualifier is supported for wildcard show requests. By default there is no output on the command. If you wish output with the symbols, use the /OUTPUT qualifier. The following symbols are defined on a show of a single archive:

MDMS_INQ_ARCHIVE_NAME

MDMS_INQ_ARCHIVE_TYPE

MDMS_INQ_CATALOG_NAME

MDMS_INQ_CONSOLIDATION_INTERVAL

MDMS_INQ_CONSOLIDATION_SAVESETS

MDMS_INQ_CONSOLIDATION_VOLUMES

MDMS_INQ_DESCRIPTION

MDMS_INQ_DESTINATION

MDMS_INQ_DRIVES

MDMS_INQ_EXPIRATION_DATE

MDMS_INQ_LOCATION_NAME

MDMS_INQ_MAXIMUM_SAVES

MDMS_INQ_MEDIA_TYPE

MDMS_INQ_OWNER_NAME

MDMS_INQ_POOL_NAME

MDMS_INQ_RETENTION_DAYS

MDMS_INQ_VOLUME_SET

Symbols are not available for access control.

On wildcard show requests the above symbols will be suffixed by _n. A symbol prefix_N stores the number of objects that were selected by a command.

Examples

```
$ MDMS SHOW ARCHIVE JIMS_ARCHIVE /FULL
```

This command displays a full listing archive JIMS_ARCHIVE.

```
$ MDMS SHOW ARCHIVE /OUTPUT=ARCHIVES.DAT
```

This command displays a brief listing of all archive information and sends the output into file ARCHIVES.DAT

MDMS SHOW CATALOG

The MDMS SHOW CATALOG command displays information about selected catalogs, or all catalogs defined in the ABS database.

Format:

Format 1: MDMS SHOW CATALOG [catalog_name [,...]]

...shows the attributes of a catalog.

Equivalent ABS Command: RUN SYS$SYSTEM:ABS$CATALOG_OBJECT

Format 2: MDMS SHOW CATALOG [catalog_name [,...]] /SAVE

...shows save entries in a catalog.

Equivalent ABS Command: ABS REPORT SAVE_LOG

Format 3: MDMS SHOW CATALOG [catalog_name [,...]] /FILES

...show file entries in a catalog.

Equivalent ABS Command: ABS LOOKUP

Parameters

catalog_name
Specify the catalog names. All catalogs are displayed if the catalog_name parameter is omitted. Wildcard characters are allowed in the catalog_name, where * represents a variable-length wildcard, and % represents a single character wildcard.

The maximum length of the catalog name is 26 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of catalog names may be entered.

Description

The MDMS SHOW CATALOG command displays information about specified catalogs in the MDMS database.

A so-called UID (Unique IDenditfier) is displayed in case the save, archive, or environment name of the original object is no longer available to retrieve its name.

Privileges

The request requires MDMS_SHOW_ALL.

Restrictions

This command is restricted to nodes with an ABS license.

/SYMBOLS are only defined on a show of a single catalog or a single catalog item.

When doing a show of ORACLE_DB type catalogs, see the notes for /INCLUDE and /SAVES.

Restrictions: Not supported for SLS type catalogs.

Qualifiers

/BRIEF
Display catalog information in the brief 1-line format. This is the default display when a catalog name is not specified and neither /FILES nor /SAVES is specified. Whenever /FILES or /SAVES is present the default is brief display.

/FILES[=(filename[,...])]
Display information about archived files. Wildcards are supported anywhere in the filename. Filenames of type UNIX_TYPES and WINDOWS_FILES have to be enclosed in quotes.

If a filename parameter is specified the /DATA_SELECT_TYPE qualifier is required.

See /FILES specific qualifiers under Files_Qualifiers.

Restrictions: Not supported for SLS type catalogs.

/FULL
Display catalog information in the full multi-line format. All attributes and status fields are displayed. This is the default display when a catalog name is specified.

/NODES[=(node_name[,...])]
The /NODES qualifier specifies on which node the catalog is located.

The default is the node on which the SHOW CATALOG command is entered.

/OUTPUT=file_spec
Specifies the output file in which to send the catalog information. The default is SYS$OUTPUT.

/SAVES[=(save_name[,...])]
Displays information about save operations. Wildcards are supported in the save_name. The save_name can also be a UID (Unique Identifier) string.

The save_name can also be a UID (Unique Identifier) string in case the save object has been deleted and only the UID is known.

Note

The save_name has no meaning for ORACLE_DB type catalogs because no save objects are involved in saving Oracle database. Specifying a save_name for ORACLE_DB type catalogs will not display any catalog entry.

See /SAVES specific qualifiers under Saves_Qualifiers.

/SYMBOLS
Stores selected catalog information in process symbols. By default there is no output on the command. If you wish output with the symbols, use the /OUTPUT qualifier. The following symbols are created:

MDMS_INQ_CATALOG_NAME

MDMS_INQ_CATALOG_NODE

MDMS_INQ_CATALOG_TYPE

MDMS_INQ_DIRECTORY

MDMS_INQ_STAGING_ENABLEDSymbols are not available for access control.

Saves_Qualifiers

/SAVES/ARCHIVE=archive_name
Displays entries for the specified archive. By default, entries for all archives are displayed.

/SAVES/BEFORE[=date]
Display save entries with a date archived before this time. You can specify time as an absolute time, as a combination of absolute and delta times, or as one of the following keywords: TODAY (default), TOMORROW, or YESTERDAY. Specify /ALL with the /BEFORE qualifier to list all entries of a file in reverse chronological order.

If you do not specify any date selection, files are not selected based on a date. If you do not specify any date, the current date at midnight is used.

/SAVES/INCLUDE=(include_specification[,...])
The /INCLUDE qualifer specifies the exact inlcude string used in a SAVE operation. Only entries with matching include specifications are selected.

Note

If you are showing information for ORACLE_DB type catalogs, the include_specification will be the database name

/SAVES/PIECE_NAME=piece_name
Displays information about an Oracle piece name. Applicable to ORACLE_DB type catalogs only.

/SAVES/SINCE[=time]
Display save entries with a date archived since this time. You can specify time as an absolute time, as a combination of absolute and delta times, or as one of the following keywords: TODAY (default), TOMORROW, or YESTERDAY. Specify /ALL with the /SINCE qualifier to list all entries of a file in chronological order. If used together with /BEFORE the all entries are listed in reverse chronological order.

If you do not specify any date selection, files are not selected based on a date. If you do not specify any date, the current date at midnight is used.

/SAVES/SYMBOLS
Stores selected catalog information in process symbols. By default there is no output on the command. If you wish output with the symbols, use the /OUTPUT qualifier. The following symbols are created:

MDMS_INQ_ARCHIVE_NAME

MDMS_INQ_ARCHIVE_TYPE

MDMS_INQ_BLOCK_SIZE

MDMS_INQ_DATABASE

MDMS_INQ_DATE_ARCHIVED

MDMS_INQ_ENVIRONMENT_NAME

MDMS_INQ_INCLUDE

MDMS_INQ_OBJECT_ENTRIES

MDMS_INQ_OWNER

MDMS_INQ_PIECE_NAME

MDMS_INQ_SAVE_NAME

MDMS_INQ_SAVE_TYPE

MDMS_INQ_SAVESET_FORMAT

MDMS_INQ_SAVESET_NAME

MDMS_INQ_SAVESET_LOCATION

MDMS_INQ_SAVESET_POSITION

MDMS_INQ_SEVERITY

MDMS_INQ_SOURCE_NODE

MDMS_INQ_STATUS

/SAVES/VOLUMES=(volume_set[,...])
Displays information about entries saved on the specified volume set(s). By default, entries for all volume sets are shown.

To find the volume set name for a given volume use MDMS SHOW VOLUME/VOLSET. The first volume is the name of the volume set.

Files_Qualifiers

/FILES/ALL
Display all entries of files. If not specified, only the most recently archived entry is displayed.

/FILES/BEFORE[=date]
Display file entries with a date archived before this time. If no time is given, the current date and time is used.

/FILES/DATA_SELECT_TYPE=keyword
The /DATA_SELECT_TYPE qualifier specifies the type of data to display. This qualifier is required if /FILES is used with a filename. Select one of the following options:

- VMS_FILES
- VMS_SAVESET
- UNIX_FILES
- WINDOWS_FILES
- RDB_V42_DATABASE
- RDB_V42_STORAGE_AREA
- RDB_V51_DATABASE
- RDB_V51_STORAGE_AREA
- RDB_V60_DATABASE
- RDB_V60_STORAGE_AREA
- RDB_V61_DATABASE
- RDB_V61_STORAGE_AREA
- RDB_V70_DATABASE
- RDB_V70_STORAGE_AREA

If not specified, all entries are displayed.

/FILES/SINCE[=date]
Display file entries with a date archived since this time. If no time is given the current date and time is used.

/FILES/SOURCE_NODE=node
For UNIX and WINDOWS files, the source node specifies the UNIX or WINDOWS system containing the source files.

/FILES/SYMBOLS
Stores selected catalog information in process symbols. By default there is no output on the command. If you wish output with the symbols, use the /OUTPUT qualifier. The following symbols are created:

MDMS_INQ_CREATION_DATE

MDMS_INQ_DATA_SELECT_TYPE

MDMS_INQ_DATE_ARCHIVED

MDMS_INQ_EXPIRATION_DATE

MDMS_INQ_FILENAME

MDMS_INQ_OWNER

MDMS_INQ_REVISION_DATE

MDMS_INQ_SAVE_TYPE

MDMS_INQ_SAVESET_NAME

MDMS_INQ_SAVESET_LOCATION

MDMS_INQ_SAVESET_SECTION

MDMS_INQ_SEVERITY

MDMS_INQ_SOURCE_NODE

MDMS_INQ_STATUS

Examples

```
$ MDMS SHOW CATALOG MY_CATALOG /FULL
```

This command displays a full listing catalog MY_CATALOG.

```
$ MDMS SHOW CATALOG /OUTPUT=CATALOGS.DAT
```

This command displays a brief listing of all catalog information and sends the output into file CATALOGS.DAT

MDMS SHOW DOMAIN

The MDMS SHOW DOMAIN command displays information about the MDMS domain..

Equivalent STORAGE Command: None

Format:

MDMS SHOW DOMAIN

Parameters

None.

Description

The MDMS SHOW DOMAIN command displays information about the MDMS domain.

Privileges

The request requires MDMS_SHOW_ALL.

If the /FULL qualifier is specified, MDMS_SHOW_RIGHTS is also required.

Restrictions

None.

Qualifiers

/FULL
Shows the rights assignments in the display.

This qualifier requires the right MDMS_SHOW_RIGHTS.

/OUTPUT=file_spec
Specifies the output file in which to send the domain information. The default is SYS$OUTPUT.

/SYMBOLS[=prefix]
Stores selected domain information in process symbols. If prefix is not specified the default prefix is MDMS_INQ. The maximum length of the prefix is 8 characters. By default there is no output on the command. If you wish output with the symbols, use the /OUTPUT qualifier. The following symbols are created:

MDMS_INQ_CHECK_ACCESS

MDMS_INQ_DATABASE_DATE

MDMS_INQ_DEALLOCATE_STATE

MDMS_INQ_DESCRIPTION

MDMS_INQ_LAST_UPDATED

MDMS_INQ_MAIL

MDMS_INQ_MAX_SCRATCH_TIME

MDMS_INQ_MEDIA_TYPE

MDMS_INQ_NODE_NAME

MDMS_INQ_OFFSITE_LOCATION

MDMS_INQ_ONSITE_LOCATION

MDMS_INQ_OPCOM_CLASS

MDMS_INQ_PROTECTION

MDMS_INQ_RELAXED_ACCESS

MDMS_INQ_REQUEST_ID

MDMS_INQ_SCHEDULER_TYPE

MDMS_INQ_SCRATCH_TIME

MDMS_INQ_TRANSITION_TIME

Symbols are not available for access control, domain rights and for holiday definitions.

Examples

```
$ MDMS SHOW DOMAIN
```

This command displays a brief listing of the MDMS domain.

```
$ MDMS SHOW DOMAIN /OUTPUT=DOMAIN.DAT
```

This command outputs a full listing of the MDMS domain to file DOMAIN.DAT.

```
$ MDMS SHOW DOMAIN/FULL
```

This command displays a full listing of the MDMS domain including the rights attributes which are normally hidden.

MDMS SHOW DRIVE

The MDMS SHOW DRIVE command displays information about specified drive(s) or all drives defined in the MDMS database.

Equivalent STORAGE Command: None

Format:

MDMS SHOW DRIVE [drive_name [,...]]

Parameters

drive_name
Specifies the name(s) of the drive(s). Specify a drive name or a logical name. All drives are displayed if the drive_name parameter is omitted. Wildcard characters are allowed in the drive_name, where * represents a variable-length wildcard, and % represents a single character wildcard.

The maximum length of the drive name or logical name is 31 characters. Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of drive names may be entered.

Description

The MDMS SHOW DRIVE command displays information about specified drive(s) or all drives defined in the MDMS database.

Privileges

The request requires MDMS_SHOW_ALL.

Restrictions

None

Qualifiers

/BRIEF
Display drive information in the brief 1-line format. This is the default display when a drive name is not specified.

/CHECK
/NOCHECK (D)
When the /CHECK qualifier is specified, the drive is physically accessed to determine its availability and its state.

If the state varies from what is stored in the database, the state is updated (and associated volume records are also updated) and the new values are displayed. If the check cannot be performed, the original database settings are displayed with a warning message. With the default /NOCHECK, no physical checking is performed, and the current database contents are displayed.

This qualifiers requires the right MDMS_SET_OWN.

/FULL
Display drive information in the full multi-line format. All attributes and status fields are displayed. This is the default display when a drive name is specified.

/OUTPUT=file_spec
Specifies the output file in which to send the drive information. The default is SYS$OUTPUT.

/SYMBOLS[=prefix]
Stores selected drive information in process symbols. If prefix is not specified the default prefix is MDMS_INQ. The maximum length of the prefix is 8 characters. This qualifier is supported for wildcard show requests. By default there is no output on the command. If you wish output with the symbols, use the /OUTPUT qualifier. The following symbols are defined on a show of a single drive:

MDMS_INQ_ACCESS

MDMS_INQ_ALLOCATED

MDMS_INQ_ALLOC_DEVICE_NAME

MDMS_INQ_ALLOC_NODE_NAME

MDMS_INQ_ALLOC_OWNER_UIC

MDMS_INQ_ALLOC_PROCESS_ID

MDMS_INQ_ALLOC_USER_NAME

MDMS_INQ_AUTOMATIC_REPLY

MDMS_INQ_AVAILABLE

MDMS_INQ_DESCRIPTION

MDMS_INQ_DEVICE_NAME

MDMS_INQ_DISABLED

MDMS_INQ_DRIVE_NAME

MDMS_INQ_DRIVE_NUMBER

MDMS_INQ_GROUPS

MDMS_INQ_JUKEBOX_NAME

MDMS_INQ_LOAD_VOLUME_ID

MDMS_INQ_MEDIA_TYPE

MDMS_INQ_NODES

MDMS_INQ_OWNER_NAME

MDMS_INQ_READONLY_MEDIA_TYPE

MDMS_INQ_SHARED

MDMS_INQ_STACKER

MDMS_INQ_STATE

MDMS_INQ_VOLUME_ID

Symbols are not available for access control.

On wildcard show requests the above symbols will be suffixed by _n. A symbol prefix_N stores the number of objects that were selected by a command.

Examples

```
$ MDMS SHOW DRIVE $1$MUA5
```

This command displays a full listing of drive information for drive 1MUA5 to SYS$OUTPUT.

```
$ MDMS SHOW DRIVE /FULL $1$MUA5 /OUTPUT=DRIVES.DAT
```

This command displays a full listing of drive information for drive 1MUA5 and puts the output into file DRIVE.DAT.

MDMS SHOW ENVIRONMENT

The MDMS SHOW ENVIRONMENT command displays information about selected environments, or all environments defined in the MDMS database.

Equivalent ABS Command: SHOW ENVIRONMENT

Format:

MDMS SHOW ENVIRONMENT [environment_name [,...]]

Parameters

environment_name

Specify the environment names. All environments are displayed if the environment_name parameter is omitted. Wildcard characters are allowed in the environment_name, where * represents a variable-length wildcard, and % represents a single character wildcard.

The maximum length of the environment name is 63 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of environment names may be entered.

Description

The MDMS SHOW ENVIRONMENT command displays information about specified environments in the MDMS database.

Privileges

The request requires MDMS_SHOW_ALL.

Restrictions

This command is restricted to nodes with an ABS license.

Qualifiers

/BRIEF
Display environment information in the brief 1-line format. This is the default display when an environment name is not specified.

/FULL
Display environment information in the full multi-line format. All attributes and status fields are displayed. This is the default display when a environment name is specified.

/OUTPUT=file_spec
Specifies the output file in which to send the environment information. The default is SYS$OUTPUT.

/SYMBOLS
Stores selected environment information in process symbols. If prefix is not specified the default prefix is MDMS_INQ. The maximum length of the prefix is 8 characters. This qualifier is supported for wildcard show requests. By default there is no output on the command. If you wish output with the symbols, use the /OUTPUT qualifier. The following symbols are defined on a show of a single environment:

MDMS_INQ_ACTION

MDMS_INQ_ASSIST

MDMS_INQ_COMPRESSION

MDMS_INQ_DATA_SAFETY

MDMS_INQ_DESCRIPTION

MDMS_INQ_DRIVE_COUNT

MDMS_INQ_ENVIRONMENT_NAME

MDMS_INQ_EPILOGUE

MDMS_INQ_INTERVAL

MDMS_INQ_LINKS_ONLY

MDMS_INQ_LISTING_OPTION

MDMS_INQ_LOCK

MDMS_INQ_OWNER_NAME

MDMS_INQ_PROFILE_CLUSTER

MDMS_INQ_PROFILE_NODE

MDMS_INQ_PROFILE_PRIVILEGES

MDMS_INQ_PROFILE_RIGHTS

MDMS_INQ_PROFILE_USER

MDMS_INQ_PROLOGUE

MDMS_INQ_RETRY_LIMIT

MDMS_INQ_SPAN_FILESYSTEMS

Symbols are not available for access control and notification.

On wildcard show requests the above symbols will be suffixed by _n. A symbol prefix_N stores the number of objects that were selected by a command.

Examples

```
$ MDMS SHOW ENVIRONMENT BACKUP_ENV /FULL
```

This command displays a full listing environment BACKUP_ENV

```
$ MDMS SHOW ENVIRONMENT /OUTPUT=ENVIRONMENTS.DAT
```

This command displays a brief listing of all environment information and sends the output into file ENVIRONMENTS.DAT

MDMS SHOW GROUP

The MDMS SHOW GROUP command displays information about selected groups, or all groups defined in the MDMS database.

Equivalent STORAGE Command: None

Format:

MDMS SHOW GROUP [group_name [,...]]

Parameters

group_name

Specify the group names. All groups are displayed if the group_name parameter is omitted. Wildcard characters are allowed in the group_name, where * represents a variable-length wildcard, and % represents a single character wildcard.

The maximum length of the group name is 31 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of group names may be entered.

Description

The MDMS SHOW GROUP command displays information about specified groups in the MDMS database.

Privileges

The request requires MDMS_SHOW_ALL.

Restrictions

None.

Qualifiers

/BRIEF
Display group information in the brief 1-line format. This is the default display when a group-name is not specified.

/FULL
Display group information in the full multi-line format. All attributes and status fields are displayed. This is the default display when a group name is specified.

/OUTPUT=file_spec
Specifies the output file in which to send the group information. The default is SYS$OUTPUT.

/SYMBOLS[=prefix]
Stores selected group information in process symbols. If prefix is not specified the default prefix is MDMS_INQ. The maximum length of the prefix is 8 characters. This qualifier is supported for wildcard show requests. By default there is no output on the command. If you wish output with the symbols, use the /OUTPUT qualifier. The following symbols are defined on a show of a single group:

MDMS_INQ_DESCRIPTION

MDMS_INQ_GROUP_NAME

MDMS_INQ_NODES

MDMS_INQ_OWNER_NAME

Symbols are not available for access control.

On wildcard show requests the above symbols will be suffixed by _n. A symbol prefix_N stores the number of objects that were selected by a command.

Examples

```
$ MDMS SHOW GROUP HOSER /FULL
```

This command displays a full listing group HOSER.

```
$ MDMS SHOW GROUP /OUTPUT=GROUPS.DAT
```

This command displays a brief listing of all group information and sends the output into file GROUPS.DAT

MDMS SHOW JUKEBOX

The MDMS SHOW JUKEBOX command displays information about specified jukebox(es), selected jukeboxes, or all jukeboxes defined in the MDMS database.

Equivalent STORAGE Command: None

Format:

MDMS SHOW JUKEBOX [jukebox_name [,...]]

Parameters

jukebox_name

Specifies the name(s) of the jukebox(es). All jukeboxes are displayed if the jukebox_name parameter is omitted.

The maximum length of the jukebox name is 31 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

Wildcard characters are allowed in the jukebox_name, where * represents a variable-length wildcard, and % represents a single character wildcard.

A comma-separated list of jukebox names may be entered.

Description

The MDMS SHOW JUKEBOX command displays information about specified jukebox(es), or all jukeboxes defined in the MDMS database.

Privileges

The request requires MDMS_SHOW_ALL.

Restrictions

None.

Qualifiers

/BRIEF
Display jukebox information in the brief 1-line format. This is the default display when a jukebox name is not specified.

/CONTENTS
Display information about the contents of the jukebox - drives, slots, volumes and magazines.

/FULL
Display jukebox information in the full multi-line format. All attributes and status fields are displayed. This is the default display when a jukebox name is specified.

/OUTPUT=file_spec
Specifies the output file in which to send the jukebox information. The default is SYS$OUTPUT.

/SYMBOLS[=prefix]
Stores selected jukebox information in process symbols. If prefix is not specified the default prefix is MDMS_INQ. The maximum length of the prefix is 8 characters. This qualifier is supported for wildcard show requests. By default there is no output on the command. If you wish output with the symbols, use the /OUTPUT qualifier. The following symbols are defined on a show of a single jukebox:

MDMS_INQ_ACCESS

MDMS_INQ_ACS_ID

MDMS_INQ_AUTOMATIC_REPLY

MDMS_INQ_CAP_SIZE

MDMS_INQ_CONTROL

MDMS_INQ_DESCRIPTION

MDMS_INQ_DISABLED

MDMS_INQ_FREE_VOLUMES

MDMS_INQ_GROUPS

MDMS_INQ_JUKEBOX_NAME

MDMS_INQ_LIBRARY

MDMS_INQ_LOCATION_NAME

MDMS_INQ_LSM_ID

MDMS_INQ_NODES

MDMS_INQ_OWNER_NAME

MDMS_INQ_ROBOT

MDMS_INQ_SLOT_COUNT

MDMS_INQ_STATE

MDMS_INQ_THRESHOLD

MDMS_INQ_TOPOLOGY_FACE

MDMS_INQ_TOPOLOGY_LEVEL

MDMS_INQ_TOPOLOGY_SLOT

MDMS_INQ_TOPOLOGY_TOWER

MDMS_INQ_USAGE

Symbols are not available for access control.

On wildcard show requests the above symbols will be suffixed by _n. A symbol prefix_N stores the number of objects that were selected by a command.

Examples

```
$ MDMS SHOW JUKEBOX JUKE_1
```

This command displays a full listing of jukebox information for jukebox JUKE_1.

```
$ MDMS SHOW JUKEBOX /FULL /OUTPUT=JUKE_LIST.DAT
```

This command displays a full listing for all jukeboxes, which is stored in file JUKE_LIST.DAT instead of SYS$OUTPUT.

MDMS SHOW LOCATION

The MDMS SHOW LOCATION command displays information about specified location(s) or all locations defined in the MDMS database.

Equivalent STORAGE Command: None

Format:

MDMS SHOW LOCATION [location [,...]]

Parameters

location

Specifies the name of the location. All locations are displayed if the location parameter is omitted.

The maximum length of the location is 31 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

Wildcard characters are allowed in the location where * represents a variable-length wildcard, and % represents a single character wildcard.

A comma-separated list of lcoations may be entered.

Description

The MDMS SHOW LOCATION command displays information about specified locations or all locations defined in the MDMS database.

Privileges

The request requires MDMS_SHOW_ALL.

Restrictions

None.

Qualifiers

/BRIEF
Display location information in the brief 1-line format. This is the default display when a location name is not specified.

/FULL
Display location information in the full multi-line format. All attributes and status fields are displayed. This is the default display when a location name is specified.

/OUTPUT=file_spec
Specifies the output file in which to send the location information. The default is SYS$OUTPUT.

/SYMBOLS[=prefix]
Stores selected location information in process symbols. If prefix is not specified the default prefix is MDMS_INQ. The maximum length of the prefix is 8 characters. This qualifier is supported for wildcard show requests. By default there is no output on the command. If you wish output with the symbols, use the /OUTPUT qualifier. The following symbols are defined on a show of a single location:

MDMS_INQ_DESCRIPTION

MDMS_INQ_LOCATION_NAME

MDMS_INQ_OWNER_NAME

MDMS_INQ_PARENT_LOCATION

MDMS_INQ_SPACES

Symbols are not available for access control.

On wildcard show requests the above symbols will be suffixed by _n. A symbol prefix_N stores the number of objects that were selected by a command.

Examples

```
$ MDMS SHOW LOCATION
```

This command displays a brief listing of all locations.

```
$ MDMS SHOW LOCATION SHELF1, SHELF2, SHELF3, SHELF4 /FULL
```

This command displays a full listing of location information for locations SHELF1 to SHELF4.

```
$ MDMS SHOW LOCATION /FULL /OUTPUT=LOC_LIST.DAT
```

This command displays a full listing of all location information in file LOC_LIST.DAT.

MDMS SHOW MAGAZINE

The MDMS SHOW MAGAZINE command displays information about specified magazine(s), selected magazines, or all magazines defined in the MDMS database.

Equivalent STORAGE Command: STORAGE SHOW MAGAZINE

Format:

MDMS SHOW MAGAZINE [magazine_name [,...]]

Parameters

magazine_name

Specifies the name(s) of the magazine(s). All magazines are displayed if the magazine_name parameter is omitted, subject to the/SCHEDULE qualifier.

The maximum length of the magazine name is 31 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

Wildcard characters are allowed in the magazine_name, where * represents a variable-length wildcard, and % represents a single character wildcard.

A comma-separated list of magazine names may be entered.

Description

The MDMS SHOW MAGAZINE command displays information about specified magazine(s) or all magazines defined in the MDMS database.

Privileges

The request requires MDMS_SHOW_ALL.

Restrictions

None.

Qualifiers

/BRIEF
Display magazine information in the brief 1-line format. This is the default display when a magazine name is not specified.

/CONTENTS
Display information about the contents of the magazine - slots and volumes.

/FULL
Display magazine information in the full multi-line format. All attributes and status fields are displayed. This is the default display when a magazine name is specified.

/OUTPUT=file_spec
Specifies the output file in which to send the magazine information. The default is SYS$OUTPUT.

/SCHEDULE[=keyword]
The /SCHEDULE qualifier selects magazines whose offsite or onsite date has "expired" and the magazine is not in the new location. If both dates have expired, the later of the two dates is used. The optional keywords on the /SCHEDULE qualifier may be:

OFFSITE

ONSITE

If the OFFSITE keyword is used, then only those magazines scheduled to be moved offsite are selected. If the ONSITE keyword is used, then only those magazines scheduled to be moved onsite are selected. If the keyword is omitted, then the magazines scheduled to be moved onsite and offsite are selected. Do not specify a magazine name with this qualifier.

/SYMBOLS
Stores selected magazine information in process symbols. If prefix is not specified the default prefix is MDMS_INQ. The maximum length of the prefix is 8 characters. This qualifier is supported for wildcard show requests. By default there is no output on the command. If you wish output with the symbols, use the /OUTPUT qualifier. The following symbols are defined on a show of a single magazine:

MDMS_INQ_DESCRIPTION

MDMS_INQ_JUKEBOX_NAME

MDMS_INQ_MAGAZINE_NAME

MDMS_INQ_OFFSITE_DATE

MDMS_INQ_OFFSITE_LOCATION

MDMS_INQ_ONSITE_DATE

MDMS_INQ_ONSITE_LOCATION

MDMS_INQ_OWNER_NAME

MDMS_INQ_PLACEMENT

MDMS_INQ_PLACENAME

MDMS_INQ_POSITION

MDMS_INQ_SLOT_COUNT

MDMS_INQ_SPACES

MDMS_INQ_START_SLOT

Symbols are not available for access control.

On wildcard show requests the above symbols will be suffixed by _n. A symbols prefix_N stores the number of objects that were selected by a command.

Examples

```
$ MDMS SHOW MAGAZINE
```

This command displays a brief listing of all magazines.

```
$ MDMS SHOW MAGAZINE PDMAG* /OUTPUT=PDMAG1.DAT
```

This command outputs a full listing of magazine information for magazine matching the wild-card PDMAG* to file PDMAG1.DAT.

```
$ MDMS SHOW MAGAZINE /SCHEDULE
```

This command outputs a brief listing of all magazines scheduled to be moved onsite or offsite.

MDMS SHOW MEDIA_TYPE

The MDMS SHOW MEDIA_TYPE command displays information about specified media type(s) or all media types defined in the MDMS database.

Equivalent STORAGE Command: None

Format:

MDMS SHOW MEDIA_TYPE [media_type [,...]]

Parameters

media_type

Specifies the name(s) of the media_type(s). All media types are displayed if the media_type parameter is omitted.

The maximum length of the media_type name is 31 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

Wildcard characters are allowed in the media_type, where * represents a variable-length wildcard, and % represents a single character wildcard.

A comma-separated list of media types may be entered.

Description

The MDMS SHOW MEDIA_TYPE command displays information about specified media type(s) or all media types defined in the MDMS database.

Privileges

The request requires MDMS_SHOW_ALL.

Restrictions

None.

Qualifiers

/BRIEF
Display media type information in the brief 1-line format. This is the default display when a media_type is not specified.

/FULL
Display media type information in the full multi- line format. All attributes and status fields are displayed. This is the default display when a media_type is specified.

/OUTPUT=file_spec
Specifies the output file in which to send the media type information. The default is SYS$OUTPUT.

/SYMBOLS
Stores selected media type information in process symbols. If prefix is not specified the default prefix is MDMS_INQ. The maximum length of the prefix is 8 characters. This qualifier is supported for wildcard show requests. By default there is no output on the command. If you wish output with the symbols, use the /OUTPUT qualifier. The following symbols are defined on a show of a single media_type:

MDMS_INQ_CAPACITY

MDMS_INQ_COMPACTION

MDMS_INQ_DENSITY

MDMS_INQ_DESCRIPTION

MDMS_INQ_MEDIA_TYPE

MDMS_INQ_OWNER_NAME

MDMS_INQ_TAPE_LENGTH

Symbols are not available for access control.

On wildcard show requests the above symbols will be suffixed by _n. A symbol prefix_N stores the number of objects that were selected by a command.

Examples

```
$ MDMS SHOW MEDIA_TYPE TK88K_COMP /FULL
```

This command displays a full listing of information for media_type TK88K_COMP.

```
$ MDMS SHOW MEDIA_TYPE /FULL /OUTPUT=MEDIA.DAT
```

This command outputs a full listing of information for all media types to file MEDIA.DAT.

MDMS SHOW NODE

The MDMS SHOW NODE command displays information about specified node(s) or all nodes defined in the MDMS database.

Equivalent STORAGE Command: None

Format:

MDMS SHOW NODE [node_name [,...]]

Parameters

node_name

Specifies the name(s) of the node(s). All nodes are displayed if the node_name parameter is omitted.

The maximum length of the node name is 31 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

Wildcard characters are allowed in the node_name, where * represents a variable-length wildcard, and % represents a single character wildcard.

A comma-separated list of node names may be entered.

Description

The MDMS SHOW NODE command displays information about specified node(s) or all nodes defined in the MDMS database.

Privileges

The request requires MDMS_SHOW_ALL.

Restrictions

None.

Qualifiers

/BRIEF
Display node information in the brief 1-line format. This is the default display when a node name is not specified.

/FULL
Display node information in the full multi-line format. All attributes and status fields are displayed. This is the default display when a node name is specified.

/OUTPUT=file_spec
Specifies the output file in which to send the node information. The default is SYS$OUTPUT.

/SYMBOLS[=prefix]
Stores selected node information in process symbols. If prefix is not specified the default prefix is MDMS_INQ. The maximum length of the prefix is 8 characters. This qualifier is supported for wildcard show requests. By default there is no output on the command. If you wish output with the symbols, use the /OUTPUT qualifier. The following symbols are defined on a show of a single node:

MDMS_INQ_DATABASE_SERVER

MDMS_INQ_DECNET_FULLNAME

MDMS_INQ_DESCRIPTION

MDMS_INQ_DISABLED

MDMS_INQ_LOCATION_NAME

MDMS_INQ_NODE_NAME

MDMS_INQ_OPCOM_CLASS

MDMS_INQ_OWNER_NAME

MDMS_INQ_TCPIP_FULLNAME

MDMS_INQ_TRANSPORT

Symbols are not available for access control.

On wildcard show requests the above symbols will be suffixed by _n. A symbol prefix_N stores the number of object that were selected by a command.

Examples

```
$ MDMS SHOW NODE /FULL /OUTPUT=NODES.DAT
```

This command outputs a full listing of node information for all nodes to file NODES.DAT.

```
$ MDMS SHOW NODE DSORDS
```

This command displays a full listing of node information for node DSORDS.

```
$ MDMS SHOW NODE SIL*/FULL
```

This command displays a full listing of nodes matching the wildcard SIL*.

MDMS SHOW POOL

The MDMS SHOW POOL command displays information about specified pool(s) or all pools defined in the MDMS database.

Equivalent STORAGE Command: None

Format:

MDMS SHOW POOL [pool_name [,...]]

Parameters

pool_name

Specifies the name of the pool. All pools are displayed if the pool_name parameter is omitted.

The maximum length of the pool name is 31 characters. Valid characters are "$,-,0-9,A-Z,_,a-z".

Wildcard characters are allowed in the pool_name, where * represents a variable-length wildcard, and % represents a single character wildcard.

A comma-separated list of pool names may be entered.

Description

The MDMS SHOW POOL command displays information about specified pool(s) or all pools defined in the MDMS database.

Privileges

The request requires MDMS_SHOW_ALL.

Restrictions

None.

Qualifiers

/BRIEF
Display pool information in the brief 1-line format. This is the default display when a pool name is not specified.

/FULL
Display pool information in the full multi-line format. All attributes and status fields are displayed. This is the default display when a pool name is specified.

/OUTPUT=file_spec
Specifies the output file in which to send the pool information. The default is SYS$OUTPUT.

/SYMBOLS[=prefix]
Stores selected pool information in process symbols. If prefix is not specified the default prefix is MDMS_INQ. The maximum length of the prefix is 8 characters. This qualifier is supported for wildcard show requests. By default there is no output on the command. If you wish output with the symbols, use the /OUTPUT qualifier. The following symbols are defined on a show of a single pool:

MDMS_INQ_AUTHORIZED_USERS

MDMS_INQ_DEFAULT_USERS

MDMS_INQ_DESCRIPTION

MDMS_INQ_FREE_VOLUMES

MDMS_INQ_OWNER_NAME

MDMS_INQ_POOL_NAME

MDMS_INQ_THRESHOLD

Symbols are not available for access control.

On wildcard show requests the above symbols will be suffixed by _n. A symbol prefix_N stores the number of objects that were selected by a command.

Examples

```
$ MDMS SHOW POOL TEST_POOL /FULL
```

This command displays a full listing of pool information for pool TEST_POOL.

MDMS SHOW REQUEST

The MDMS SHOW REQUEST command displays information about all requests currently active on the database server node which includes virtually all requests in the domain.

Equivalent STORAGE Command: None

Format:

MDMS SHOW REQUEST [request_id]

Parameters

request_id

Specifies an identifier to show a specific request. You can obtain a list of request IDs by issuing a SHOW REQUEST command without a request ID.

Description

The MDMS SHOW REQUESTS command displays information about requests currently active in the domain. Certain recently-completed requests may also be shown. If no request_id is specified, all requests are shown subject to privilege. In addition, requests from a specific user can be shown.

Privileges

The request requires MDMS_SHOW_ALL, MDMS_SHOW_POOL, or MDMS_SHOW_OWN.

If the user has only MDMS_SHOW_OWN or MDMS_SHOW_POOL, only requests issued by the user are shown. To see requests of other users MDMS_SHOW_ALL is required.

Restrictions

None.

Qualifiers

/BRIEF
Displays requests information in the brief 1-line format. This is the default display if no request_id is specified.

/DEBUG
Displays addresses of certain objects for debugging purposes.

/FULL
Displays request information in the full multi-line format. This is the default display if a request_id is specified.

/OUTPUT=file_spec
Specifies the output file in which to send the requests information. The default is SYS$OUTPUT.

/USER_NAME=user_name
Restricts the request list to those issued by the specified user.

Examples

```
$ MDMS SHOW REQUESTS
```

This command displays a brief listing of of all requests active in the domain.

```
$ MDMS SHOW REQUEST/FULL
```

This command displays a full listing of all requests active in the domain.

```
$ MDMS SHOW REQUEST 45
```

This command displays a full listing of request identifier 45

```
$ MDMS SHOW REQUEST/USER_NAME=FROEHLIN
```

This command displays a brief listing of all requests issued by user FROEHLIN.

MDMS SHOW RESTORE

The MDMS SHOW RESTORE command displays information about selected restores, or all restores defined in the MDMS database.

Equivalent ABS Command: SHOW STORAGE_CLASS

Format:

MDMS SHOW RESTORE [restore_name [,...]]

Parameters

restore_name

Specify the restore names. All restores are displayed if the restore_name parameter is omitted. Wildcard characters are allowed in the restore_name, where * represents a variable-length wildcard, and % represents a single character wildcard.

The maximum length of the restore name is 39 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of restore names may be entered.

Description

The MDMS SHOW RESTORE command displays information about specified restores in the MDMS database.

Privileges

The request requires MDMS_SHOW_ALL. In addition, the /PROFILE qualifier requires MDMS_SHOW_RIGHTS.

Restrictions

This command is restricted to nodes with an ABS license.

Qualifiers

/BRIEF
Display restore information in the brief 1-line format. This is the default display when a restore-name is not specified.

/FULL
Display restore information in the full multi-line format. All attributes and status fields are displayed. This is the default display when a restore name is specified.

/OUTPUT=file_spec
Specifies the output file in which to send the restore information. The default is SYS$OUTPUT.

/PROFILE
Outputs the user profile stored in the restore request. By default the user profile is not displayed.

This qualifier requires MDMS_SHOW_RIGHTS.

/SELECTIONS
Outputs the details of all selections in the restore. By default, only selected information about the default selection that is settable in the restore command is shown. This qualifier is not supported for wildcard show requests.

/SYMBOLS[=prefix]
Stores selected restore information in process symbols. If prefix is not specified the default prefix is MDMS_INQ. The maximum length of the prefix is 8 characters. This qualifier is supported for wildcard show requests. By default there is no output on the command. If you wish output with the symbols, use the /OUTPUT qualifier. The following symbols are defined on a show of a single restore:

MDMS_INQ_ARCHIVE_NAME

MDMS_INQ_BASE_DATE

MDMS_INQ_BEFORE_DATE

MDMS_INQ_CATALOG_NAME

MDMS_INQ_DATA_SELECT_TYPE

MDMS_INQ_DATE_ARCHIVED

MDMS_INQ_DELETE_INTERVAL

MDMS_INQ_DESCRIPTION

MDMS_INQ_DESTINATION

MDMS_INQ_ENVIRONMENT_NAME

MDMS_INQ_EPILOGUE

MDMS_INQ_EXCLUDE

MDMS_INQ_EXPLICIT_INTERVAL

MDMS_INQ_FREQUENCY

MDMS_INQ_GROUPS

MDMS_INQ_INCLUDE

MDMS_INQ_INCREMENTAL

MDMS_INQ_JOB_NUMBER

MDMS_INQ_NODES

MDMS_INQ_OWNER_NAME

MDMS_INQ_PROFILE_CUSTER

MDMS_INQ_PROFILE_NODE

MDMS_INQ_PROFILE_PRIVILEGES

MDMS_INQ_PROFILE_RIGHTS

MDMS_INQ_PROFILE_USER

MDMS_INQ_PROLOGUE

MDMS_INQ_RESTORE_NAME

MDMS_INQ_SCHEDULE_NAME

MDMS_INQ_SELECTIONS

MDMS_INQ_SEQUENCE_OPTION

MDMS_INQ_SINCE_DATE

MDMS_INQ_SKIP_TIME

MDMS_INQ_SOURCE_NODE

MDMS_INQ_START_DATE

MDMS_INQ_TRANSACTION_STATUS

Symbols are not available for access control.

On wildcard show requests the above symbols will be suffixed by _n. A symbol prefix_N stores the number of objects that were selected by a command.

Examples

```
$ MDMS SHOW RESTORE CHRIS_RESTORE /FULL
```

This command displays a full listing restore CHRIS_RESTORE.

```
$ MDMS SHOW RESTORE /OUTPUT=RESTORES.DAT
```

This command displays a brief listing of all restore information and sends the output into file RESTORES.DAT

MDMS SHOW SAVE

The MDMS SHOW SAVE command displays information about selected saves, or all saves defined in the MDMS database.

Equivalent ABS Command: SHOW STORAGE_CLASS

Format:

MDMS SHOW SAVE [save_name [,...]]

Parameters

save_name

Specify the save names. All saves are displayed if the save_name parameter is omitted. Wildcard characters are allowed in the save_name, where * represents a variable-length wildcard, and % represents a single character wildcard.

The maximum length of the save name is 39 characters. Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of save names may be entered.

Description

The MDMS SHOW SAVE command displays information about specified saves in the MDMS database.

Privileges

The request requires MDMS_SHOW_ALL. In addition, the /PROFILE qualifier requires MDMS_SHOW_RIGHTS.

Restrictions

This command is restricted to nodes with an ABS license.

Qualifiers

/BRIEF
Display save information in the brief 1-line format. This is the default display when a save name is not specified.

/FULL
Display save information in the full multi-line format. All attributes and status fields are displayed. This is the default display when a save name is specified.

/OUTPUT=file_spec
Specifies the output file in which to send the save information. The default is SYS$OUTPUT.

/PROFILE
Outputs the user profile stored in the save request. By default the user profile is not displayed.

This qualifier requires MDMS_SHOW_RIGHTS.

/SELECTIONS
Outputs the details of all selections in the save. By default, only selected information about the default selection that is settable in the save command is shown. This qualifier is not supported for wildcard show requests.

/SYMBOLS[=prefix]
Stores selected save information in process symbols. If prefix is not specified the default prefix is MDMS_INQ. The maximum length of the prefix is 8 characters. This qualifier is supported for wildcard show requests. By default there is no output on the command. If you wish output with the symbols, use the /OUTPUT qualifier.The following symbols are defined on a show of a single save:

MDMS_INQ_ARCHIVE_NAME

MDMS_INQ_BASE_DATE

MDMS_INQ_DATA_SELECT_TYPE

MDMS_INQ_DELETE_INTERVAL

MDMS_INQ_DESCRIPTION

MDMS_INQ_ENVIRONMENT_NAME

MDMS_INQ_EPILOGUE

MDMS_INQ_EXCLUDE

MDMS_INQ_EXPLICIT_INTERVAL

MDMS_INQ_FREQUENCY

MDMS_INQ_GROUPS

MDMS_INQ_INCLUDE

MDMS_INQ_INCREMENTAL

MDMS_INQ_JOB_NUMBER

MDMS_INQ_NODES

MDMS_INQ_OWNER_NAME

MDMS_INQ_PROFILE_CUSTER

MDMS_INQ_PROFILE_NODE

MDMS_INQ_PROFILE_PRIVILEGES

MDMS_INQ_PROFILE_RIGHTS

MDMS_INQ_PROFILE_USER

MDMS_INQ_PROLOGUE

MDMS_INQ_SAVE_NAME

MDMS_INQ_SCHEDULE_NAME

MDMS_INQ_SELECTIONS

MDMS_INQ_SEQUENCE_OPTION

MDMS_INQ_SKIP_TIME

MDMS_INQ_SOURCE_NODE

MDMS_INQ_START_DATE

MDMS_INQ_TRANSACTION_STATUS

Symbols are not available for access control.

On wildcard show requests the above symbols will be suffixed by _n. A symbol prefix_N stored the number of objects that were selected by a command.

Examples

```
$ MDMS SHOW SAVE MARTYS_SAVE /FULL
```

This command displays a full listing save MARTYS_SAVE.

```
$ MDMS SHOW SAVE /OUTPUT=SAVES.DAT
```

This command displays a brief listing of all save information and sends the output into file SAVES.DAT.

MDMS SHOW SCHEDULE

The MDMS SHOW SCHEDULE command displays information about selected schedules, or all schedules defined in the MDMS database.

Equivalent ABS Command: SHOW STORAGE_CLASS

Format:

MDMS SHOW SCHEDULE [schedule_name [,...]]

Parameters

schedule_name

Specify the schedule names. All schedules are displayed if the schedule_name parameter is omitted. Wildcard characters are allowed in the schedule_name, where * represents a variable-length wildcard, and % represents a single character wildcard.

The maximum length of the schedule name is 63 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of schedule names may be entered.

Description

The MDMS SHOW SCHEDULE command displays information about specified schedules in the MDMS database.

Privileges

The request requires MDMS_SHOW_ALL.

Restrictions

None.

Qualifiers

/BRIEF
Display schedule information in the brief 1-line format. This is the default display when a schedule name is not specified.

/FULL
Display schedule information in the full multi-line format. All attributes and status fields are displayed. This is the default display when a schedule name is specified.

/OUTPUT=file_spec
Specifies the output file in which to send the schedule information. The default is SYS$OUTPUT.

/SYMBOLS[=prefix]
Stores selected schedule information in process symbols. If prefix is not specified the default prefix is MDMS_INQ. The maximum length of the prefix is 8 characters. This qualifier is supported for wildcard show requests. By default there is no output on the command. If you wish output with the symbols, use the /OUTPUT qualifier. The following symbols are defined on a show of a single schedule:

MDMS_INQ_AFTER_SCHEDULE_NAME

MDMS_INQ_AFTER_SCHEDULE_OPTION

MDMS_INQ_COMMAND

MDMS_INQ_DATES

MDMS_INQ_DAYS

MDMS_INQ_DESCRIPTION

MDMS_INQ_EXCLUDE

MDMS_INQ_INCLUDE

MDMS_INQ_LAST_START_DATE

MDMS_INQ_MONTHS

MDMS_INQ_NEXT_START_DATE

MDMS_INQ_OWNER_NAME

MDMS_INQ_SCHEDULE_NAME

MDMS_INQ_TIMES

MDMS_INQ_WEEKS

Symbols are not available for access control.

On wildcard show requests the above symbols will be suffixed by _n. A symbol prefix_N stores the number of objects that were selected by a comamnd.

Examples

```
$ MDMS SHOW SCHEDULE RICHS_SCHEDULE /FULL
```

This command displays a full listing schedule RICHS_SCHEDULE.

```
$ MDMS SHOW SCHEDULE /OUTPUT=SCHEDULES.DAT
```

This command displays a brief listing of all schedule information and sends the output into file SCHEDULES.DAT

MDMS SHOW SELECTION

The MDMS SHOW SELECTION command displays information about selected selections, or all selections defined in the MDMS database.

Equivalent ABS Command: SHOW STORAGE_CLASS

Format:

MDMS SHOW SELECTION [selection_name [,...]]

Parameters

selection_name

Specify the selection names. All selections are displayed if the selection_name parameter is omitted. Wildcard characters are allowed in the selection_name, where * represents a variable-length wildcard, and % represents a single character wildcard.

The maximum length of the selection name is 63 characters. Valid characters are "$,-,0-9,A-Z,_,a-z".

A comma-separated list of selection names may be entered.

Description

The MDMS SHOW SELECTION command displays information about specified selections in the MDMS database.

Privileges

The request requires MDMS_SHOW_ALL.

Restrictions

This command is restricted to nodes with an ABS license.

Qualifiers

/BRIEF
Display SELECTION information in the brief 1-line format. This is the default display when a selection name is not specified.

/FULL
Display selection information in the full multi-line format. All attributes and status fields are displayed. This is the default display when a selection name is specified.

/OUTPUT=file_spec
Specifies the output file in which to send the selection information. The default is SYS$OUTPUT.

/SYMBOLS[=prefix]
Stores selected selection information in process symbols. If prefix is not specified the default prefix is MDMS_INQ. The maximum length of the prefix is 8 characters. This qualifier is supported for wildcard show requests. By default there is no output on the command. If you wish output with the symbols, use the /OUTPUT qualifier. The following symbols are defined on a show of a single selection:

MDMS_INQ_AGENT_QUALIFIERS

MDMS_INQ_BEFORE_DATE

MDMS_INQ_CONFLICT_OPTIONS

MDMS_INQ_DATA_SELECT_TYPE

MDMS_INQ_DATE_TYPE

MDMS_INQ_DESCRIPTION

MDMS_INQ_EXCLUDE

MDMS_INQ_INCLUDE

MDMS_INQ_OWNER_NAME

MDMS_INQ_SELECTION_NAME

MDMS_INQ_SINCE_DATE

MDMS_INQ_SOURCE_NODE

Symbols are not available for access control.

On wildcard show requests the above symbols will be suffixed by _n. A symbol prefix_N stores the number of objects that were selected by a command.

Examples

```
$ MDMS SHOW SELECTION JOHANNAS_SELECTION /FULL
```

This command displays a full listing selection JOHANNAS_SELECTION.

```
$ MDMS SHOW SELECTION /OUTPUT=SELECTIONS.DAT
```

This command displays a brief listing of all selection information and sends the output into file SELECTIONS.DAT

MDMS SHOW SERVER

The MDMS SHOW SERVER command displays information about the local configuration of the MDMS server on the specified node(s).

Equivalent STORAGE Command: None

Format:

MDMS SHOW SERVER

Parameters

None.

Description

The MDMS SHOW SERVER command displays information about the local configuration of the MDMS server on the specified node(s). The information is derived from the specified nodes local startup configuration files rather then the MDMS database.

Privileges

The request requires MDMS_SHOW_ALL, MDMS_SHOW_POOL or MDMS_SHOW_OWN.

Qualifiers

/NODES=(node_name[,...])
Displays information about the server on the specified node(s). The node name is either a DECnet (Phase IV) node name, a DECnet-Plus (Phase V) node name, or a TCP/IP node name. A TCP/IP node name can include a port number range. If no port number range is specified the default is 2501-2510.

/OUTPUT=file_spec
Specifies the output file in which to send the version information. The default is SYS$OUTPUT.

/SYMBOLS[=prefix]
Stores selected domain information in process symbols. If prefix is not specified the default prefix is MDMS_INQ. The maximum length of the prefix is 8 characters. By default there is no output on the command. If you wish output with the symbols, use the /OUTPUT qualifier. The following symbols are created:

MDMS_INQ_DATABASE_ACCESS

MDMS_INQ_DATABASE_LOCATION

MDMS_INQ_DECNET_FULLNAME

MDMS_INQ_LOGFILE

MDMS_INQ_SERVER_NODE_NAME

MDMS_INQ_SERVER_SEARCH_LIST

MDMS_INQ_SERVER_VERSION

MDMS_INQ_TCPIP_FULLNAME

MDMS_INQ_TRANSPORTS

Examples

```
$ MDMS SHOW SERVER
```

This command displays MDMS version information on the current node.

```
$ MDMS SHOW SERVER /NODES=(COOKIE, DSORDS)
```

This command displays local MDMS server information for nodes COOKIE and DSORDS.

```
$ MDMS SHOW SERVER -

  /NODES=(SENILE,CORP:.DOM.PARANOID, -

  DISORDERS.DOM.CORP:3001-3010)
```

This command displays information about servers on DECnet node SENILE, DECnet-Plus node PARANOID and TCP/IP node DISORDERS.

MDMS SHOW VERSION

The MDMS SHOW VERSION command displays information about the version of various MDMS components on the specified node(s).

Equivalent STORAGE Command: None

Format:

MDMS SHOW VERSION

Parameters

None.

Description

The MDMS SHOW VERSION command displays information about the version of various MDMS components on the specified node(s).

Privileges

The request requires MDMS_SHOW_ALL, MDMS_SHOW_POOL or MDMS_SHOW_OWN.

Restrictions

None.

Qualifiers

/NODES=(node_name[,...])
Displays information about this server. The node name is either a DECnet (Phase IV) node name, a DECnet-Plus (Phase V) node name, or a TCP/IP node name. A TCP/IP node name can include a port number range. If no port number range is specified the default is 2501-2510.

/OUTPUT=file_spec
Specifies the output file in which to send the version information. The default is SYS$OUTPUT.

Examples

```
$ MDMS SHOW VERSION
```

This command displays MDMS version information on the current node.

```
$ MDMS SHOW VERSION /NODE=(COOKIE::, DSORDS)
```

This command displays MDMS version information for nodes COOKIE and DSORDS.

```
$ MDMS SHOW VERSION -

 /NODES=(SENILE,CORP:.DOM.PARANOID, -

 DISORDERS.COM.CORP:3001-3010)
```

This command displays the version of the servers on DECnet node SENILE, DECnet-Plus node PARANOID and TCP/IP node DISORDERS.

MDMS SHOW VOLUME

The MDMS SHOW VOLUME command displays information about specified volume(s), selected volumes, or all volumes defined in the MDMS database.

Equivalent STORAGE Command: STORAGE SHOW VOLUME

Format:

MDMS SHOW VOLUME [volume_id[,...]]

Parameters

volume_id

Specifies the identifier(s) of the volume(s). Alternatively, a volume range, separated by a dash, may be specified. A volume range is a numeric range for up to the last five characters of the volume ID.

Example ranges are (ABC001-ABC250), (T20120-T20125).

The maximum length of the volume ID is 6 characters. Valid characters are " ,!,",%-?,A-Z,_".

Wildcard characters are allowed in the volume_id, where * represents a variable-length wildcard, and % represents a single character wildcard.

All volumes are displayed if the volume_id parameter is omitted, subject to qualifier selection.

A comma-separated list of volume IDs or ranges may be entered.

Description

The MDMS SHOW VOLUME command displays information about specified volume(s), selected volumes, or all volumes defined in the MDMS database.

If the volume_id parameter is supplied, only information on the specified volume(s) is displayed, which are subject to further selection based on the qualifiers.

If no volume_id parameter is specified, the qualifiers are used for selection; if no qualifiers are specified, all volumes are displayed.

Privileges

The request requires MDMS_SHOW_ALL, MDMS_SHOW_VOLUME,

MDMS_SHOW_POOL or MDMS_SHOW_OWN.

If the user has only MDMS_SHOW_OWN, only volumes allocated and owned by the user are displayed. If the user has MDMS_SHOW_POOL, then volumes in pools authorized to the user are displayed. To display any other volumes requires MDMS_SHOW_VOLUME or MDMS_SHOW_ALL.

Restrictions

/ALLOCATED, /NOALLOCATED and /SYMBOLS are mutually exclusive.

The MDMS server will refuse this command if mutually exclusive qualifiers are used in the affirmative forms.

Qualifiers

/ABS_VOLSET
In a wildcard specification, this qualifier displays the ABS volset records, those begining with "&+", in addition to normal volumes records. By default, these pseudo volume records are not displayed. When used with a volume name, range or list, the associated ABS volset records are displayed instead of the normal volume records.

/ALLOCATED
/NOALLOCATED
Displays only volumes that are currently either allocated or not allocated respectively.

/BRIEF
Display volume information in the brief 1-line format. This is the default if no volume_id parameter is specified.

/FULL
Display volume information in the full multi-line format. All attributes and status fields are displayed. This is the default when a volume_id parameter is specified.

/OUTPUT=file_spec
Specifies the output file in which to send the volume information. The default is SYS$OUTPUT.

/SCHEDULE[=keyword]
The /SCHEDULE qualifier selects volumes whose offsite or onsite date has "expired" and the volumes are not in the new location. If both dates have expired, the later of the two dates is used. The optional keyword on the schedule qualifier may be:

OFFSITE

ONSITE

If the OFFSITE keyword is used, then only those volumes schedule to be moved offsite are selected. If the ONSITE keyword is used, then only those volumes scheduled to be moved onsite are selected. If the keyword is omitted, the volumes scheduled to be moved onsite and offsite are selected. Do not specify a volume_id with this qualifier.

/SYMBOLS[=prefix]
Stores selected selection information in process symbols. If prefix is not specified the default prefix is MDMS_INQ. The maximum length of the prefix is 8 characters. This qualifier is supported for wildcard show requests. By default there is no output on the command. If you wish output with the symbols, use the /OUTPUT qualifier. The following symbols are defined on a show of a single volume:

MDMS_INQ_ACCOUNT

MDMS_INQ_ALLOCATED_DATE

MDMS_INQ_AVAILABLE_STATE

MDMS_INQ_BLOCK_FACTOR

MDMS_INQ_BRAND

MDMS_INQ_CLEANED_DATE

MDMS_INQ_CREATION_DATE

MDMS_INQ_DEALLOCATION_DATE

MDMS_INQ_DESCRIPTION

MDMS_INQ_DRIVE

MDMS_INQ_FORMAT

MDMS_INQ_FREED_DATE

MDMS_INQ_INITIALIZED_DATE

MDMS_INQ_IO_ERROR_COUNT

MDMS_INQ_JOB_NAME

MDMS_INQ_JUKEBOX_NAME

MDMS_INQ_LAST_ACCESS_DATE

MDMS_INQ_MAGAZINE_NAME

MDMS_INQ_MEDIA_TYPE

MDMS_INQ_MOUNT_COUNT

MDMS_INQ_NEXT_VOLUME

MDMS_INQ_OFFSITE_DATE

MDMS_INQ_OFFSITE_LOCATION

MDMS_INQ_ONSITE_DATE

MDMS_INQ_ONSITE_LOCATION

MDMS_INQ_OWNER_NAME

MDMS_INQ_OWNER_UIC

MDMS_INQ_PLACEMENT

MDMS_INQ_PLACENAME

MDMS_INQ_POOL_NAME

MDMS_INQ_PREVIOUS_VOLUME

MDMS_INQ_PROTECTION

MDMS_INQ_PURCHASED_DATE

MDMS_INQ_RECORD_LENGTH

MDMS_INQ_SCRATCH_DATE

MDMS_INQ_SLOTS

MDMS_INQ_SPACES

MDMS_INQ_STATE

MDMS_INQ_TIMES_CLEANED

MDMS_INQ_TRANSITION_TIME

MDMS_INQ_USER_NAME

MDMS_INQ_VOLUME_ID

Symbols are not available for access control.

On wildcard show requests the above symbols will be suffixed by _n. A symbol prefix_N stores the number of objects that were selected by a command.

/USER_NAME=username
Selects volumes owned by this user.

/VOLSET
/NOVOLSET(D)
This qualifier specifies that the show applies to all volumes of the volume set. By default, the show command only applies to specified volume(s).

Examples

```
$ MDMS SHOW VOLUME FRM001 /SYMBOLS
```

This command stores selected information in DCL symbols for volume FRM001. No output is displayed by default.

```
$ MDMS SHOW VOLUME /ALLOCATED /USER_NAME=HSM$SERVER /FULL
```

This command displays a full listing of volume information for all volumes allocated to user HSM$SERVER.

```
$ MDMS SHOW VOLUME /NOALLOCATED
```

This command displays a brief listing of volume information for the all volumes that are not allocated (i.e. those that are in the UNINITIALIZED, FREE or TRANSITION states).

```
$ MDMS SHOW VOLUME BDJ*/FULL
```

This command displays a full listing of the volumes matching the wildcard BDJ*.

Start_Session

Equivalent STORAGE Command: None.

Format

MDMS

Parameter

None.

Description

The MDMS starts an MDMS session. The default session is a DCL session, from which you may enter multiple MDMS commands without the MDMS verb. Your prompt is MDMS>. If you enter the /INTERFACE=GUI qualifier, you will instead initiate a GUI session on the system.

Qualifier

/INTERFACE=GUI
This qualifier is required to start the Graphical User Interface on OpenVMS.

Before initiating the MDMS/INTERFACE=GUI command, the following command should be issued:

```
$ SET DISPLAY/CREATE/NODE=monitor_node_name-/TRANSPORT=transport
```

monitor_node_name:

Is the name of the node on which the monitor resides. Depending on the transport you select, you may need to enter the TCP/IP fullname, or the DECnet-Plus fullname, rather than the DECnet Phase IV node name.

transport:

Is one of the following:

- DECnet - if you are using DECnet between the OpenVMS node running the GUI and the node whose monitor you are displaying the GUI.
- TCPIP - if you are using TCP/IP between the OpenVMS node running the GUI and the node whose monitor you are displaying the GUI.
- LOCAL - if the monitor is on the same node as the one running the GUI.

Note that native GUIs are also provided that execute directly on Microsoft Windows systems. To activate these GUIs, do the following:

1. Double-click on the drive in which MDMSView is installed. The default is the C: drive.
2. Double-click on the folder MDMSView to open it.
3. Double-click on the batch file to start the GUI.

After activating the GUI, you may log into any OpenVMS system in the MDMS domain to manipulate MDMS. Both the Windows system and the OpenVMS system must support the TCP/IP protocol for the GUI to access MDMS.

While using the GUI (from any system), you cannot set the SYSPRV privilege to grant all rights from the GUI. As such, the account you are logging into should have SYSPRV defined as an authorized privilege to support the SYSPRV privilege. If this is not desired, then the appropriate MDMS rights need to be defined in the account.

Examples

1. $ MDMS

   MDMS>

   This command initiates an MDMS DCL session.

2. $ SET DISPLAY/NODE=NOD001.XYZ.COM/TRANSPORT=TCPIP
   $ MDMS/INTERFACE=GUI

   This command initiates an MDMS GUI session on the current system (running OpenVMS V7.2-1 or later), on the monitor connected to node NOD001 (which can be running an OpenVMS version supporting X-windows, a UNIX operating system or a Microsoft Windows operating system) running the TCP/IP protocol.

MDMS SYNCHRONIZE RESTORE

The MDMS SYNCHRONIZE RESTORE command waits for the named restore request to complete execution, then returns.

Equivalent ABS Command: ABS SYNCHRONIZE

Format

MDMS SYNCHRONIZE RESTORE restore_name

Parameters

restore_name

Specifies the name of the restore on which to synchronize.

The maximum length of the restore name is 39 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

Description

The MDMS SYNCHRONIZE RESTORE command waits for the named restore request to complete execution, then returns. If the restore is not currently running, the synchronize returns immediately. You can specify /STATUS and /SEVERITY qualifiers, with named symbols, which will return the transaction status and severity of the last execution of the restore request.

Privileges

The request requires MDMS_SHOW_ALL.

Restrictions

This command is restricted to nodes with an ABS license.

Qualifiers

/SEVERITY=symbol_name
The /SEVERITY qualifier allows you to receive the severity condition of the last execution of the restore request. The severity string becomes the value of the named symbol.

/STATUS=symbol_name
The /STATUS qualifier allows you to receive the transaction status of the last execution of the restore request. The transaction status becomes the value of the named symbol.

Example

```
$ MDMS SET RESTORE NIGHTLY_RESTORE/START

$ MDMS SYNCHRONIZE RESTORE NIGHTLY_RESTORE/ -

/STATUS=MY_STATUS/SEVERITY=MY_SEVERITY

$ SHOW SYMBOL MY_STATUS

MY_STATUS = "ABS_SUCCESS : Normal successful completion"

$ SHOW SYMBOL MY_SEVERITY

MY_SEVERITY = "SUCCESS"
```

This example starts a restore request, then waits for it to complete. On completion, the symbols MY_STATUS and MY_SEVERITY contain the transaction status and severity respectively.

MDMS SYNCHRONIZE SAVE

The MDMS SYNCHRONIZE SAVE command waits for the named save request to complete execution, then returns.

Equivalent ABS Command: ABS SYNCHRONIZE

Format

MDMS SYNCHRONIZE SAVE save_name

Parameters

save_name

Specifies the name of the save on which to synchronize.

Description

The MDMS SYNCHRONIZE SAVE command waits for the named save request to complete execution, then returns. If the save is not currently running, the synchronize returns immediately. You can specify /STATUS and /SEVERITY qualifiers, with named symbols, which will return the transaction status and severity of the last execution of the save request.

Privileges

The request requires MDMS_SHOW_ALL.

Restrictions

This command is restricted to nodes with an ABS license.

Qualifiers

/SEVERITY=symbol_name
The /SEVERITY qualifier allows you to receive the severity condition of the last execution of the save request. The severity string becomes the value of the named symbol.

/STATUS=symbol_name
The /STATUS qualifier allows you to receive the transaction status of the last execution of the save request. The transaction status becomes the value of the named symbol.

Example

```
$ MDMS SET SAVE NIGHTLY_SAVE/START

$ MDMS SYNCHRONIZE SAVE NIGHTLY_SAVE/ -

/STATUS=MY_STATUS/SEVERITY=MY_SEVERITY

$ SHOW SYMBOL MY_STATUS

MY_STATUS = "ABS_SUCCESS : Normal successful completion"

$ SHOW SYMBOL MY_SEVERITY

MY_SEVERITY = "SUCCESS"
```

This example starts a save request, then waits for it to complete. On completion, the symbols MY_STATUS and MY_SEVERITY contain the transaction status and severity respectively.

MDMS UNBIND VOLUME

The MDMS UNBIND VOLUME command unbinds a volume from a volume set.

Equivalent STORAGE Command: STORAGE SPLIT

Format:

MDMS UNBIND VOLUME volume_id

Parameters

volume_id

Specifies the volume ID of the volume to unbind.

The maximum length of a volume ID is 6 characters. Valid characters are " ,!,",%-?,A-Z,_".

Description

The MDMS UNBIND VOLUME command unbinds a volume from a volume set. By default, when a volume is unbound from a volume set, all volumes in the volume set are unbound. To cause the volume set to be split into two volume sets, use the /NOVOLSET qualifier. Be aware that unbinding a volume from a volume set could cause data loss if the volume set contains valid data on every volume. Unbound volumes will remain in the ALLOCATED state.

Privileges

The request requires MDMS_UNBIND_ALL or MDMS_UNBIND_OWN.

If the user has only MDMS_UNBIND_OWN, he can unbind only those volumes allocated to him. Unbinding any other volume requires MDMS_UNBIND_ALL.

Restrictions

None

Qualifiers

/USER_NAME=username
The user that owns the volume set. This qualifier is used to unbind a volume from a volume set on behalf of the user. The maximum length of the username is 31 characters.

This qualifier requires the right MDMS_UNBIND_ALL.

/VOLSET (D)
/NOVOLSET
By default, the entire volume set containing the volume will be split into single volumes. Use the /NOVOLSET qualifier to split the volume set into two volume sets, with the second set beginning with the specified volume.

Note that it is not possible to unbind the first volume of a volume set using the /NOVOLSET qualifier.

Examples

```
$ MDMS UNBIND VOLUME VOL002
```

Volume set contains VOL001, VOL002, VOL003, VOL004. This command unbinds all the volumes in the volume set, leaving VOL001, VOL002, VOL003 and VOL004 all as single volumes. The volumes remain allocated.

```
$ MDMS UNBIND VOLUME VOL003 /USER_NAME=SMITH /NOVOLSET
```

Volume set contains VOL001, VOL002, VOL003, VOL004 owned by user SMITH. This command unbinds the volume set starting at VOL003 from the volume set. The remaining volume sets contain volumes VOL001 and VOL002 and the second set contains VOL003 and VOL004.

MDMS UNLOAD DRIVE

The MDMS UNLOAD DRIVE command unloads the volume contained in the specified drive.

Equivalent STORAGE Command: STORAGE UNLOAD DRIVE

Format:

MDMS UNLOAD DRIVE drive_name

Parameters

drive_name

Specifies the name of the drive to unload. Specify a drive name or a logical name. The maximum length of the drive name or logical name is 31 characters.
Valid characters are "$,-,0-9,A-Z,_,a-z".

Description

The MDMS UNLOAD DRIVE command unloads the volume currently contained in the specified drive.

Privileges

The request requires MDMS_UNLOAD_ALL.

MDMS_ASSIST is also required unless /NOASSIST is specified.

Restriction

None

Qualifiers

/ASSIST (D)
/NOASSIST
The default /ASSIST qualifier requests operator assistance to prompt the operator to unload the volume from the drive. If /NOASSIST is specified, the operator is not notified. This qualifier requires the right MDMS_ASSIST.

/REPLY=symbol
The name of the symbol to receive the operator's reply when operator intervention is needed. The symbol will contain the operator reply to the DCL REPLY/TO or DCL REPLY/ABORT commands. The maximum length of a symbol name is 31 characters. This qualifier is only applicable when /ASSIST is specified.

/WAIT (D)
/NOWAIT
The /NOWAIT qualifier returns an informational message indicating that the unload is being queued The /WAIT qualifier causes the MDMS UNLOAD DRIVE command to wait until a drive is unloaded.

Example

```
$ MDMS UNLOAD DRIVE $1$MUA151:
```

This command unloads the volume in drive 1MUA151:. There is no timeout value, and no operator assistance is requested.

MDMS UNLOAD VOLUME

The MDMS UNLOAD VOLUME command unloads the specified volume from a drive.

Equivalent STORAGE Command: STORAGE UNLOAD VOLUME

Format:

MDMS UNLOAD VOLUME volume_id

Parameters

volume_id

Specifies the volume ID of the volume to unload.

The maximum length of the volume ID is 6 characters. Valid characters are " ,!,",%-?,A-Z,_".

If there is a discrepancy between the "Load Volume" and "Volume" fields in a SHOW DRIVE display, try the "Load Volume" field first for unload. If this does not work, try the "Volume" field next.

Finally, try UNLOAD DRIVE.

Description

The MDMS UNLOAD VOLUME command will unload a volume from a drive. If the volume resides in a jukebox, it will be returned to its jukebox slot.

Privileges

The request requires MDMS_UNLOAD_ALL, MDMS_UNLOAD_POOL or MDMS_UNLOAD_OWN.

If the user only has MDMS_UNLOAD_OWN, only those volumes allocated to the user can be unloaded. With MDMS_UNLOAD_POOL, the user can unload a volume in a pool to which he is authorized. To unload any other volume requires MDMS_UNLOAD_ALL.

MDMS_ASSIST is also required unless /NOASSIST is specified.

Restrictions

The volume cannot be unloaded if it is currently mounted.

Qualifiers

/ASSIST (D)
/NOASSIST
The default /ASSIST qualifier requests operator assistance to prompt the operator to unload the volume from the drive. If /NOASSIST is specified, the operator is not notified.

This qualifier requires the right MDMS_ASSIST.

/REPLY=symbol
The name of the symbol to receive the operator's reply when operator intervention is needed. The symbol will contain the operator reply to the DCL REPLY/TO or DCL REPLY/ABORT commands. The maximum length of a symbol name is 31 characters. This qualifier is only applicable when /ASSIST is specified.

/WAIT (D)
/NOWAIT
The /NOWAIT qualifier returns an informational message indicating that the unload is being queued. The /WAIT qualifier causes the MDMS UNLOAD VOLUME command to wait until a volume is unloaded.

Example

```
$ MDMS UNLOAD VOLUME VOL003 /NOWAIT
```

This command unloads volume VOL003 from the drive on which it is loaded and the command does not wait until the unload is complete.

2

ABS - MDMS Command Mappings

This section shows the mappings from the ABS DCL commands to the MDMS DCL commands.

ABS CREATE CATALOG

Table 2–1 ABS CREATE CATALOG

RUN SYS$SYSTEM:ABS$CATALOG_OBJECT	MDMS CREATE CATALOG
Function: CREATE	N/A
Catalog name: NAME	NAME (Parameter)
Catalog type: TYPE	/TYPE=
BRIEF	FILES
FULL_RESTORE	DISKS
ORACLE_DB	ORACLE_DB
SLS	SLS
VOLUME_SET	VOLUME_SETS
Catalog owner: OWNER	/[NO]OWNER_NAME
Use faster staging catalog operation:	/[NO]STAGING
Catalog location: DIRECTORY	/DIRECTORY
N/A	/[NO]ACCESS_CONTROL
N/A	USERNAME
N/A	ALLOW
N/A	/NODE

ABS CREATE ENVIRONMENT

Table 2–2 ABS CREATE ENVIRONMENT

ABS CREATE ENVIRONMENT	MDMS CREATE ENVIRONMENT
NAME (PARAMETER)	NAME (PARAMETER)
/ACCESS_CONTROL	/[NO]ACCESS_CONTROL
USER_ID	USERNAME
ACCESS	ALLOW
/ACTION	/ACTION
/COMPRESSION	/COMPRESSION
/DATA_SAFETY	/[NO]DATA_SAFETY
/DRIVE_COUNT	/DRIVE_COUNT
/[NO]EPILOGUE	/[NO]EPILOGUE
/INTERVAL_FOR_RETRY	/INTERVAL
/[NO]LINKS_ONLY	/[NO]LINKS_ONLY
/LISTING_OPTION	/LISTING_OPTION
/[NO]LOCK_OPTION	/[NO]LOCK
/[NO]NOTIFICATION	/[NO]NOTIFICATION
RECEIVER	MAIL/OPCOM
METHOD	N/A
WHEN	WHEN
TYPE	TYPE
/OWNER	/[NO]OWNER_NAME
/PROFILE	/PROFILE
CLUSTER	CLUSTER
NODE	NODE
PRIVS	PRIVILEGES
RIGHTS_LIST	RIGHTS_LIST
USERNAME	USER
/[NO]PROLOGUE	/[NO]PROLOGUE
/RETRY_COUNT	/RETRY_COUNT
/SPAN_FILESYSTEMS	/SPAN_FILESYSTEMS
N/A	/[NO]ASSIST
N/A	/DESCRIPTION
N/A	/INHERIT

ABS CREATE STORAGE_CLASS

Table 2–3 ABS CREATE STORAGE_CLASS

ABS CREATE STORAGE_CLASS	MDMS CREATE ARCHIVE
NAME (Parameter)	NAME (Parameter)
/ACCESS_CONTROL	/[NO] ACCESS_CONTROL
USER_ID	USERNAME
ACCESS	ALLOW
/ARCHIVE_TYPE	/ARCHIVE_TYPE
/CATALOG	/CATALOG
/CONSOLIDATION	/CONSOLIDATION
INTERVAL	INTERVAL
COUNT	SAVESETS
SIZE	VOLUMES
/[NO]DRIVE_LIST	/[NO] DRIVES
/[NO]EXPIRATION	/[NO] EXPIRATION_DATE
/LOCATION	/DESTINATION
/MAXIMUM_SAVES	/MAXIMUM_SAVES
/[NO]MEDIA_LOCATION	/[NO] LOCATION
/OWNER	/[NO] OWNER_NAME
/RETAIN	/RETENTION_DAYS
/[NO]TAPE_POOL	/[NO] POOL
/[NO]TYPE_OF_MEDIA	/MEDIA_TYPE
/[NO]VOLUME_SET	/[NO] VOLUME_SETS
N/A	/DESCRIPTION
N/A	/INHERIT

ABS DELETE

Table 2–4 ABS DELETE

ABS DELETE Object	MDMS DELETE Object
NAME (PARAMETER)	NAME (PARAMETER)
/CONFIRM	N/A
/OVERRIDE_REFERENCE_COUNT	/OVERRIDE
/VERSION	N/A
N/A	/SCHEDULE (Save/Restore)

ABS DELETE CATALOG

Table 2–5 ABS DELETE CATALOG

RUN SYS$SYSTEM:ABS$CATALOG_OBJECT	MDMS DELETE CATALOG
Function : DELETE	N/A
Catalog name: NAME	NAME (Parameter)
Delete catalog NAME 9YES, [NO]0:	N/A
N/A	/NODE
N/A	/OVERRIDE

ABS LOOKUP

Table 2–6 ABS LOOKUP

ABS LOOKUP	MDMS SHOW CATALOG
DATA_OBJECT (Parameter)	/FILES
/ALL	/ALL
/BRIEF	/BRIEF
/FULL	/FULL
/[NO] OUTPUT	/OUTPUT
/[NO] SUMMARY	N/A
/BEFORE (Positional)	/BEFORE
/CATALOG (Positional)	NAME (Parameter)
/DATE_ARCHIVED (Positional)	N/A
/EXPIRATION (Positional)	N/A
/OBJECT_TYPE (Positional)	/DATA_SELECT_TYPE
/NODE (Positional)	/SOURCE_NODE
/SINCE (Positional)	/SINCE
/STORAGE_CLASS (Positional)	/ARCHIVE
N/A	/NODES
N/A	/SYMBOLS

ABS REPORT SAVE_LOG

Table 2–7 ABS REPORT SAVE_LOG

ABS REPORT SAVE_LOG	MDMS SHOW CATALOG
/BEFORE	/BEFORE
/BRIEF	/BRIEF
/CATALOG	NAME (Parameter)
/DATE_ARCHIVED	N/A
/FULL	/FULL
/INCLUDE	/INCLUDE
/[NO] OUTPUT	/OUTPUT
/REQUEST	/SAVES
/SINCE	/SINCE
/STORAGE_CLASS	/ARCHIVE
/[NO] SUMMARY	N/A
/VOLUME	/VOLUMES
N/A	/NODES
N/A	/SYMBOLS

ABS RESTORE

Table 2–8 ABS RESTORE

ABS RESTORE	MDMS CREATE RESTORE
INCLUDE_SPEC (Parameter)	/[NO] INCLUDE *
/ACCESS_CONTROL	/[NO] ACCESS_CONTROL
USER_ID	USERNAME
ACCESS	ALLOW
/[NO] BEFORE	/[NO] BEFORE_DATE
/CATALOG	/[NO] CATALOG
/DATE_ARCHIVED	/[NO] DATE_ARCHIVED
/DESTINATION	/DESTINATION
/ENVIRONMENT	/ENVIRONMENT
/[NO] EPILOGUE	/[NO] EPILOGUE
/EXECUTION_NODE	/[NO] EXECUTION_NODES
/FULL	N/A
/INCREMENTAL	/[NO] INCREMENTAL
/LATEST_COPY	N/A
/NAME	NAME (Parameter)
/OWNER	/[NO] OWNER_NAME
/[NO] PROLOGUE	/[NO] PROLOGUE
/SELECTIVE	N/A
/SEQUENCE_OPTION	/SEQUENCE_OPTION
/[NO] SINCE	/[NO] SINCE_DATE
/[NO] START_TIME	/[NO] START_DATE
/STORAGE_CLASS	/ARCHIVE
/AGENT_QUALIFIERS (Positional)	N/A (Selection Object)
/CONFLICT_OPTIONS (Positional)	N/A (Selection Object)
/OBJECT_TYPE (Positional)	/DATA_SELECT_TYPE *
/TARGET_NODE (Positional)	/[NO] SOURCE_NODE *
N/A	/[NO] BASE_DATE
N/A	/DELETE_INTERVAL
N/A	/DESCRIPTION
N/A	/[NO] EXCLUDE *
N/A	/[NO] EXPLICIT_INTERVAL
N/A	/FREQUENCY
N/A	/[NO] GROUPS
N/A	/INHERIT
N/A	/KEEP
N/A	/[NO] SELECTIONS
N/A	/[NO] SKIP_TIME

ABS SET SAVE

Table 2–9 ABS SET SAVE

ABS SET SAVE	MDMS SET SAVE
INCLUDE_SPEC (Parameter)	/[NO] INCLUDE *
/ACCESS_CONTROL	/[NO] ACCESS_CONTROL
USER_ID	USERNAME
ACCESS	ALLOW
/ENVIRONMENT	/ENVIRONMENT
/[NO] EPILOGUE	/[NO] EPILOGUE
/EXECUTION_NODE	/[NO] EXECUTION_NODES
/EXPLICIT	/[NO] EXPLICIT_INTERVAL
/FULL	N/A
/INCREMENTAL	/[NO] INCREMENTAL
/NAME	NAME (Parameter)
/OWNER	/[NO] OWNER_NAME
/[NO] PROLOGUE	/[NO] PROLOGUE
/SCHEDULE_OPTION	/FREQUENCY
/SELECTIVE	N/A
/SEQUENCE_OPTION	/SEQUENCE_OPTION
/[NO] START_TIME	/[NO]START_DATE
/STORAGE_CLASS	/ARCHIVE
/AGENT_QUALIFIERS (Positional)	N/A (Selection Object)
/[NO] BEFORE (Positional)	N/A (Selection Object)
/EXCLUDE (Positional)	/[NO]EXCLUDE*
/OBJECT_TYPE (Positional)	/DATA_SELECT_TYPE*
/[NO] SINCE (Positional)	N/A (Selection Object)
/SOURCE_NODE (Positional)	/[NO]SOURCE_NODE*
N/A	/[NO]BASE_DATE
N/A	/DELETE_INTERVAL
N/A	/DESCRIPTION
N/A	/[NO]GROUPS
N/A	/INHERIT
N/A	/KEEP
N/A	/[NO]SELECTIONS
N/A	/[NO]SKIP_TIME

ABS SET CATALOG

Table 2–10 ABS SET CATALOG

RUN SYS$SYSTEM:ABS$CATALOG_OBJECT	MDMS SET CATALOG
Function name: MODIFY	N/A
Catalog name: NAME	NAME (Parameter)
Catalog owner: OWNER	/[NO]OWNER_NAME
Use faster staging catalog operation:	/[NO]STAGING
N/A	/[NO]ACCESS_CONTROL
N/A	USERNAME
N/A	ALLOW
N/A	/NODE

ABS SET ENVIRONMENT

Table 2–11 ABS SET ENVIRONMENT

ABS SET ENVIRONMENT	MDMS SET ENVIRONMENT
NAME (Parameter)	NAME (Parameter)
/ACCESS_CONTROL	/[NO]ACCESS_CONTROL
USER_ID	USERNAME
ACCESS	ALLOW
/ACTION	/ACTION
/COMPRESSION	/COMPRESSION
/[NO]CONFIRM	N/A
/DATA_SAFETY	/[NO]DATA_SAFETY
/DRIVE_COUNT	/DRIVE_COUNT
/[NO]EPILOGUE	/[NO]EPILOGUE
/INTERVAL_FOR_RETRY	/INTERVAL
/[NO]LINKS_ONLY	/[NO]LINKS_ONLY
/LISTING_OPTION	/LISTING_OPTION
/[NO]LOCK_OPTION	/[NO]LOCK
/[NO]NOTIFICATION	/[NO]NOTIFICATION
METHOD	N/A
RECEIVER	MAIL/OPCOM
TYPE	TYPE
WHEN	WHEN
/OWNER	/[NO]OWNER_NAME
/PROFILE	/PROFILE
CLUSTER	CLUSTER
NODE	NODE
PRIVS	PRIVILEGES
RIGHTS_LIST	RIGHTS_LIST
USERNAME	USER
/[NO]PROLOGUE	/[NO]PROLOGUE
/REMOVE(access_control)	/REMOVE
/RETRY_COUNT	/RETRY_COUNT
/SPAN_FILESYSTEMS	/SPAN_FILESYSTEMS
N/A	/ADD
N/A	/[NO]ASSIST
N/A	/DESCRIPTION
N/A	/REPLACE

ABS SET RESTORE

Table 2–12 ABS SET RESTORE

ABS SET RESTORE	MDMS SET RESTORE
NAME (Parameter)	NAME (Parameter)
INCLUDE_SPEC (Parameter)	/[NO]INCLUDE*
/ACCESS_CONTROL	/[NO]ACCESS_CONTROL
USER_ID	USERNAME
ACCESS	ALLOW
/[NO]BEFORE	/[NO]BEFORE_DATE
/CATALOG	/[NO]CATALOG
/[NO] CONFIRM	N/A
/DATE_ARCHIVED	/[NO]DATE_ARCHIVED
/DESTINATION	/DESTINATION
/ENVIRONMENT	/ENVIRONMENT
/[NO]EPILOGUE	/[NO]EPILOGUE
/EXECUTION_NODE	/[NO]EXECUTION_NODES
/FULL	N/A
/INCREMENTAL	/[NO]INCREMENTAL
/LATEST_COPY	N/A
/OWNER	/[NO]OWNER_NAME
/[NO] PROLOGUE	/[NO]PROLOGUE
/SELECTIVE	N/A
/SEQUENCE_OPTION	/SEQUENCE_OPTION
/[NO] SINCE	/[NO]SINCE_DATE
/[NO]START_TIME	/[NO]START_DATE
/STORAGE_CLASS	/ARCHIVE
/ADD (include_spec)	/ADD
/AGENT_QUALIFIERS (Positional)	N/A (Selection Object)
/CONFLICT_OPTIONS (Positional)	N/A (Selection Object)
/OBJEC/REMOVE (access_control & include_spec)T_TYPE (Positional)	/DATA_SELECT_TYPE* /REMOVE
/TARGET_NODE (Positional)	/[NO]SOURCE_NODE*
N/A	/[NO]BASE_DATE
N/A	/DELETE_INTERVAL
N/A	/DESCRIPTION
N/A	/[NO]EXCLUDE*
N/A	/[NO]EXPLICIT_INTERVAL
N/A	/FREQUENCY
N/A	/[NO]GROUPS
N/A	/KEEP
N/A	/REPLACE
N/A	/[NO]SELECTIONS
N/A	/[NO]SKIP_TIME

* Information is stored in the default selection

ABS SAVE

Table 2–13 ABS SAVE

ABS SAVE	MDMS CREATE SAVE
NAME (Parameter)	NAME (Parameter)
INCLUDE_SPEC (Parameter)	/[NO]INCLUDE*
/ACCESS_CONTROL	/[NO]ACCESS_CONTROL
USER_ID	USERNAME
ACCESS	ALLOW
/[NO] CONFIRM	N/A
/ENVIRONMENT	/ENVIRONMENT
/[NO] EPILOGUE	/[NO]EPILOGUE
/EXECUTION_NODE	/[NO]EXECUTION_NODES
/EXPLICIT	/[NO]EXPLICIT_INTERVAL
/FULL	N/A
/INCREMENTAL	/[NO]INCREMENTAL
/OWNER	/[NO]OWNER_NAME
/[NO]PROLOGUE	/[NO]PROLOGUE
/SCHEDULE_OPTION	/FREQUENCY
/SELECTIVE	N/A
/SEQUENCE_OPTION	/SEQUENCE_OPTION
/[NO]START_TIME	/[NO]START_DATE
/STORAGE_CLASS	/ARCHIVE
/ADD (include_spec)	/ADD
/AGENT_QUALIFIERS (Positional)	N/A (Selection Object)
/[NO]BEFORE (Positional)	N/A (Selection Object)
/EXCLUDE (Positional)	/[NO]EXCLUDE*
/OBJECT_TYPE (Positional)	/DATA_SELECT_TYPE*
/REMOVE (access_control & include_spec)	/REMOVE
/[NO]SINCE (Positional)	N/A (Selection Object)
/SOURCE_NODE (Positional)	/[NO]SOURCE_NODE*
N/A	/[NO]BASE_DATE
N/A	/DELETE_INTERVAL
N/A	/DESCRIPTION
N/A	/[NO]GROUPS
N/A	/KEEP
N/A	/REPLACE
N/A	/[NO]SELECTIONS
N/A	/[NO]SKIP_TIME

* Information is stored in the default selection

ABS SET STORAGE_CLASS

Table 2–14 ABS SET STORAGE_CLASS

ABS SET STORAGE_CLASS	MDMS SET ARCHIVE
NAME (Parameter)	NAME (Parameter)
/ACCESS_CONTROL	/[NO]ACCESS_CONTROL
USER_ID	USERNAME
ACCESS	ALLOW
/ARCHIVE_TYPE	/ARCHIVE_TYPE
/CATALOG	/CATALOG
/[NO] CONFIRM	N/A
/CONSOLIDATION	/CONSOLIDATION
INTERVAL	INTERVAL
COUNT	SAVESETS
SIZE	VOLUMES
/[NO]DRIVE_LIST	/[NO]DRIVES
/[NO]EXPIRATION	/[NO]EXPIRATION_DATE
/LOCATION	/DESTINATION
/MAXIMUM_SAVES	/MAXIMUM_SAVES
/[NO]MEDIA_LOCATION	/[NO]LOCATION
/OWNER	/[NO]OWNER_NAME
/REMOVE(access_control)	/REMOVE
/RETAIN	/RETENTION_DAYS
/[NO]TAPE_POOL	/[NO]POOL
/[NO]TYPE_OF_MEDIA	/MEDIA_TYPE
/[NO]VOLUME_SET	/[NO]VOLUME_SETS
N/A	/ADD
N/A	/DESCRIPTION
N/A	/REPLACE

ABS SHOW CATALOG

Table 2–15 ABS SHOW CATALOG

RUN SYS$SYSTEM:ABS$CATALOG_OBJECT	MDMS SHOW CATALOG
Function name: SHOW	N/A
Catalog name: NAME	NAME (Parameter)
N/A	/BRIEF
N/A	/FULL
N/A	/NODE
N/A	/OUTPUT
N/A	/SYMBOLS

ABS SHOW ENVIRONMENT

Table 2–16 ABS SHOW ENVIRONMENT

ABS SHOW ENVIRONMENT	MDMS SHOW ENVIRONMENT
NAME (Parameter)	NAME (Parameter)
/BRIEF	/BRIEF
/FULL	/FULL
/OUTPUT	/OUTPUT
/VERSION	N/A
N/A	/SYMBOLS

ABS SHOW REQUEST_STATUS

Table 2–17 ABS SHOW REQUEST_STATUS

ABS SHOW REQUEST_STATUS	MDMS SHOW REQUEST
REQUEST_NAME (Parameter)	REQUEST_ID (Parameter)

ABS SHOW RESTORE

Table 2–18 ABS SHOW RESTORE

ABS SHOW RESTORE	MDMS SHOW RESTORE
NAME (Parameter)	NAME (Parameter)
/BRIEF	BRIEF
/FULL	/FULL
/OUTPUT	/OUTPUT
/PROFILE	/PROFILE
/SYMBOLS	/SYMBOLS
/VERSION	N/A
N/A	/SELECTIONS

ABS SHOW SAVE

Table 2–19 ABS SHOW SAVE

ABS SHOW SAVE	MDMS SHOW SAVE
NAME (Parameter)	NAME (Parameter)
/BRIEF	BRIEF
/FULL	/FULL
/OUTPUT	/OUTPUT
/PROFILE	/PROFILE
/SYMBOLS	/SYMBOLS
/VERSION	N/A
N/A	/SELECTIONS

ABS SHOW STORAGE_CLASS

Table 2–20 ABS SHOW STORAGE_CLASS

ABS SHOW STORAGE_CLASS	MDMS SHOW ARCHIVE
NAME (Parameter)	NAME (Parameter)
/BRIEF	BRIEF
/FULL	/FULL
/OUTPUT	/OUTPUT
/VERSION	/N/A
N/A	/SYMBOLS

ABS SYNCHRONIZE

Table 2–21 ABS SYNCHRONIZE

ABS SHOW SYNCHRONIZE	MDMS SYNCHRONIZE RESTORE MDMS SYNCHRONIZE SAVE
NAME (Parameter)	NAME (Parameter)
/SEVERITY	/SEVERITY
/STATUS	/STATUS

3

MDMS Rights and Privileges

This appendix has explanation for MDMS user rights and privileges. Every MDMS user/potential user will be assigned zero or more rights in their SYSUAF file. These rights will be examined on a per-command basis to determine whether a user has sufficient privilege to issue a command. The command is accepted for processing only if the user has sufficient privilege. In case the user has no rights the **entire command** is rejected. Each right has a name in the following format:

```
MDMS_rightname.
```

Rights are looked-up on the ***client OpenVMS node*** that receives the request, as such each user must have an account on the *client node*.

- in the case of DCL commands and applications, this would be the node at which the request is issued.
- from the GUI, it is the node whose MDMS$SERVER process receives the request. The rights are translated into a bitmap and passed to the database server for validation.

3.1 MDMS Rights - Types

MDMS has the following rights:

- High-level rights
- Low level rights
- ABS rights

3.1.1 High Level Rights

These rights are designed for a specific kind of user, to support a typical MDMS installation, and make the assignments of rights to users easy. The **three** high-level MDMS rights, the default right, administrator right and the additional right are described in :

High Level Rights

High level right	Allows Privileges for...
MDMS_USER	A non-privileged MDMS user who wants to use MDMS to manage tape volumes for BACKUP, ABS or HSM purposes
MDMS_APPLICATION	Main applications that MDMS supports - ABS and HSM server processes
MDMS_OPERATOR	The user responsible for day-to-day operations in the MDMS environment

High level right	Allows Privileges for...
Default Right A *hidden* high-level right	The low level rights contained in it, for users with no MDMS rights. They are additional to any specific rights a user may have been granted. It is the ***default right***. By default, there are no low-level rights assigned to the *default* right. If rights are assigned to the default right, they apply to all users in the system, since every user is effectively granted the default right. The default right can be disabled with the MDMS_NO_DEFAULT identifier in a user's UAF file.
MDMS_ALL_RIGHTS Administrator Right	A system administrator to perform any operation. MDMS_ALL_RIGHTS can be enabled with the OpenVMS SYSPRV privilege.
Additional Right	All operations.

High Level Rights

You can disable the mapping of SYSPRV to MDMS_ALL_RIGHTS using a SET DOMAIN command

3.1.2 Low-level rights

Each command or command option will be tagged with one or more low-level rights that are needed to perform the operation. Where more than one right is specified, the command indicates the appropriate combination of rights needed. The MDMS administrator can assign a set of *low-level rights* to each high-level right. The administrator can then simply assign the high-level right to the user.
MDMS translates the high-level right to respective low-level rights while processing a command. For additional flexibility, the user can be assigned a combination of high-level and low-level rights. The result will be a sum of all rights defined.
The default set of mapping of high-level to low-level rights will be assigned at installation (by default) and stored in the domain record. However, the MDMS administrator can change these assignments by using the SET DOMAIN command.

Note

By default a user has no rights and cannot use MDMS. The system administrator can change the 'rightless' user's rights using a SET DOMAIN command. These rights can again be disabled on a per-user basis as needed.

The low-level rights are designed to be applied to operations. A given command, with a given set of qualifiers or options, requires the sum of the rights needed for the command **and all supplied options.** In many cases some options require more privilege than the command, and that higher privilege will be applied to the entire command if those options are specified.
The following are usable low level rights:

Table 3–1 Low Level Rights

Low Level Right Name	Allows Privilege to:
MDMS_ALL_RIGHTS	Enable all operations (This right is for the system administrator,)
MDMS_ALLOCATE_ALL	Allocate volumes or drives for any user

MDMS_ALLOCATE_OWN	Allocate a drive and become “owner”
MDMS_ALLOCATE_POOL	Allocate a volume from an authorized pool
MDMS_ASSIST	Request operator assistance on calls
MDMS_BIND_ALL	Bind any volumes together in a volume set
MDMS_BIND_OWN	Bind owned volumes together in a volume set
MDMS_CANCEL_ALL	Cancel any request
MDMS_CANCEL_OWN	Cancel one’s own requests
MDMS_CANCEL_POOL	Cancel a request of a member of the same pool
MDMS_CREATE_ALL	Create any database object
MDMS_CREATE_POOL	Create volumes in a pool authorized to user
MDMS_DEALLOCATE_ALL	Deallocate volumes for any user
MDMS_DEALLOCATE_OWN	Deallocate an owned volume or drive
MDMS_DELETE_ALL	Delete any database object
MDMS_DELETE_POOL	Delete volumes in pool authorized to user
MDMS_INITIALIZE_ALL	Initialize any volume
MDMS_INITIALIZE_POOL	Initialize a volume in pool authorized to user
MDMS_INVENTORY_ALL	Perform inventory on any jukebox
MDMS_LOAD_ALL	Load any volumes including scratch volumes
MDMS_LOAD_OWN	Load owned volumes into drives
MDMS_LOAD_POOL	Load volumes in pool authorized to user
MDMS_LOAD_SCRATCH	Load scratch volumes
MDMS_MOVE_ALL	Move any volume
MDMS_MOVE_OWN	Move owned volumes
MDMS_MOVE_POOL	Move volumes in pool authorized to user
MDMS_SET_ALL	SET (modify) any database object
MDMS_SET_PROTECTED	SET internal MDMS attributes in an object
MDMS_SET_OWN	SET (modify) volumes allocated to user
MDMS_SET_POOL	SET (modify) volumes in pool authorized to user
MDMS_SET_RIGHTS	SET (modify) rights in the domain
MDMS_SHOW_ALL	SHOW or REPORT any database object
MDMS_SHOW_OWN	SHOW or REPORT volumes allocated to user
MDMS_SHOW_POOL	SHOW or REPORT volumes in pool authorized to user
MDMS_SHOW_RIGHTS	Show rights with a SHOW DOMAIN/FULL
MDMS_UNBIND_ALL	Unbind any volumes

MDMS_UNBIND_OWN	Unbind owned objects from a volume set
MDMS_UNLOAD_ALL	Unload any volumes or drives
MDMS_UNLOAD_OWN	Unload volumes allocated to user from a drive
MDMS_UNLOAD_POOL	Unload volumes in pool authorized to user

3.1.3 ABS Rights

MDMS can be defined to recognize ABS rights and map them to MDMS rights. This capability is disabled by default and can be enabled with a SET DOMAIN command. The exact mapping for ABS rights is as in :

Table 3–2 ABS Rights

ABS RIGHTS	MDMS RIGHTS
ABS_BACKUP_JOB	MDMS_USER
ABS_BYPASS	MDMS_ALL_RIGHTS
ABS_CREATE_EXECUTION_ENV	MDMS_CREATE_ALL MDMS_SET_ALL MDMS_SHOW_ALL
ABS_CREATE_REMOTE_JOB	None
ABS_CREATE_STORAGE_CLASS	MDMS_CREATE_ALL MDMS_SET_ALL MDMS_SHOW_ALL
ABS_LOOKUP_ALL	None
ABS_SHOW_ALL	MDMS_SHOW_ALL

3.2 Default High-Level to Low-Level Mapping

This section defines the default high to low-level mapping for each high-level right.

3.2.1 MDMS_USER Rights:

Table 3–3 MDMS_USER Rights

MDMS User...	Allows privilege to...
MDMS_ALLOCATE_OWN	Allocate a drive and become “owner”
MDMS_ALLOCATE_POOL	Allocate a volume from a pool authorized to user
MDMS_ASSIST	Request operator assistance on calls
MDMS_BIND_OWN	Bind owned volumes together in a volume set
MDMS_CANCEL_OWN	Cancel one’s own requests
MDMS_DEALLOCATE_OWN	Deallocate an owned volume or drive
MDMS_LOAD_OWN	Load owned volumes into drives
MDMS_SHOW_OWN	SHOW or REPORT volumes allocated to user
MDMS_SHOW_POOL	SHOW or REPORT volumes in pool authorized to user
MDMS_UNBIND_OWN	Unbind owned objects from a volume set
MDMS_UNLOAD_OWN	Unload volumes allocated to user from a drive

3.2.2 MDMS_OPERATOR Rights:

Table 3–4 MDMS_OPERATOR Rights

MDMS Operator...	Allows privilege to...
MDMS_ALLOCATE_ALL	Allocate volumes or drives for any user
MDMS_ASSIST	Request operator assistance on calls
MDMS_BIND_ALL	Bind any volumes together in a volume set
MDMS_CANCEL_ALL	Cancel any request
MDMS_CREATE_POOL	Create volumes in a pool authorized to user
MDMS_DEALLOCATE_ALL	Deallocate volumes for any user
MDMS_DELETE_POOL	Delete volumes in pool authorized to user
MDMS_INITIALIZE_ALL	Initialize any volume
MDMS_INVENTORY_ALL	Perform inventory on any jukebox
MDMS_LOAD_ALL	Load any volumes including scratch volumes

MDMS Operator...	Allows privilege to...
MDMS_MOVE_ALL	Move any volume
MDMS_SET_OWN	SET (modify) volumes allocated to user
MDMS_SET_POOL	SET (modify) volumes in pool authorized to user
MDMS_SHOW_ALL	SHOW or REPORT any database object
MDMS_SHOW_RIGHTS	Show rights with SHOW DOMAIN/FULL
MDMS_UNBIND_ALL	Unbind any volumes
MDMS_UNLOAD_ALL	Unload any volumes or drives

3.2.2.1 Domain Commands for Mapping Privileges

SET DOMAIN

/NO]ABS_RIGHTS
/ADD
/[NO]APPLICATION_RIGHTS[=(right[,…])]

/[NO]DEFAULT_RIGHTS[=(right[,…])]
/[NO]OPERATOR_RIGHTS[=(right[,…])]
/REMOVE
/[NO]SYSPRV
/[NO]USER_RIGHTS[=(right[,…])]

Example 3–1

```
SET DOMAIN /OPERATOR_RIGHTS=MDMS_SET_PROTECTED /ADD
```

This command adds the MDMS_SET_PROTECTED right to the operator rights list.

4

MDMS Logical Names

Logical Name	Definition and Description
MDMS$DATABASE_LOCATION MDMS$DB	These logical names point to the location of the MDMS database files.
MDMS$DATABASE_SERVERS	This logical name is a comma separated list of full node names of potential database servers. When a server starts up, it uses this logical to see if it may be a database server. If the server finds its node name in the list, it tries to become the database server. If the server does not find itself in the list, it then knows that it is not a database server but it then tries to communicate with the node in the list to find the database server. The name of the node defines how the two server communicate with each other. This list of names must be DECnet, DECnet-Plus, or TCP/IP node names. They can be a mix of different protocols or the same. For example the node list could look like this: NODE1,NODE2.SITE.INC.COM, - INC:.SITE.NODE3 The above example shows that to communicate with: • NODE1 - use DECnet • NODE2 - use DECnet-Plus • NODE3 - use TCP/IP Following are examples of valid TCPIP and DECnet names. Valid DECnet node names: DEC:.CXO.FARMS[::] - Phase V NABSCO[::] - Phase IV **Note:** The DECnet node name is terminated at the "::" if present. Valid TCP/IP node names: nabsco-12.cxo.dec.com nabsco-12[.cxo.dec.com]: nabsco-12[.cxo.dec.com]:2501 nabsco-12[.cxo.dec.com]:2501-2510
MDMS$LOGFILE_LOCATION MDMS$LOG	These logical names point to the location of the MDMS log files.
MDMS$LOGFILTER	Bitmask that defines the level of logging to be performed by the MDMS$SERVER process. If not defined, the default value is 15, which turns on completion audit logging of requests that change the database, and event and serious error logging. See MDMS$SYSTARTUP.COM for bitmask definitions.

MDMS Logical Names

Logical Name	Definition and Description
MDMS$MAILBOX	This logical name is the name of the mailbox used by the MDMS$SERVER process.
MDMS$ROOT	This logical name points to the device and directory of the root for the MDMS files.
MDMS$SBT_TRACE_LEVEL	This logical name is used by the System Backup to Tape module. It controls what is written to the Oracle trace file for SBT.
MDMS$STARTUP_QUEUE	This logical name should point to the name of the batch queue to be used for MDMS$STARTUP.COM.
MDMS$SUPPORT_PRE_V3	This logical name enables or disables support of SLS/MDMS V2.9x remote servers. When this logical is TRUE, an SLS/MDMS V2.9x client can communicate with an MDMS V3.0 server. If you do not have any SLS/MDMS V2.9x clients, define this logical as FALSE.
MDMS$SYSTEM	This logical name points to the location of MDMS utilities.
MDMS$TCPIP_SND_PORTS	This logical name is the range of port numbers for outgoing TCP/IP connections. The defaults are ports 601 to1023.
MDMS$VERSION3	This logical name is TRUE when ABS and HSM should use MDMS V3.0 or later. If ABS or HSM is not supposed to use MDMS V3.0 or later this logical will not be defined. The MDMS server should not be running if ABS and HSM is not supposed to use MDMS V3 or later.

5

ABS Logical Names

The following logical names are entered into the system logical name table when ABS installation procedure is complete. These names are stored in the startup file, SYS$STARTUP:ABS$STARTUP.COM. They are automatically entered into the system logical name table whenever the system reboots or whenever the software is invoked. The following table describes the logical names.

Logical Name[a]	Description
ABS$CATALOG	This logical name points to the directory containing. ABS catalogs.
ABS_CATALOG_CLEANUP	Defined when the catalog cleanup utility is executed.
ABS$CLIENT_DB	Stores the license information for UNIX and NT clients.
ABS$DATABASE	This logical name points to the Rdb/VMS database used by ABS to store policy objects. This logical is not used with V4.0, but is used during the database conversion.
ABS$LISTINGS	This logical name points to the directory where listing files produced by ABS will reside when requested by the customer.
ABS$LOG	This logical name points to the directory where all log files for save and restore operations are placed.
ABS$MONITOR_UPDATE_INTERVAL	This logical name is used by $ABS SHOW REQUEST_STATUS command. This logical specifies the number of seconds between updates.
ABS$ROOT	This logical name defines the top of the directory tree used by ABS to store its files.
ABS$SLS_CONVERSION	This logical points to the directory and files needed to convert from SLS to ABS.
ABS_SUBPROC_BASE_PRIORITY	This logical is used to change the priority of the subprocess in which the backup excecutes.
ABS$SYSTEM	This logical name points to the directory where all ABS system files and images reside.
ABS$TEMPLATES	This logical name points to the directory where the templates used to control backup agents are stored. Recommendation: It is not recommended that you modify these templates. The behavior of ABS in regard to its backup agents is defined by these templates.

Logical Name[a]	Description
ABS$USSSHR	This logical points to the appropriate ABS$USSSHR image for the current version of the Operating System.

a. For portability purposes, each logical name also has a corresponding “underscore” version of the logical name. For example, ABS$CATALOG also translates as ABS_CATALOG.

6

MDMS Messages

ABORT
request aborted by operator

Explanation:

The request issued an OPCOM message that has been aborted by an operator. This message can also occur if no terminals are enabled for the relevant OPCOM classes on the node.

User Action: Either nothing or enable an OPCOM terminal, contact the operator and retry.

ACCCTRLONLY
updated access control only

Explanation:

You entered a SET command and you only had CONTROL access to the object, so only the access control information (if any) was updated.

User Action: If this is what was intended no action is needed. If you wish to update other fields in the object, you require SET access control. See your administrator.

ACCVIO
access violation

Explanation:

The MDMS software caused an access violation. This is an internal error.

User Action:

Provide copies of the MDMS command issued, the database files and the server's logfile for further analysis.

ALLOCDRIVE
drive !AD allocated

Explanation:

The named drive was successfully allocated.

User Action:

None.

ALLOCDRIVEDEV
drive !AD allocated as device !AD

Explanation:

The named drive was successfully allocated, and the drive may be accessed with DCL commands using the device name shown.

User Action:

None.

ALLOCVOLUME
volume !AD allocated

Explanation:

The named volume was successfully allocated.

User Action:

None.

ALTSUCCESS
alternative success

Explanation:

The request was successful, but extended status contains information.

User Action:

Examine the extended status, and retry command as needed.

APIBUGCHECK
internal inconsistency in API

Explanation:

The MDMS API (MDMS$SHR.EXE) detected an inconsistency. This is an internal error.

User Action:

Provide copies of the MDMS command issued, the database files and the server's logfile for further analysis.

APIUNEXP
unexpected error in API !AZ line !UL

Explanation:

The shareable image MDMS$SHR detected an internal inconsistency.

User Action:

Provide copies of the MDMS command issued, the database files and the server's logfile for further analysis.

ARCUNDEFINED
referenced archive(s) !AZ undefined

Explanation:

When creating or modifying a valid object, the object's record contains a reference to a archive name that does not exist. One or more of the specified archives may be undefined.

User Action:

Check spelling of the archive names and retry, or create the archive objects in the database.

ATTRINMAG
onsite/offsite attributes invalid for magazine-based volumes

Explanation:

You attempted to specify offsite or onsite dates or locations for a volume whose placement is in a magazine. These attributes are controlled by the magazine and are not valid for individual volumes.

User Action:

Specify the dates and locations in the magazine object, or do not use magazines for volumes if you want the individual offsite/onsite dates to be different for each volume.

BINDVOLUME
volume !AD bound to set !AD

Explanation:

The specified volume (or volume set) was successfully bound to the end of the named volume set.

User Action:

None.

BUGCHECK
internal inconsistency

Explanation:

The server software detected an inconsistency. This is an internal error.

User Action:

Provide copies of the MDMS command issued, the database files and the server's logfile for further analysis. Restart the server.

CANCELLED
request cancelled by user

Explanation:

The request was cancelled by a user issuing a cancel request command.

User Action:

None, or retry command.

CLEANVOL
cleaning volume loaded

Explanation:

During a load of a volume, a cleaning volume was loaded.

User Action:

During an inventory this message can be ignored. During a load of a requested volume or a scratch load on a drive, or an initialize command, a cleaning volumes was loaded. Check location of the cleaning volume, update database as needed, and re-issue command using a non-cleaning volume.

CONFLITEMS
conflicting item codes specified

Explanation:

The command cannot be completed because there are conflicting item codes in the command. This is an internal error.

User Action:

Provide copies of the MDMS command issued, the database files and the server's logfile for further analysis.

CREATVOLUME
volume !AD created

Explanation:

The named volume was successfully created.

User Action:

None.

DBLOCACC
local access to database

Explanation:

This node has the database files open locally.

User Action:

None.

DBRECERR
error !AZ !AZ record for !AZ:

Explanation:

The search for a database server received an error from a remote server.

User Action:

Check the logfile on the remote server for more information. Check the logical name MDMS$DATABASE_SERVERS for correct entries of database server node.

DBREMACC
access to remote database server on node !AZ

Explanation:

This node has access to a remote database server.

User Action:

None.

DBREP
Database server on node !AZ reports:

Explanation:

The remote database server has reported an error condition. The next line contains additional information.

User Action:

Depends on the additional information.

DCLARGLSOVR
DCL extended status format, argument list overflow

Explanation:

During formating of the extended status, the number of arguments exceeded the allowable limit. This is an internal error.

User Action:

Provide copies of the MDMS command issued, the database files and the server's logfile for further analysis.

DCLBUGCHECK
internal inconsistency in DCL

Explanation:

The MDMS comand line software (MDMS$DCL.EXE) detected an inconsistency. This is an internal error.

User Action:

Provide copies of the MDMS command issued, the database files and the server's logfile for further analysis.

DCSCERROR
error accessing jukebox with DCSC

Explanation:

MDMS encountered an error when performing a jukebox operation. An accompanying message gives more detail.

User Action:

Examine the accompanying message and perform corrective actions to the hardware, the volume or the database, and optionally retry the operation.

DCSCMSG
!AZ
Explanation:

This is a more detailed DCSC error message which accompanies DCSCERROR.

User Action:

Check the DCSC error message file.

DECNETLISEXIT
DECnet listener exited

Explanation:

The DECnet listener has exited due to an internal error condition or because the user has disabled the DECNET transport for this node. The DECnet listener is the server's routine to receive requests via DECnet (Phase IV and Phase V).

User Action:

The DECnet listener should be automatically restarted unless the DECNET transport has been disabled for this node. Provide copies of the MDMS command issued, the database files and the server's logfile for further analysis if the transport has not been disabled by the user.

DECNETLISRUN
listening on DECnet node !AZ object !AZ

Explanation:

The server has successfully started a DECnet listener. Requests can now be sent to the server via DECnet.

User Action:

None.

DEVNAMICM
device name item code missing

Explanation:

During the allocation of a drive, the drive name was not returned by the server. This is an internal error.

User Action:

Provide copies of the MDMS command issued, the database files and the server's logfile for further analysis.

DRIVEEXISTS
specified drive already exists

Explanation:

The specified drive already exists and cannot be be created.

User Action:

Use a set command to modify the drive, or create a new drive with a different name.

DRVACCERR
error accessing drive

Explanation:

MDMS could not access the drive.

User Action:

Verify the VMS device name, node names and/or group names specified in the drive record. Fix if necessary. Verify MDMS is running on a remote node. Check status of the drive, correct and retry.

DRVALRALLOC
drive is already allocated

Explanation:

An attempt was made to allocate a drive that was already allocated.

User Action:

Wait for the drive to become deallocated, or if the drive is allocated to you, use it.

DRVEMPTY
drive is empty or volume in drive is unloaded

Explanation: The specified drive is empty, or the volume in the drive is unloaded, spun-down and inaccessible.

User Action:

Check status of drive, correct and retry.

DRVINITERR
error initializing drive on platform

Explanation:

MDMS could not initialize a volume in a drive.

User Action:

There was a system error initializing the volume. Check the log file.

DRVINUSE
drive is currently in use

Explanation:

The specified drive is already in use.

User Action:

Wait for the drive to free up and re-enter command, or try to use another drive.

DRVLOADED
drive is already loaded

Explanation:

A drive unload appeared to succeed, but the specified volume was still detected in the drive.

User Action:

Check the drive and check for duplicate volume labels, or if the volume was reloaded.

DRVLOADING
drive is currently being loaded or unloaded

Explanation:

The operation cannot be performed because the drive is being loaded or unloaded.

User Action:

Wait for the drive to become available, or use another drive. If the drive is stuck in the loading or unloading state, check for an outstanding request on the drive and cancel it. If all else fails, manually adjust the drive state.

DRVNOTALLOC
drive is not allocated

Explanation:

The specified drive could not be allocated.

User Action:

Check again if the drive is allocated. If it is, wait until it is deallocated. Otherwise there was some other reason the drive could not be allocated. Check the log file.

DRVNOTALLUSER
drive is not allocated to user

Explanation:

You cannot perform the operation on the drive because the drive is not allocated to you.

User Action:

Either defer the operation or (in some cases) you may be able to perform the operation specifying a user name.

DRVNOTAVAIL
drive is not available on system

Explanation:

The specified drive was found on the system, but is not available for use.

User Action:

Check the status of the drive and correct.

DRVNOTDEALLOC
drive was not deallocated

Explanation:

MDMS could not deallocate a drive.

User Action:

Either the drive was not allocated or there was a system error deallocating the drive. Check the log file.

DRVNOTFOUND
drive not found on system

Explanation:

The specified drive cannot be found on the system.

User Action:

Check that the OpenVMS device name, node names and/or group names are correct for the drive. Verify MDMS is running on a remote node. Re-enter command when corrected.

DRVNOTSPEC
drive not specified or allocated to volume

Explanation:

When loading a volume a drive was not specified, and no drive has been allocated to the volume.

User Action:

Retry the operation and specify a drive name.

DRVREMOTE
drive is remote

Explanation:

The specified drive is remote on a node where it is defined to be local.

User Action:

Check that the OpenVMS device name, node names and/or group names are correct for the drive. Verify MDMS is running on a remote node. Re-enter command when corrected.

DRVSINUSE
all drives are currently in use

Explanation:

All of the drives matching the selection criteria are currently in use.

User Action:

Wait for a drive to free up and re-enter command.

DRVUNDEFINED
referenced drive !AZ undefined

Explanation:

When creating or modifying a valid object, the object's record contains a reference to a drive name that does not exist.

User Action:

Check spelling of the drive name and retry, or create the drive object in the database.

ENVUNDEFINED
referenced environment(s) !AZ undefined

Explanation:

When creating or modifying a valid object, the object's record contains a reference to a environment name that does not exist. One or more of the specified environments may be undefined.

User Action:

Check spelling of the environment names and retry, or create the environment objects in the database.

ERROR
error

Explanation:

A general internal MDMS error occurred.

User Action:

Provide copies of the MDMS command issued, the database files and the server's logfile for further analysis.

EXECOMFAIL
execute command failed, see log file for more explanation

Explanation:

While trying to execute a command during scheduled activities, a system service called failed.

User Action:

Check the log file for the failure code from the system server call.

EXIT
MDMS server exiting with fatal error, restarting

Explanation:

The MDMS server has encountered a fatal error and is exiting. The server will be restarted.

User Action:

Report incident to hp.

EXSCHED
internal schedules are inoperable; external scheduler in use

Explanation:

You have created or modified an MDMS schedule object. This is allowed, but since the domain scheduler type is set up to an external scheduler product, this schedule object will never be executed.

User Action:

If you are not planning ot change the scheduler type to INTERNAL or EXTERNAL, you should modify the associated save or restore request to use a standard frequency or an explicit frequency.

EXTRAVOL
extra volume(s) processed

Explanation:

One or more volumes unknown to MDMS have been processed by this command.

User Action:

See next message line(s) for more details. Use MDMS or jukebox utility programs (MRU or CARTRIDGE) to correct the problem.

FAILALLOCDRV
failed to allocate drive

Explanation:

Failed to allocate drive.

User Action:

The previous message is the error that caused the failure.

FAILCONSVR
failed connection to server

Explanation:

The connection to an MDMS server either failed or could not be established. See additional message lines and/or check the server's logfile.

User Action:

Depends on additional information.

FAILCONSVRD
failed connection to server via DECnet

Explanation:

The DECnet connection to an MDMS server either failed or could not be established. See additional message lines and/or check the server's logfile.

User Action:

Depends on additional information.

FAILCONSVRT
failed connection to server via TCP/IP

Explanation:

The TCP/IP connection to an MDMS server either failed or could not be established. See additional message lines and/or check the server's logfile.

User Action:

Depends on additional information.

FAILCREATE
failed to create !AZ

Explanation:

The reported file or object could not be created. The next line contains additional information.

User Action:

Depends on the additional information.

FAILDEALLOCDRV
failed to deallocate drive

Explanation:

Failed to deallocate drive.

User Action:

The previous message is the error that caused the failure.

FAILDELETE
failed to delete !AZ

Explanation:

The reported file or object could not be deleted. The next line contains additional information.

User Action:

Depends on the additional information.

FAILEDMNTVOL
failed to mount volume

Explanation:

MDMS was unable to mount the volume.

User Action:

The error above this contains the error that cause the volume not to be mounted.

FAILICRES
failed item code restrictions

Explanation:

The command cannot be completed because there are conflicting item codes in the command. This is an internal error.

User Action:

Provide copies of the MDMS command issued, the database files and the server's logfile for further analysis.

FAILINIEXTSTAT
failed to initialize extended status buffer

Explanation:

The API could not initialze the extended status buffer. This is an internal error.

User Action:

Provide copies of the MDMS command issued, the database files and the server's logfile for further analysis.

FAILLOOKUP
failed to lookup !AZ

Explanation:

The reported file or object could not be looked up. The next line contains additional information.

User Action:

Depends on the additional information.

FAILURE
fatal error

Explanation:

The MDMS server encountered a fatal error during the processing of a request.

User Action:

Provide copies of the MDMS command issued, the database files and the server's logfile for further analysis.

FILOPNERR
file !AZ could not be opened

Explanation:

An MDMS database file could not be opened.

User Action:

Check the server's logfile for more information.

FIRSTVOLUME
specified volume is first in set

Explanation:

The specified volume is the first volume in a volume set.

User Action:

You cannot deallocate or unbind the first volume in a volume set. However, you can unbind the second volume and then deallocate the first, or unbind and deallocate the entire volume set.

FUNCFAILED
Function !AZ failed with:

Explanation:

An internal call to a system function has failed. The following lines identify the function called and the failure status.

User Action:

Depends on information following this message.

GRPUNDEFINED
referenced group(s) !AZ undefined

Explanation:

When creating or modifying a valid object, the object's record contains a reference to a group name that does not exist. One or more of the specified groups may be undefined.

User Action:

Check spelling of the group names and retry, or create the group objects in the database.

ILLEGALOP
illegal move operation

Explanation:

You attempted to move a volume within a DCSC jukebox, and this is not supported.

User Action:

None.

INCOMFREQ
incompatible frequency for !AZ !AZ

Explanation:

After changing the domain scheduler type, MDMS has detemined that this save or restore request has a frequency that is incompatible with the new scheduler type. The frequencies that are not valid for the given scheduler types are:

- INTERNAL and EXTERNAL: Explicit
- DECSCHEDULER and SCHEDULER: Custom

User Action:

Modify the frequency to a valid one for this scheduler type.

INCOMPATMED
volume's media type incompatible with the drive

Explanation:

The media type for the volume is incompatible with the media type(s) for the drive on a load operation.

User Action:

Verify that the volume can be physically loaded and used in the specified drive. If not, select another drive. If so, then add the volume's media type to the drive or otherwise aligned the media types of the volume and the drive.

INCOMPATOPT
incompatible options specified

Explanation:

You entered a command with incompatible options.

User Action:

Examine the command documentation and re-enter with allowed combinations of options.

INCOMPATTR
attributes incompatible with archive type

Explanation:

You attempted to create or set an attribute which is incompatible with the archive type. The following attributes are incompatible for archive types:

- DISK: CONSOLIDATION, DRIVES, MEDIA_TYPE, POOL, VOLUME_SETS
- TAPE: DESTINATION

User Action:

Do not specify these attributes if they are incompatible with the archive type.

INCOMPATVOL
volume is incompatible with volumes in set

Explanation:

You cannot bind the volume to the volume set because some of the volume's attributes are incompatible with the volumes in the volume set.

User Action:

Check that the new volume's media type, onsite location and offsite location are compatible with those in the volume set. Adjust attributes and retry, or use another volume with compatible attributes.

INSCMDPRIV
insufficient privilege to execute request

Explanation:

You do not have sufficient privileges to enter the request.

User Action:

Contact your system administrator and request additional privileges, or give yourself privs and retry.

INSOPTPRIV
insufficient privilege for request option

Explanation:

You do not have sufficient privileges to enter a privileged option of this request.

User Action:

Contact your system administrator and request additional privileges, or give yourself privs and retry. Alternatively, retry without using the privileged option.

INSSHOWPRIV
some volumes not shown due to insufficient privilege

Explanation:

Not all volumes were shown because of restricted privilege.

User Action:

None if you just want to see volumes you own. You need MDMS_SHOW_ALL privilege to see all volumes.

INSSVRPRV
insufficient server privileges

Explanation:

The MDMS server is running with insufficient privileges to perform system functions.

User Action:

Refer to the Installation Guide to determine the required privileges. Contact your system administrator to add these privileges in the MDMS$SERVER account.

INTBUFOVR
internal buffer overflow

Explanation:

The MDMS software detected an internal buffer overflow. This an internal error.

User Action:

Provide copies of the MDMS command issued, the database files and the server's logfile for further analysis. Restart the server.

INTINVMSG
internal invalid message

Explanation:

An invalid message was received by a server. This could be due to a network problem or, a remote non-MDMS process sending messages in error or, an internal error.

User Action:

If the problem persists and no non-MDMS process can be identified then provide copies of the MDMS command issued, the database files and the server's logfile for further analysis.

INTSCHEDULE
cannot modify or delete internal schedule

Explanation:

You attempted to modify or delete a schedule object that was internally generated for a save or restore request. This is not allowed.

User Action:

Modify or delete the associated save or restore request instead, and the schedule will be updated accordingly.

INVABSTIME
invalid absolute time

Explanation:

The item list contained an invalid absolute date and time. Time cannot be earlier than 1-Jan-1970 00:00:00 and cannot be greater than 7-Feb-2106 06:28:15

User Action:

Check that the time is between these two times.

INVALIDRANGE
invalid volume ID or invalid range specified

Explanation:

The specified volume ID, volume range, slot range or space range is invalid.

User Action:

A volume ID may contain up to 6 characters. A volume range may contain up to 1000 volume IDs where the first 3 characters must be alphabetic and the last 3 may be alphanumeric. Only the numeric portions may vary in the range. Examples are ABC000-ABC999, or ABCD01-ABCD99. A slot range can contain up to 1000 slots and must be numeric. Also, all slots in the range must be less than the slot count for the jukebox or magazine.

Example: 0-255 for a slot count of 256. A space range can contain up to1000 spaces where the first and last spaces must have the same number of characters. Spaces must be within the range defined for the location. Examples: 000-999, or Space A1-Space C9

INVCONSOLVAL
invalid value for consolidation savesets or volumes

Explanation:

You specified an invalid value for consolidation savesets or volumes.

User Action:

Use a value in the range 0 to maximum integer.

INVDBSVRLIS
invalid database server search list

Explanation:

The logical name MDMS$DATABASE_SERVERS contains invalid network node names or is not defined.

User Action:

Correct the node name(s) in the logical name MDMS$DATABASE_SERVERS in file MDMS$SYSTARTUP.COM. Redefine the logical name in the current system. Then start the server.

INVDELSTATE
object is in invalid state for delete

Explanation:

The specified object cannot be deleted because its state indicates it is being used.

User Action:

Defer deletion until the object is no longer being used, or otherwise change its state and retry.

INVDELTATIME
invalid delta time

Explanation:

The item list contained an invalid delta time.

User Action:

Check that the item list has a correct delta time.

INVDFULLNAM
invalid DECnet fullname

Explanation:

A node full name for a DECnet-Plus (Phase V) node specification has an invalid syntax.

User Action:

Correct the node name and retry.

INVDRVCOUNT
invalid value for drive count, use 1-32

Explanation:

You specified an invalid value for drive count.

User Action:

Use a value in the range 1-32.

INVEXTSTS
invalid extended status item desc/buffer

Explanation:

The error cannot be reported in the extended status item descriptor. This error can be caused by on of the following:

- Not being able to read any one of the item descriptors in the item list
- Not being able to write to the buffer in the extended status item descriptor
- Not being able to write to the return length in the extended status item descriptor
- Not being able to initialize the extended status buffer

User Action:

Check for any of the errors stated above in your program and fix the error.

INVFREQUENCY
invalid frequency for domain scheduler type

Explanation:

You specified an invalid save or restore frequency the scheduler type specified in the domain. Invalid combinations include: CUSTOM, with NONE, DECSCHEDULER, SCHEDULER or LOCAL EXPLICIT, with NONE, INTERNAL, EXTERNAL, or SINGLE

User Action:

Specify a valid frequency for the scheduler type specified in the domain.

INVINITOPT
invalid initialize options specified

Explanation:

You attempted initialize volumes in a jukebox by specifying a slot range and the jukebox is not a vision-equipped, MRD-controlled jukebox.

User Action:

Specify a volume range instead of a slot range to initialize volumes in a DCSC jukebox or an MRD jukebox without a vision system.

INVITCODE
invalid item code for this function

Explanation:

The item list had an invalid item code. The problem could be one of the following:

- Item codes do not meet the restrictions for that function.
- An item code cannot be used in this function.

User Action:

Refer to the API specification to find out which item codes are restricted for each function and which item codes are allowed for each function.

INVITDESC
invalid item descriptor, index !@UL

Explanation:

The item descriptor is in error. The previous message gives gives the error. Included is the index of the item descriptor in the item list.

User Action:

Refer to the index number and the previous message to indicate the error and which item descriptor is in error.

INVITLILENGTH
invalid item list buffer length

Explanation:

The item list buffer length is zero. The item list buffer length cannot be zero for any item code.

User Action:

Refer to the API specification to find an item code that would be used in place of an item code that has a zero buffer length.

INVMAXSAVES
invalid value for maximum saves, use 1-36

Explanation:

You specified an invalid value for maximum saves.

User Action:

Use a value in the range 1-36.

INVMEDIATYPE
media type is invalid or not supported by volume

Explanation:

The specified volume supports multiple media types where a single media type is required, or the volume does not support the specified media type.

User Action:

Re-enter the command specifying a single media type that is already supported by the volume.

INVMSG
invalid message via !AZ

Explanation:

An invalid message was received MDMS software. This could be due to a network problem or, a non-MDMS process sending messages in error or, an internal error.

User Action:

If the problem persists and no non-MDMS process can be identified then provide copies of the MDMS command issued, the database files and the server's logfile for further analysis.

INVNODNAM
invalid node name specification

Explanation:

A node name for a DECnet (Phase IV) node specification has an invalid syntax.

User Action:

Correct the node name and retry.

INVPORTS
invalid port number specification

Explanation:

The MDMS server did not start up because the logical name MDMS$TCPIP_SND_PORTS in file MDMS$SYSTARTUP.COM specifies and illegal port number range. A legal port number range is of the form "low_port_number-high_port_number".

User Action:

Correct the port number range for the logical name MDMS$TCPIP_SND_PORTS in file MDMS$SYSTARTUP.COM. Then start the server.

INVPOSITION
invalid jukebox position

Explanation:

The position specified is invalid.

User Action:

Position is only valid for jukeboxes with a topology defined. Check that the position is within the topology ranges, correct and retry. Example: /POSITION=(1,2,1)

INVRETDAYS
invalid retention days specified

Explanation:

You entered an invalid value for the retention days. Valid values are 0 to 9999 days. If you wish for no expiration of volumes, specify /NOEXPIRATION_DATE.

User Action:

Enter a value between 0 and 9999.

INVRETRY
invalid value for retry count or interval

Explanation:

You specified an invalid value for either or both the retry count or interval. In addition, it is invalid to specify an interval with a retry limit of zero or nolimit.

User Action:

Use values within the following ranges:

- RETRY_LIMIT: 0 - 10000 or NOLIMIT
- INTERVAL: 00:01:00 - 01:00:00 (1 - 60 mins)

INVRETRYINTERVAL
invalid value for retry interval

Explanation:

You specified an invalid value for retry interval. In addition, it is invalid to specify an interval with a retry limit of zero.

User Action:

Use a value within the following range only if retry limit is non-zero: 00:01:00 - 01:00:00 (1 - 60 mins)

INVRETRYLIMIT
invalid value for retry limit

Explanation:

You specified an invalid value for retry limit.

User Action:

Use a value in the range 0 to maximum integer or use /NORETRY_LIMIT

INVSCHEDENUM
invalid scheduling translation defined

Explanation:

An invalid parameter translation was entered for a scheduling option.

User Action:

Report the incident to hp.

INVSCHEDOPT
invalid schedule options entered

Explanation:

You entered invalid schedule date/time options for a schedule object. The following values are allowed:

- DATES: List of values or ranges, values 1 - 31
- DAYS: List of values or ranges, values MON - SUN
- MONTHS: List of values or ranges, values JAN - DEC
- TIMES: List of values, 00:00 - 23:59

- INCLUDE: List of dates 01-Jan-yyyy - 31-Dec-yyyy
- EXCLUDE: List of dates 01-Jan-yyyy - 31-Dec-yyyy

The yyyy for INCLUDE and EXCLUDE must be between the current year and up to 9 years into the future (e.g. 2001-2010). If omitted, the current year is used.

User Action:

Re-enter the command with valid values.

INVSCHEDPARAM
inavlid scheduling parameter defined

Explanation:

An invalid parameter was entered for a scheduling option.

User Action:

Report the incident to hp.

INVSELECT
invalid selection criteria

Explanation:

The selection criteria specified on an allocate command are invalid.

User Action:

Check the command with the documentation and re-enter with a valid combination of selection criteria.

INVSLOT
invalid slot or slot range specified

Explanation:

The slot or slot range specified when moving volumes into a magazine or jukebox was invalid, or the specified slots were already occupied.

User Action:

Specify valid empty slots and re-enter.

INVSLOTRANGE
invalid slot range

Explanation:

The slot range was invalid. It must be of the form: 1-100 1,100-200,300-400 The only characters allowed are comma, dash, and numbers (0-9).

User Action:

Check that you are using the correct form.

INVSPACE
invalid space or space range specified

Explanation:

The space or space range specified when moving volumes into a location was invalid.

User Action:

Specify valid spaces already defined for the location, or specify a space range for the location

INVSRCDEST
invalid source or destination for move

Explanation:

Either the source or destination of a move operation was invalid (does not exist).

User Action:

If the destination is invalid, enter a correct destination and retry. If a source is invalid, either create the source or correct the current placement of the affected volumes or magazines.

INVSTATE
volume !AZ is in an invalid state for initialization

Explanation:

The volume loaded in the drive for initialization was either allocated or in the transition state and cannot be initialized.

User Action:

Either the wrong volume was loaded, or the requested volume was in an invalid state. If the wrong volume was loaded, perform an inventory on the jukebox and retry. If the volume is allocated or in transition, you should not try to initialize the volume.

INVTFULLNAM
invalid TCP/IP fullname

Explanation:

A node full name for a TCP/IP node specification has an invalid syntax.

User Action:

Correct the node name and retry.

INVTOPOLOGY
invalid jukebox topology

Explanation:

The specified topology for a jukebox is invalid.

User Action:

Check topology definition; the towers must be sequentially increasing from 0; there must be a face, level and slot definition for each tower. Example: /TOPOLOGY=(TOWER=(0,1,2), FACES=(8,8,8), - LEVELS=(2,3,2), SLOTS=(13,13,13))

INVVOLPLACE
invalid volume placement for operation

Explanation:

The volume has an invalid placement for a load operation.

User Action:

Re-enter the command and use the move option.

INVVOLSTATE
volume in invalid state for operation

Explanation:

The operation cannot be performed on the volume because of the volume state does not allow it.

User Action:

Defer the operation until the volume changes state. If the volume is stuck in a transient state (e.g. moving), check for an outstanding request and cancel it. If all else fails, manually change the state.

JUKEBOXEXISTS
specified jukebox already exists

Explanation:

The specified jukebox already exists and cannot be created.

User Action:

Use a set command to modify the jukebox, or create a new jukebox with a different name.

JUKENOTINIT
jukebox could not be initialized

Explanation:

An operation on a jukebox failed because the jukebox could not be initialized.

User Action:

Check the control, robot name, node name and group name of the jukebox, and correct as needed. Check access path to jukebox (HSJ etc), correct as needed. Verify MDMS is running on a remote node. Then retry operation.

JUKETIMEOUT
timeout waiting for jukebox to become available

Explanation:

MDMS timed out waiting for a jukebox to become available. The timeout value is 10 minutes.

User Action:

If the jukebox is in heavy use, try again later. Otherwise, check requests for a hung request - cancel it. Set the jukebox state to available if all else fails.

JUKEUNAVAIL
jukebox is currently unavailable

Explanation:

The jukebox is disabled.

User Action:

Re-enable the jukebox.

JUKUNDEFINED
referenced jukebox !AZ undefined

Explanation:

When creating or modifying a valid object, the object's record contains a reference to a jukebox name that does not exist.

User Action:

Check spelling of the jukebox name and retry, or create the jukebox object in the database.

LOCATIONEXISTS
specified location already exists

Explanation:

The specified location already exists and cannot be created.

User Action:

Use a set command to modify the location, or create a new location with a different name.

LOCUNDEFINED
referenced location !AZ undefined

Explanation:

When creating or modifying a valid object, the object's record contains a reference to a location name that does not exist.

User Action:

Check spelling of the location name and retry, or create the location object in the database.

LOGRESET
Log file !AZ by !AZ on node !AZ

Explanation:

The server logfile has been closed and a new version has been created by a user.

User Action:

None.

MAGAZINEEXISTS
specified magazine already exists

Explanation:

The specified magazine already exists and cannot becreated.

User Action:

Use a set command to modify the magazine, or create a new magazine with a different name.

MAGUNDEFINED
referenced magazine !AZ undefined

Explanation:

When creating or modifying a valid object, the object's record contains a reference to a magazine name that does not exist.

User Action:

Check spelling of the magazine name and retry, or create the magazine object in the database.

MBLISEXIT
mailbox listener exited

Explanation:

The mailbox listener has exited due to an internal error condition. The mailbox listener is the server's routine to receive local user requests through mailbox MDMS$MAILBOX.

User Action:

The mailbox listener should be automatically restarted. Provide copies of the MDMS command issued, the database files and the server's logfile for further analysis.

MBLISRUN
listening on mailbox !AZ logical !AZ

Explanation:

The server has successfully started the mailbox listener. MDMS commands can now be entered on this node.

User Action:

None.

MEDIATYPEEXISTS
specified media type already exists

Explanation:

The specified media type already exists and cannot be created.

User Action:

Use a set command to modify the media type, or create a new media type with a different name.

MEDUNDEFINED
referenced media type(s) !AZ undefined

Explanation:

When creating or modifying a valid object, the object's record contains a reference to a media type that does not exist. One or more of the specified media types may be undefined.

User Action:

Check spelling of the media types and retry, or create the media type objects in the database.

MOVEINCOMPL
move is incomplete

Explanation:

When moving volumes into and out of a jukebox, some of the volumes were not moved.

User Action:

Check that there are enough empty slots in the jukebox when moving in and retry. On a move out, examine the cause of the failure and retry.

MRDERROR
error accessing jukebox with MRD

Explanation:

MDMS encountered an error when performing a jukebox operation. An accompanying message gives more detail.

User Action:

Examine the accompanying message and perform corrective actions to the hardware, the volume or the database, and optionally retry the operation.

MRDMSG
!AZ

Explanation:

This is a more detailed MRD error message which accompanies MRDERROR.

User Action:

Check the MRU error message file.

NOACCESS
no user access to object for operation

Explanation:

You attempted to perform an operation on an object for which you have no access.

User Action:

You need an authorized user to add you to the access control list, otherwise you cannot perform the requested operation.

NOBINDSELF
volume is already in volume set

Explanation:

You cannot bind this volume into this volume set because it already a member of the volume set.

User Action:

Use another volume.

NOCHANGES
no attributes were changed in the database

Explanation:

Your set command did not change any attributes in the database because the attributes you entered were already set to those values.

User Action:

Double-check your command, and re-enter if necessary. Otherwise the database is already set to what you entered.

NOCHANGESOBJ
no attributes were changed for !AZ !AZ

Explanation:

Your set command did not change any attributes in the database because the attributes you entered were already set to those values. The message indicates which object was not changed.

User Action:

Double-check your command, and re-enter if necessary. Otherwise the database is already set to what you entered.

NOCHECK
drive not accessible, check not performed

Explanation:

The specified drive could not be physically accessed and the label check was not performed. The displayed attributes are taken from the database.

User Action:

Verify the VMS device name, node name or group name in the drive object. Check availability on system. Verify MDMS is running on a remote node. Determine the reason the drive was not accessible, fix it and retry.

NODBACC
no access to database server

Explanation:

This server has no access to a database server.

User Action:

Verify the setting of logical name MDMS$DATABASE_SERVERS. Check each node listed using MDMS SHOW SERVER/NODE=... for connectivity and database access status. Check the servers logfiles for more information.

NODCSC
DCSC not running

Explanation:

DCSC has not been started.

User Action:

Execute command procedure SYS$STARTUP:DCSC$STARTUP.COM and retry command.

NODEDISABLED
node disabled

Explanation:

The server failed to start up because it is disabled in the database.

User Action:

If necessary correct the setting and start the server again.

NODEEXISTS
specified node already exists

Explanation:

The specified node already exists and cannot be created.

User Action:

Use a set command to modify the node, or create a new node with a different name.

NODENOPRIV
node is not privileged to access database server

Explanation:

A remote server access failed because the user making the DECnet connection is not MDMS$SERVER or the remote port number is not less than 1024.

User Action:

Verify with DCL command SHOW PROCESS that the remote MDMS server is running under a username of MDMS$SERVER and/or, verify that logical name MDMS$TCPIP_SND_PORTS on the remote server node specifies a port number range between 0-1023.

NODENOTENA
node not in database or not fully enabled

Explanation:

The server was not allowed to start up because there is no such node object in the database or its node object in the database does not specify all network full names correctly.

User Action:

For a node running DECnet (Phase IV) the node name has to match logical name SYS$NODE on that node. For a node running DECnet-Plus (Phase V) the node's DECNET_PLUS_FULLNAME has to match the logical name SYS$NODE_FULLNAME on that node. For a node running TCP/IP the node's TCPIP_FULLNAME has to match the full name combined from logical names *INET_HOST and *INET_DOMAIN.

NODENOTINDB
no node object with !AZ name !AZ in database

Explanation:

The current server could not find a node object in the database with a matching DECnet (Phase IV) or DECnet-Plus (Phase V) or TCP/IP node full name.

User Action:

Use SHOW SERVER/NODES=(...) to see the exact naming of the server's network names. Correct the entry in the database and restart the server.

NODRIVES
no drives match selection criteria

Explanation:

When allocating a drive, none of the drives match the specified selection criteria.

User Action:

Check spelling and re-enter command with valid selection criteria.

NODRVACC
access to drive disallowed

Explanation:

You attempted to allocate, load or unload a drive from a node that is not allowed to access it.

User Action:

The access field in the drive object allows local, remote or all access, and your attempted access did not conform to the attribute. Use another drive.

NODRVSAVAIL
no drives are currently available

Explanation:

All of the drives matching the selection criteria are currently in use or otherwise unavailable.

User Action:

Check to see if any of the drives are disabled or inaccessible. Re-enter command when corrected.

NODRVSGRP
no drives in the specified group were found

Explanation:

When allocating a drive, no drives on nodes in the specified group were found.

User Action:

Check group name and retry command.

NODRVSJUKE
no drives in the specified jukebox were found

Explanation:

When allocating a drive, no drives in the specified jukebox were found.

User Action:

Check jukebox name and retry command.

NODRVSLOC
no drives in the specified location were found

Explanation:

When allocating a drives, no drives in the specified location were found.

User Action:

Check location name and retry command.

NODRVSMED
no drives with the specified media type were found

Explanation:

When allocating a drive, no drives with the specified media type were found.

User Action:

Check media type and retry command, or specify the media type for more drives.

NODRVSNOD
no drives on the specified node were found

Explanation:

When allocating a drive, no drives on the specified node were found.

User Action:

Check the node name and retry command.

NODRVSVOL
no drives that can support the specified volume were found

Explanation:

When allocating a drive, no drives that could support the specified volume were found.

User Action:

Check the volume ID and retry command, or check and adjust volume attributes to match a valid drive.

NODUNDEFINED
referenced node(s) !AZ undefined

Explanation:

When creating or modifying a valid object, the object's record contains a reference to a node name that does not exist. One or more of the specified nodes may be undefined.

User Action:

Check spelling of the node names and retry, or create the node objects in the database.

NOFIELDS
no fields specified for report

Explanation:

A REPORT VOLUME command was entered with no fields to select or display.

User Action:

Enter at least one field for the report.

NOINCLUDE
selection attributes not set with no include data

Explanation:

You specified one or more of the following attributes which are not valid unless an include specification is present: DATA_TYPE, INCREMENTAL, NODES, GROUPS The save or restore object was updated, but selection attributes were not set.

User Action:

These attributes are applicable only when an INCLUDE statement is present. Re-enter the command with an INCLUDE qualifier.

NOINCLUDES
no include specification for selection

Explanation:

A save or restore object had some selection attributes specified, but no include file specification. The following attributes require an include specification:

- Data type
- Incremental
- Groups
- Nodes

User Action:

Re-enter the command with an include specification.

NOINTSCHED
internal scheduling not enabled

Explanation:

You attempted to create a schedule object but the domain's scheduler option is set to an external scheduler. The MDMS schedule object is valid only with scheduler options INTERNAL, EXTERNAL and SINGLE_SCHEDULER.

User Action:

Schedule your request using the specified external scheduler product and interface.

NOJUKEACC
access to jukebox disallowed

Explanation:

You attempted to use a jukebox from a node that is not allowed to access it.

User Action:

The access field in the jukebox object allows local, remote or all access, and your attempted access did not conform to the attribute. Use another jukebox.

NOJUKESPEC
jukebox required on vision option

Explanation:

The jukebox option is missing on a create volume request with the vision option.

User Action:

Re-enter the request and specify a jukebox name and slot range.

NOLICENSE
your current license does not support this operation

Explanation:

The requested operation is not licensed. If you are licensed for ABS_OMT only, you have attempted to perform an operation that requires a full ABS license.

User Action:

Use an alternative mechanism to perform the operation. If this is not possible, you cannot perform the operation with your current license. You may purchase an upgrade ABS license to enable full ABS functionality. Contact hp for details.

NOMAGAZINES
no magazines match selection criteria

Explanation:

On a move magazine request using the schedule option, no magazines were scheduled to be moved.

User Action:

None.

NOMAGSMOVED
no magazines were moved

Explanation:

No magazines were moved for a move magazine operation. An accompanying message gives a reason.

User Action:

Check the accompanying message, correct and retry.

NOMEDIATYPE
no media type specified when required

Explanation:

An allocation for a volume based on node, group or location also requires the media type to be specified.

User Action:

Re-enter the command with a media type specification.

NOMEMORY
not enough memory

Explanation:

The MDMS server failed to allocate enough virtual memory for an operation. This is an internal error.

User Action:

Provide copies of the MDMS command issued, the database files and the server's logfile for further analysis. Restart the server.

NOOBJECTS
no such objects currently exist

Explanation:

On a show command, there are no such objects currently defined.

User Action:

None.

NOPARAM
required parameter missing

Explanation:

A required input parameter to a request or an API function was missing.

User Action:

Re-enter the command with the missing parameter, or refer to the API specification for required parameters for each function.

NOPOOLSPEC
no free volumes with no pool or your default pool were found

Explanation:

When allocating a volume, no free volumes that do no have a pool defined or that are in your default pool were found.

User Action:

Add a pool specification to the command, or define more free volumes with no pool or your default pool.

NORANGESUPP
slot or space ranges not supported with volset option

Explanation:

On a set volume, you entered the volset option and specified either a slot range or space range.

User Action:

If you want to assign slots or spaces to volumes directly, do not use the volset option.

NORECVPORTS
no available receive port numbers for incoming connections

Explanation:

The MDMS could not start the TCP/IP listener because none of the receive ports specified with this node's TCPIP_FULLNAME are currently available.

User Action:

Use a suitable network utility to find a free range of TCP/IP ports which can be used by the MDMS server. Use the MDMS SET NODE command to specify the new range with the /TCPIP_FULLNAME then restart the server.

NOREMCONNECT
unable to connect to remote node

Explanation:

The server could not establish a connection to a remote node. See the server's logfile for more information.

User Action:

Depends on information in the logfile.

NOREQUESTS
no such requests currently exist

Explanation:

No requests exist on the system.

User Action:

None.

NORESEFN
not enough event flags

Explanation:

The server ran out of event flags. This is an internal error.

User Action:

Provide copies of the MDMS command issued, the database files and the server's logfile for further analysis. Restart the server.

NORIGHTS
no rights are shown

Explanation:

When showing a domain, the rights are not shown because you don't have privilege to see the rights.

User Action:

Nothing. To see rights you need MDMS_SHOW_RIGHTS.

NOSCHEDULE
schedule object invalid for scheduler type or frequency

Explanation:

You specified a schedule object for a non-custom frequency or for an external scheduler option. A schedule object can only be specified for frequency CUSTOM with domain scheduler type of INTERNAL, EXTERNAL or SINGLE.

User Action:

Do not specify a schedule name.

NOSCRATCH
scratch loads not supported for jukebox drives

Explanation:

You attempted a load drive command for a jukebox drive.

User Action:

Scratch loads are not supported for jukebox drives. You must use the load volume command to load volumes in jukebox drives.

NOSENDPORTS
no available send port numbers for outgoing connection

Explanation:

The server could not make an outgoing TCP/IP connection because none of the send ports specified for the range in logical name MDMS$TCPIP_SND_PORTS are currently available.

User Action:

Use a suitable network utility to find a free range of TCP/IP ports which can be used by the MDMS server. Change the logical name MDMS$TCPIP_SND_PORTS in file MDMS$SYSTARTUP.COM. Then restart the server.

NOSLOT
not enough slots defined for operation

Explanation:

The command cannot be completed because there are not enough slots specified in the command, or because there are not enough empty slots in the jukebox.

User Action:

If the jukebox is full, move some other volumes out of the jukebox and retry. If there are not enough slots specified in the command, re-enter with a larger slot range.

NOSTATUS
no status defined

Explanation:

An uninitialized status has been reported. This an internal error.

User Action:

Provide copies of the MDMS command issued, the database files and the server's logfile for further analysis.

NOSUCHDEST
specified destination does not exist

Explanation:

In a move command, the specified destination does not exist.

User Action:

Check spelling or create the destination as needed.

NOSUCHDRIVE
specified drive does not exist

Explanation:

The specified drive does not exist.

User Action:

Check spelling or create drive as needed.

NOSUCHGROUP
specified group does not exist

Explanation:

The specified group does not exist.

User Action:

Check spelling or create group as needed.

NOSUCHINHERIT
specified inherited object does not exist

Explanation:

On a create of an object, the object specified for inherit does not exist.

User Action:

Check spelling or create the inherited object as needed.

NOSUCHJUKEBOX
specified jukebox does not exist

Explanation:

The specified jukebox does not exist.

User Action:

Check spelling or create jukebox as needed.

NOSUCHLOCATION
specified location does not exist

Explanation:

The specified location does not exist.

User Action:

Check spelling or create location as needed.

NOSUCHMAGAZINE
specified magazine does not exist

Explanation:

The specified magazine does not exist.

User Action:

Check spelling or create magazine as needed.

NOSUCHMEDIATYPE
specified media type does not exist

Explanation:

The specified media type does not exist.

User Action:

Check spelling or create media type as needed.

NOSUCHNODE
specified node does not exist

Explanation:

The specified node does not exist.

User Action:

Check spelling or create node as needed.

NOSUCHOBJECT
specified object does not exist

Explanation:

The specified object does not exist.

User Action:

Check spelling or create the object as needed.

NOSUCHPOOL
specified pool does not exist

Explanation:

The specified pool does not exist.

User Action:

Check spelling or create pool as needed.

NOSUCHREQUESTID
specified request does not exist

Explanation:

The specified request does not exist on the system.

User Action:

Check the request id again, and re-enter if incorrect.

NOSUCHUSER
no such user on system

Explanation:

The username specified in the command does not exist.

User Action:

Check spelling of the username and re-enter.

NOSUCHVOLUME
specified volume(s) do not exist

Explanation:

The specified volume or volumes do not exist.

User Action:

Check spelling or create volume(s) as needed.

NOSVRACCOUNT
username !AZ does not exist

Explanation:

The server cannot startup because the username MDMS$SERVER is not defined in file SYSUAF.DAT.

User Action:

Enter the username of MDMS$SERVER (see Installation manual for account details) and then start the server.

NOSVRMB
no server mailbox or server not running

Explanation:

The MDMS server is not running on this node or the server is not servicing the mailbox via logical name MDMS$MAILBOX.

User Action:

Use the MDMS$STARTUP procedure with parameter RESTART to restart the server. If the problem persists, check the server's logfile and file SYS$MANAGER:MDMS$SERVER.LOG for more information.

NOSYMBOLS
symbols not supported for multiple volumes

Explanation:

A SHOW VOLUME/SYMBOLS command was entered for multiple volumes. The /SYMBOLS qualifier is only supported for a single volume.

User Action:

Re-enter command with a single volume ID, or don't use the /SYMBOLS qualifier.

NOTALLOCUSER
volume is not allocated to user

Explanation:

You cannot perform the operation on the volume because the volume is not allocated to you.

User Action:

Either use another volume, or (in some cases) you may be able to perform the operation specifying a user name.

NOTSCHEDULED
specified save or restore is not scheduled for execution

Explanation:

The save or restore request did not contain enough information to schedule the request for execution. The request requires the definition of an archive, an environment and a start time.

User Action:

If you wish this request to be scheduled, enter a SET SAVE or SET RESTORE and enter the required information.

NOUNALLOCDRV
no unallocated drives found for operation

Explanation:

On an initialize volume request, MDMS could not locate an unallocated drive for the operation.

User Action:

If you had allocated a drive for the operation, deallocate it and retry. If all drives are currently in use, retry the operation later.

NOVOLSJUKE
no free volumes in the specified jukebox were found

Explanation:

When allocating a volume, no free volumes in the specified jukebox were found.

User Action:

Check jukebox name and retry command, or move some free volumes into the jukebox.

NOVOLSLOC
no free volumes in the specified location were found

Explanation:

When allocating a volume, no free volumes in the specified location were found.

User Action:

Check location name and retry command, or move some free volumes into the location.

NOVOLSMED
no free volumes with the specified media type were found

Explanation:

When allocating a volume, no free volumes with the specified media type were found.

User Action:

Check media type and retry command, or specify the media type for more free volumes.

NOVOLSMOVED
no volumes were moved

Explanation:

No volumes were moved for a move volume operation. An accompanying message gives a reason.

User Action:

Check the accompanying message, correct and retry.

NOVOLSPOOL
no free volumes in the specified pool were found

Explanation:

When allocating a volume, no free volumes in the specified pool were found.

User Action:

Check pool name and retry command, or specify the pool for more free volumes (add them to the pool).

NOVOLSPROC
no volumes were processed

Explanation:

In a create, set or delete volume command, no volumes were processed.

User Action:

Check the volume identifiers and re-enter command.

NOVOLSVOL
no free volumes matching the specified volume were found

Explanation:

When allocating a volume, no free volumes matching the specified volume were found.

User Action:

Check the volume ID and retry command, or add more free volumes with matching criteria.

NOVOLUMES
no volumes match selection criteria

Explanation:

When allocating a volume, no volumes match the specified selection criteria.

User Action:

Check the selection criteria. Specifically check the relevant volume pool. If free volumes are in a volume pool, the pool name must be specified in the allocation request, or you must be a default user defined in the pool. You can re-enter the command specifying the volume pool as long as you are an authorized user. Also check that newly-created volumes are in the FREE state rather than the UNITIALIZED state.

OBJECTEXISTS
specified object already exists

Explanation:

The specified object already exists and cannot be created.

User Action:

Use a set command to modify the object, or create a new object with a different name.

OBJNOTEXIST
referenced object !AZ does not exist

Explanation:

When attempting to allocate a drive or volume, you specified a selection object that does not exist.

User Action:

Check spelling of selection criteria objects and retry, or create the object in the database.

OBJREFZERO
dereferenced object with zero count

Explanation:

The MDMS server software detected an internal inconsistency. This is an internal error.

User Action:

Provide copies of the MDMS command issued, the database files and the server's logfile for further analysis.

PARTIALSUCCESS
some volumes in range were not processed

Explanation:

On a command using a volume range, some of the volumes in the range were not processed.

User Action:

Verify the state of all objects in the range, and issue corrective commands if necessary.

POLUNDEFINED
referenced pool !AZ undefined

Explanation:

When creating or modifying a valid object, the object's record contains a reference to a pool name that does not exist.

User Action:

Check spelling of the pool name and retry, or create the pool object in the database.

POOLEXISTS
specified pool already exists

Explanation:

The specified pool already exists and cannot be be created.

User Action:

Use a set command to modify the pool, or create a new pool with a different name.

PROFERROR
profile specification error

Explanation:

You specified an invalid user profile for the environment. Verify that the user name specified (default is ABS) exists on the specified node or cluster.

User Action:

Re-enter with a valid combination of node or cluster name and user name.

QUEUED
operation is queued for processing

Explanation:

The asynchronous request you entered has been queued for processing.

User Action:

You can check on the state of the request by issuing a show requests command.

RDFERROR
error allocating or deallocating RDF device

Explanation:

During an allocation or deallocation of a drive using RDF, the RDF software returned an error.

User Action:

The error following this error is the RDF error return.

REQUESTID
request ID is !@UL

Explanation:

The number is the request ID for the command just queued.

User Action:

None

RESUNDEFINED
referenced restore(s) !AZ undefined

Explanation:

When creating or modifying a valid object, the object's record contains a reference to a restore name that does not exist. One or more of the specified restores may be undefined.

User Action:

Check spelling of the restore names and retry, or create the restore objects in the database.

SAVUNDEFINED
referenced save(s) !AZ undefined

Explanation:

When creating or modifying a valid object, the object's record contains a reference to a save name that does not exist. One or more of the specified saves may be undefined.

User Action:

Check spelling of the save names and retry, or create the save objects in the database.

SCHEDCREATEERR
failed to create a scheduling job

Explanation:

MDMS failed to create a scheduling job.

User Action:

Report the incident to hp.

SCHEDDELETEERR
failed to delete a scheduling job

Explanation:

MDMS failed to delete a scheduling job.

User Action:

Report the incident to hp.

SCHEDDISCONNECT
scheduler disconnected from mailbox

Explanation:

The scheduler was disconnected from a mailbox

User Action:

Report the incident to hp.

SCHEDDUPJOB
duplicate scheduler job found

Explanation:

MDMS found a duplicate scheduling job

User Action:

Report the incident to hp.

SCHEDEXTSTATUS
external schedule job exited with bad status

Explanation:

An external schedule job exited with bad status

User Action:

Report the incident to hp.

SCHEDLOOPERR
schedule thread terminating with fatal error, restarting

Explanation:

The MDMS internal schedule thread encountered an error and terminated. The thread is restarted.

User Action:

Report the problem to hp.

SCHEDMODIFYERR
failed to modify a scheduling job

Explanation:

MDMS failed to modify a scheduling job.

User Action:

Report the incident to hp.

SCHEDNOJOBCOMPLETE
no job complete time was returned from a scheduled job

Explanation:

No job complete time was returned from a scheduled job.

User Action:

Report the incident to hp.

SCHEDNOJOBEXISTS
no job exists was returned from a scheduled job

Explanation:

No job exists was returned from a scheduled job.

User Action:

Report the incident to hp.

SCHEDNOJOBNUM
no job number was returned from a scheduled job

Explanation:

No job number was returned from a scheduled job.

User Action:

Report the incident to hp.

SCHEDNOJOBSTART
no job start time was returned from a scheduled job

Explanation:

No job start time was returned from a scheduled job.

User Action:

Report the incident to hp.

SCHEDNOJOBSTATUS
no job status was returned from a scheduled job

Explanation:

No job status was returned from a scheduled job.

User Action:

Report the incident to hp.

SCHEDNOSUCHJOB
failed to find a scheduling job

Explanation:

MDMS failed to find a scheduling job.

User Action:

Report the incident to hp.

SCHEDSHOWERR
failed to show a scheduling job

Explanation:

MDMS failed to show a scheduling job.

User Action:

Report the incident to hp.

SCHEDSYSTEMERR
failed to access the internal scheduler queue

Explanation:

An MDMS call to a system service failed in the scheduler functions.

User Action:

Report the incident to hp.

SCHEDULECONFL
schedule qualifier and novolume qualifier are incompatible

Explanation:

The /SCHEDULE and /NOVOLUME qualifiers are incompatible for this command.

User Action:

Use the /SCHEDULE and /VOLSET qualifiers for this command.

SCHEDVOLCONFL
schedule qualifier and volume parameter are incompatible

Explanation:

The /SCHEDULE and the volume parameter are incompatible for this command.

User Action:

Use the /SCHEDULE qualifier and leave the volume parameter blank for this command.

SCHEDULECONFL
schedule qualifier and novolume qualifier are incompatible

Explanation:

The /SCHEDULE and /NOVOLUME qualifiers are incompatible for this command.

User Action:

Use the /SCHEDULE and /VOLSET qualifiers for this command.

SCHEDVOLCONFL
schedule qualifier and volume parameter are incompatible

Explanation:

The /SCHEDULE and the volume parameter are incompatible for this command.

User Action:

Use the /SCHEDULE qualifier and leave the volume parameter blank for this command.

SCHUNDEFINED
referenced schedule(s) !AZ undefined

Explanation:

When creating or modifying a valid object, the object's record contains a reference to a schedule name that does not exist. One or more of the specified schedules may be undefined.

User Action:

Check spelling of the schedule names and retry, or create the schedule objects in the database.

SELUNDEFINED
referenced selection(s) !AZ undefined

Explanation:

When creating or modifying a valid object, the object's record contains a reference to a selection name that does not exist. One or more of the specified selections may be undefined.

User Action:

Check spelling of the selection names and retry, or create the selection objects in the database.

SETLOCALEFAIL
an error occurred when accessing locale information

Explanation:

When executing the SETLOCALE function an error occurred.

User Action:

A user should not see this error.

SETPROTECTED
protected field(s) set, verify consistency

Explanation:

You have directly set a protected field with this command. Normally these fields are maintained by MDMS. This has the potential to make the database inconsistent and cause other operations to fail.

User Action:

Do a SHOW /FULL on the object(s) you have just modified and verify that your modifications leave the object(s) in a consistent state.

SLSDBINUSE
SLS$DB network object in use

Explanation:

The MDMS server could not be started because it could not declare the network task SLS$DB. The network task SLS$DB is already in use.

User Action:

Check the server's logfile for more information.Check the logical MDMS$SUPPORT_PRE_V3 in the system table. If this is TRUE and the SLS$TAPMGRDB process is running the server cannot be started. Shut down the SLS$TAPMGRDB process by shutting down SLS. Restart MDMSV3.0 server and then restart SLS.

SNDMAILFAIL
send mail failed, see log file for more explanation

Explanation:

While sending mail during the scheduled activities, a call to the mail utility failed.

User Action:

Check the log file for the failure code from the mail utility.

SOMESUCCESS
some objects in list were not processed

Explanation:

The request was partially successful, but some of the objects were not processed as shown in the extended status.

User Action:

Examine the extended status, and retry command as needed.

SPAWNCMDBUFOVR
spawn command buffer overflow

Explanation:

During the mount of a volume, the spawned mount command was too long for the buffer. This is an internal error.

User Action:

Provide copies of the MDMS command issued, the database files and the server's logfile for further analysis.

SVRBUGCHECK
internal inconsistency in SERVER

Explanation:

The MDMS server software (MDMS$SERVER.EXE) detected an inconsistency. This is an internal error.

User Action:

Provide copies of the MDMS command issued, the database files and the server's logfile for further analysis. Restart the server.

SVRDISCON
server disconnected

Explanation:

The server disconnected from the request because of a server problem or a network problem.

User Action:

Check the server's logfile and file SYS$MANAGER:MDMS$SERVER.LOG for more information. Provide copies of the MDMS command issued, the database files and the server's logfile for further analysis.

SVREXIT
server exited

Explanation:

Server exited. Check the server logfile for more information.

User Action:

Depends on information in the logfile.

SVRLOGERR
server logged error

Explanation:

The server failed to execute the request. Additional information is in the server's logfile.

User Action:

Depends on information in the logfile.

SVRRUN
server already running

Explanation:

The MDMS server is already running.

User Action:

Use the MDMS$SHUTDOWN procedure with parameter RESTART to restart the server.

SVRSTART
Server !AZ!UL.!UL-!UL started

Explanation:

The server has started up identifying its version and build number.

User Action:

None.

SVRSTARTSTRING
Server !AZ started

Explanation:

The server has started up identifying its version and build number.

User Action:

None.

SVRTERM
Server terminated abnormally

Explanation:

The MDMS server was shut down. This could be caused by a normal user shutdown or it could be caused by an internal error.

User Action:

Check the server's logfile for more information. If the logfile indicates an error has caused the server to shut down then provide copies of the MDMS command issued, the database files and the server's logfile for further analysis.

SVRUNEXP
unexpected error in SERVER !AZ line !UL

Explanation:

The server software detected an internal inconsistency.

User Action:

Provide copies of the MDMS command issued, the database files and the server's logfile for further analysis.

TCPIPLISEXIT
TCP/IP listener exited

Explanation:

The TCP/IP listener has exited due to an internal error condition or because the user has disabled the TCPIP transport for this node. The TCP/IP listener is the server's routine to receive requests via TCP/IP.

User Action:

The TCP/IP listener should be automatically restarted unless the TCPIP transport has been disabled for this node. Provide copies of the MDMS command issued, the database files and the server's logfile for further analysis if the transport has not been disabled by the user.

TCPIPLISRUN
listening on TCP/IP node !AZ port !AZ

Explanation:

The server has successfully started a TCP/IP listener. Requests can now be sent to the server via TCP/IP.

User Action:

None.

TOOLARGE
entry is too large

Explanation:

Either entries cannot be added to a list of an MDMS object or existing entries cannot be renamed because the maximum list size would be exceeded.

User Action:

Remove other elements from list and try again.

TOOMANY
too many objects generated

Explanation:

You attempted to perform an operation that generated too many objects.

User Action:

There is a limit of 1000 objects that may be specified in any volume range, slot range or space range. Re-enter command with a valid range.

TOOMANYSELECTS
too many selections for a field, use only one

Explanation:

More than one selection was specified for a particular field.

User Action:

Specify only one field to select on.

TOOMANYSORTS
too many sort qualifiers, use only one

Explanation:

When specify more than one field to sort on.

User Action:

Specify only one field to sort on.

UNDEFINEDREFS
success, but object references undefined objects

Explanation:

The command was successful, but the object being created or modified has references to undefined objects. Subsequent messages indicate which objects are undefined.

User Action:

This allows objects to be created in any order, but some operations may not succeed until the objects are defined. Verify/correct the spelling of the undefined objects or create the objects if needed.

UNKVOLENT
unknown volume !AZ entered in jukebox !AZ

Explanation:

A volume unknown to MDMS has been entered into a jukebox.

User Action:

Use the INVENTORY command to make the volume known to MDMS or use a jukebox utility program (CARTRIDGE or MRU) to eject the volume from the jukebox.

UNSUPPORTED
unsupported function

Explanation:

You attempted to perform an unsupported function.

User Action:

None.

UNSUPPORTED1
unsupported function !AZ

Explanation:

You attempted to perform an unsupported function.

User Action:

None.

UNSUPRECVER
unsupported version for record !AZ in database !AZ

Explanation:

The server has detected unsupported records in a database file. These records will be ignored.

User Action:

Consult the documentation about possible conversion procedures provided for this version of MDMS.

USERNOTAUTH
user is not authorized for volume pool

Explanation:

When allocating a volume, you specified a pool for which you are not authorized.

User Action:

Specify a pool for which you are authorized, or add your name to the list of authorized users for the pool. Make sure the authorized user includes the node name or group name in the pool object.

VISIONCONFL
vision option and volume parameter are incompatible

Explanation:

You attempted to create volumes with the vision option and the volume parameter. This is not supported.

User Action:

The vision option is used to create volumes with the volume identifiers read by the vision system on a jukebox. Re-enter the command with either the vision option (specifying jukebox and slot range), or with volume identifier(s), but not both.

VOLALRALLOC
specified volume is already allocated

Explanation:

You attempted to allocate a volume that is already allocated.

User Action:

Use another volume.

VOLALRINIT
volume is already initialized and contains data

Explanation:

When initializing a volume, MDMS detected that the volume is already initialized and contains data.

User Action:

If you are sure you still want to initialize the volume, re-enter the command with the overwrite option.

VOLIDICM
volume ID code missing

Explanation:

The volume ID is missing in a request.

User Action:

Provide voluem ID and retry request.

VOLINDRV
volume is currently in a drive

Explanation:

When allocating a volume, the volume is either moving or in a drive, and nopreferred was specified.

User Action:

Wait for the volume to be moved or unloaded, or use the preferred option.

VOLINJUKE
volume is in a jukebox

Explanation:

You attempted load a volume that is currently in a jukebox into a drive that is not in the jukebox.

User Action:

Load the volume into a drive within the current jukebox, or check the jukebox name for the drive.

VOLINSET
volume is already bound to a volume set

Explanation:

You cannot bind this volume because it is already in a volume set and is not the first volume in the set.

User Action:

Use another volume, or specify the first volume in the volume set.

VOLLOST
volume location is unknown

Explanation:

The volume's location is unknown.

User Action:

Check if the volume's placement is in a magazine, and if so if the magazine is defined. If not, create the magazine. Also check the magazine's placement.

VOLMOVE
volume cannot be loaded but can be moved to jukebox or drive

Explanation:

The volume is not currently in a placement where it can be loaded, but can be moved there.

User Action:

Move the volume to the drive, or use the automatic move option on the load and retry.

VOLMOVING
volume is currently being moved

Explanation:

In a move, load or unload command, the specified volume is already being moved.

User Action:

Wait for volume to come to a stable placement and retry. If the volume is stuck in the moving placement, check for an outstanding request and cancel it. If all else fails, manually change volume state.

VOLNOTALLOC
specified volume is not allocated

Explanation:

You attempted to bind or deallocate a volume that is not allocated.

User Action:

None for deallocate. For bind, allocate the volume and then bind it to the set, or use another volume.

VOLNOTBOUND
volume is not bound to a volume set

Explanation:

You attempted to unbind a volume that is not in a volume set.

User Action:

None.

VOLNOTINACS
one or more volumes are not in this ACS

Explanation:

One or more volumes for the command are not in this ACS.

User Action:

Verify that all volumes are in the same ACS and that the ACS id is correct.

VOLNOTINJUKE
volume is not in a jukebox

Explanation:

When loading a volume into a drive, the volume is not in a jukebox.

User Action:

Use the move option and retry the load. This will issue OPCOM messages to move the volume into the jukebox.

VOLNOTINPOOL
loaded volume is not in the specified pool

Explanation:

During a scratch load of a volume in a drive, the volume loaded was not in the requested pool.

User Action:

Load another volume that is in the requested pool. A recommended volume is printed in the OPCOM message. Note that if no pool was specified, the volume must have no pool defined.

VOLNOTLOADED
the volume is not loaded in a drive

Explanation:

On an unload request, the volume is not recorded as loaded in a drive.

User Action:

If the volume is not in a drive, none. If it is, issue an unload drive command to unload it.

VOLONOTHDRV
volume is currently in another drive

Explanation:

When loading a volume, the volume was found in another drive.

User Action:

Wait for the volume to be unloaded, or unload the volume and retry.

VOLSALLOC
!AZ volumes were successfully allocated

Explanation:

When attempting to allocate multiple volumes using the quantity option, some but not all of the requested quantity of volumes were allocated.

User Action:

See accompanying message as to why not all volumes were allocated.

VOLSDRIVES
one or more of the volumes are in drives or are moving

Explanation:

One or more of the volumes in the move request are in drives and cannot be moved. A show volume /brief will identify which volumes are in drives.

User Action:

Unload the volume(s) in drives and retry, or retry without specifying the volumes in drives.

VOLUMEEXISTS
specified volume(s) already exist

Explanation:

The specified volume or volumes already exist and cannot be be created.

User Action:

Use a set command to modify the volume(s), or create new volume(s) with different names.

VOLUNDEFINED
referenced volume !AZ undefined

Explanation:

When creating or modifying a valid object, the object's record contains a reference to a volume ID that does not exist.

User Action:

Check spelling of the volume ID and retry, or create the volume object in the database.

VOLWRTLCK
volume loaded with hardware write-lock

Explanation:

The requested volume was loaded in a drive, but is hardware write-locked when write access was requested.

User Action:

If you need to write to the volume, unload it, physically enable it for write, and re-load it.

WRONGLABEL
initializing volume !AZ as !AZ is disallowed

Explanation:

The label of the volume loaded in the drive for initialization does not match the requested volume label and there is data on the volume. Or initializing the volume with the requested label causes duplicate volumes in the same jukebox or location.

User Action:

If you wish to overwrite the volume label, re-issue the command with the overwrite qualifier. If there are duplicate volumes in the same location or jukebox you need to move the other volume from the jukebox or location before retrying.

WRONGVOLUME
wrong volume label or unlabelled volume was loaded

Explanation:

On a load volume command, MDMS loaded a volume with the wrong volume label or a blank volume label into the drive.

User Action:

Check the volume, and optionally perform an initialization of the volume and retry. If this message is displayed in an OPCOM message, you will need another free drive to perform the initialization. The volume has been unloaded.

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