start ...

SANtricity commands

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Table of Contents

start … 1
- Start asynchronous mirroring synchronization 1
- Start consistency group snapshot rollback 1
- Start iSCSI DHCP refresh 4
- Start controller trace 6
- Start Disk Pool Full Provisioning 8
- Start disk pool locate 9
- Start Disk Pool Resource Provisioning 10
- Start drive erase 11
- Start drive initialize 12
- Start drive locate 13
- Start drive reconstruction 15
- Start drive channel fault isolation diagnostics 16
- Start drive channel locate 18
- Test email alert configuration 19
- Increase capacity of volume in disk pool or volume group 20
- Start input output controller (IOC) dump 22
- Start FDE secure drive erase 23
- Start snapshot image rollback 24
- Test SNMP trap destination 26
- Start SSD cache locate 27
- Start SSD cache performance modeling 28
- Test AutoSupport delivery settings 29
- Start Storage Array AutoSupport Manual Dispatch 30
- Start storage array configuration database diagnostic 31
- Start storage array controller health image 33
- Test storage array directory server 34
- Test external key management communication 35
- Start storage array iSNS server refresh 36
- Start storage array locate 37
- Start OCSP server URL test 37
- Start storage array syslog test 38
- Start synchronous mirroring synchronization 39
- Test syslog configuration 40
- Start tray locate 41
- Start volume initialization 41
- Initialize thin volume 42
- Start volume group defragment 45
- Start volume group export 46
- Start Volume Group Full Provisioning 47
- Start volume group import 48
- Start volume group locate 49
- Start Volume Group Resource Provisioning 50

start …

Start asynchronous mirroring synchronization

The `start asyncMirrorGroup synchronize` command starts Asynchronous Mirroring synchronization.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, and E5700 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800, or E5700 storage array, you must have the Storage Admin role.

Syntax

```
start asyncMirrorGroup ["asyncMirrorGroupName"] synchronize
[deleteRecoveryPointIfNecessary]
```

Parameter

Parameter	Description
`asyncMirrorGroup`	The name of the asynchronous mirror group for which you want to start synchronization. Enclose the asynchronous mirror group name in double quotation marks (" ") inside square brackets ([" "]).
`deleteRecoveryPointIfNecessary`	The parameter to delete the recovery point if the recoverable synchronization data has exceeded time threshold for recovery. Recovery point age is measured from the time the data was frozen on the primary storage array.

Minimum firmware level

7.84

8.10 adds the `deleteRecoveryPointIfNecessary` parameter.

Start consistency group snapshot rollback

The `start cgSnapImage rollback` command starts a rollback operation to the member base volumes in a snapshot consistency group.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, E5700, EF600 and EF300 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin role.

Context

The content of the base volumes changes immediately to match the point-in-time content of the consistency group snapshot volume. The base volumes immediately becomes available for read/write requests after the rollback operation has successfully completed.

The repository volume that is associated with the consistency group snapshot volume continues to track any new changes between the base volume and the consistency group snapshot volume that occur after the rollback operation is completed.

To stop a rollback operation to the member base volumes use the `stop cgSnapImage rollback` command.

Syntax

```
start cgSnapImage ["snapCGID:imageID"] rollback
memberVolumeSet ("memberVolumeName1" ... "memberVolumeNameN")
```

Parameter

Parameter	Description
`cgSnapImage`	The name of the consistency group snapshot image for which you want to start a rollback operation. The name of a snapshot image is comprised of two parts: • The name of the snapshot group • An identifier for the snapshot image in the snapshot group. The identifier for the snapshot image can be one of these: • An integer value that is the sequence number of the snapshot in the snapshot group. • `NEWEST` — Use this option when you want to show the latest snapshot image created in the snapshot group. • `OLDEST` — Use this option when you want to show the earliest snapshot image created in the snapshot group. Enclose the snapshot image name in double quotation marks (" ") inside square brackets ([ ]).
`memberVolumeSet`	The name of one or more member base volumes in a consistency group that you want to rollback. Enclose each member base volume name in double quotation marks (" ") inside parentheses. You can enter more than one volume name. Enclose all of the volume names in one set of square brackets ([ ]). Enclose each volume name in double quotation marks (" "). Separate each volume name with a space. When the `memberVolumeSet` parameter is not used the rollback process applies to all member volumes of the consistency group.

Notes

The name of a snapshot image has two parts separated by a colon (:):

- The identifier of the snapshot group
- The identifier of the snapshot image

For example, if you want to start a roll back operation for the newest snapshot image in an entire consistency group that has the name CG1, you would use this command:

```
start cgSnapImage ["CG1:newest"] rollback;
```

To start a roll back operation for the snapshot image 12345 for base volume members memVol1, memVol2, and memVol3 in a consistency group that has the name CG2, you would use this command:

```
start cgSnapImage ["CG2:12345"] rollback memberVolumeset=("memVol1 memVol2
memVol3");
```

Minimum firmware level

7.83

Start iSCSI DHCP refresh

The `start controller iscsiHostPort dhcpRefresh` command initiates a refresh of the DHCP parameters for the iSCSI interface.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, E5700, EF600 and EF300 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin role.

Context

If the configuration method for the interface is not set to DHCP, the procedure returns an error.

Syntax

```
start controller [(a|b)] iscsiHostPort [portLabel] dhcpRefresh
```

Parameter

Parameter	Description
`controller`	The identifier letter of the controller that has the iSCSI host ports. Valid controller identifier values are `a` or `b` where `a` is the controller in slot A, and `b` is the controller in slot B.

Parameter	Description
`iscsiHostPort`	The host port label or the number of the iSCSI host port for which you want to refresh the DHCP parameters. See the following for more information: "Identifying an iSCSI host port label"

Identifying an iSCSI host port label

You must specify a label for the host port. Follow these steps to specify the host port label:

Steps

1. If you do not know the port label for the iSCSI host port, run the `show controller` command.
2. In the Host interface section of the results, locate the host port you want to select.

   The port label is the complete value returned for the `Port` field.

3. Enclose the entire value of the port label in both quotes and square brackets: ["portLabel"]. For example, if the port label is `Ch 2`, specify the iSCSI host port as follows:

```
iscsiHostPort[\"ch 2\"]
```

   If you are using a Windows command line and the label contains a pipe (|), the character should be escaped (using ^); otherwise, it will be interpreted as a command. For example, if the port label is `e0b|0b`, specify the iSCSI host port as follows:

```
iscsiHostPort[\"e0b^|0b\"]
```

   For backward compatibility, the iscsiPortNumber, enclosed by braces [ ] rather than quotes and braces [" "] can still be used for E2700, E5600, or EF560 controllers (and other previous generations of E-Series or EF-Series controllers). For those controllers, valid values for iscsiPortNumber are as follows:

   - For controllers with integrated host ports, the numbering is 3, 4, 5, or 6.
   - For controllers with host ports on a host interface card only, the numbering is 1, 2, 3, or 4.

   An example of the prior syntax is as follows:

```
iscsiHostPort[3]
```

Notes

This operation ends the iSCSI connections for the portal and temporarily brings down the portal.

Minimum firmware level

7.10

8.10 revises the numbering system for iSCSI host ports.

8.30 revises the identification method for iSCSI host ports in the E2800.

Start controller trace

The `start controller` command starts an operation that saves debug trace information to a compressed file.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, E5700, EF600 and EF300 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin role.

Context

The debug trace information can be used by technical support to help analyze how well a storage array is running.

Syntax

```
start controller [(a
 | b
 | both)] trace
dataType=(current | flushed | currentFlushed | all)
forceFlush=(TRUE | FALSE)
file="fileName"
```

Parameters

Parameter	Description
`controller`	The controller for which you want to collect the trace debug information. Valid controller identifiers are `a` or `b`, where `a` is the controller in slot A , and `b` is the controller in slot B. You can also simultaneously collect debug for both controllers by entering `both` . Enclose the controller identifier in square brackets ([ ]). If you do not specify a controller, the storage management software returns a syntax error.
`dataType`	The type of data that you want to collect: • `current` — Retrieves the current DQ traces • `flushed` — Retrieves all flushed DQ traces • `currentFlushed` — Retrieves both the current DQ trace and the flushed DQ trace • `all` — Retrieves the current DQ trace, flushed DQ trace, and all platform DQ traces If `dataType=flushed` and `forceFlush=True`, an error message is returned indicating that only active traces can be flushed to the buffer on retrieval.
`forceFlush`	The setting to move the DQ information in the current buffer to the flushed buffer when the DQ trace information defined by the `dataType` parameter is retrieved. To enable force flush, set this parameter to `TRUE`. To disable force flush, set this parameter to `FALSE`. If `dataType=flushed` and `forceFlush=True`, an error message is returned indicating that only active traces can be flushed to the buffer on retrieval.
`file`	The file path and the file name to which you want to save the DQ trace information. Enclose the file name in double quotation marks (" "). Refer to the Notes section for information about naming the files.

Notes

The DQ trace information is written to a compressed file with an extension of .zip. The file name is a combination of a user-defined file name and the storage array identifier (SAID). A constant of "dq" is also added to the file name. The complete file name has this form:

```
user_defined_file_name-SAID-dq.zip
```

The compressed file contains the information listed in this table.

File Name	Directory	Comments
`user_provided_file_name-SAID-A.dq`	`SAID/timestamp/`	The DQ trace data retrieved from controller A.
`user_provided_file_name-SAID-B.dq`	`SAID/timestamp/`	The DQ trace data retrieved from controller B.
`user_provided_file_name-SAID-trace_description.xm`	`SAID/timestamp/`	The description file in an xml format that describes the DQ file attributes for future data mining.

Minimum firmware level

7.75

Start Disk Pool Full Provisioning

The `start diskPool fullProvisioning` command starts a full provisioning operation on all volumes in the disk pool and optionally disables resource provisioning on the disk pool.

Supported Arrays

This command applies to any individual storage array, including the EF600 and EF300 arrays; as long as all SMcli packages are installed.

Roles

To execute this command on an EF600 and EF300 storage array, you must have the Storage Admin role.

Context

The Resource Provisioning feature improves SSD wear-life and increases write performance by leaving a larger portion of the drive blocks in an unallocated state than a standard volume. A resource-provisioned volume is a thick volume in an SSD volume group or pool, where drive capacity is allocated (assigned to the volume), but the drive blocks are deallocated (unmapped) during volume creation. Drive blocks are allocated as needed to complete host write IOs. Host unmap operations can return drive blocks back to the unallocated

state . Resource Provisioning also eliminates time-bound background initialization, allowing for large volumes to be initialized quickly.

Resource Provisioned volumes are supported only on SSD volume groups and pools, where all drives in the group or pool support the NVMe Deallocated or Unwritten Logical Block Error Enable (DULBE) error recovery capability. Performance improvement varies with each drive model and capacity.

The full provisioning format ensures all blocks needed by the volumes in the storage pool are fully mapped on the drives. This command is only applicable to resource provisioned storage pools. If the option to `disableResourceProvisioning` is not set to `FALSE`, then the volumes will still be resource provisioned and new volumes created on the storage pool will be resource provisioned. If the option to disable resource provisioning is set to `TRUE`, then the volumes will no longer be resource provisioned and new volumes created on the storage pool will not be resource provisioned.

Syntax

```
start diskPool[diskPoolName] fullProvisioning
[disableResourceProvisioning=(TRUE | FALSE)]
```

Parameters

Parameter	Description
`diskPool`	The disk pool you want to start the full provisioning operation. Enclose the disk pool name in square brackets ([ ])
`disableResourceProvisioning`	The setting to specify if resource provisioning should be disabled after the full provisioning operation completes. To skip disabling resource provisioning, set this to `FALSE`. The default value is `TRUE`. To re-enable resource provisioning on a storage pool and all associated volumes, use the `Start Disk Pool Resource Provisioning` command.

Minimum firmware level

11.72

Start disk pool locate

The `start diskPool locate` command identifies the drives that are logically grouped together to form the specified disk pool by blinking the indicator lights on the drives.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, E5700, EF600 and EF300 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin role.

Context

(Use the `stop diskPool locate` command to turn off the indicator lights on the drives.)

Syntax

```
start diskPool [diskPoolName] locate
```

Parameter

Parameter	Description
`diskPool`	The name of the disk pool for which you want to locate. Enclose the disk pool name in square brackets ([ ]). If the disk pool name has special characters or numbers, you must enclose the disk pool name in double quotation marks (" ") inside square brackets.

Minimum firmware level

7.83

Start Disk Pool Resource Provisioning

The `start diskPool resourceProvisioning` command enables resource provisioning on a given disk pool and starts a resource provisioning enablement asynchronous operation on each volume in the disk pool. Resource provisioning requires that all the drives in the disk pool support NVMe's DULBE feature.

Supported Arrays

This command applies to any individual storage array, including the EF600 and EF300 arrays; as long as all SMcli packages are installed.

Roles

To execute this command on an EF600 and EF300 storage array, you must have the Storage Admin role.

Context

To disable resource provisioning on a disk pool, use the full provisioning command with the option to disable resource provisioning. A disk pool will be resource provisioned when created if all the drives are DULBE capable and the storage array's `resourceProvisionedVolumes` setting is `true`.

Syntax

```
start diskPool[diskPoolName] resourceProvisioning
```

Parameters

Parameter	Description
`diskPoolName`	The disk pool you want to enable the resource provisioning feature. Enclose the disk pool name in square brackets ([ ]).

Minimum firmware level

11.73

Start drive erase

The `start drive erase` command erases all of the data from one or more drives.

Supported Arrays

This command applies to an individual E2800, E5700, EF600 or EF300 array. It does operate on E2700 and E5600storage arrays.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Security Admin role.

Context

Run this command only if you want to permanently remove all data on a drive. If the drive is secure-enabled, the `start drive erase` command option performs a cryptographic erase and resets the drive's security attributes back to secure-capable.

> The erase operation cannot be undone. Make sure you select the correct drive when using this command.

Syntax

```
start drive [trayID,[drawerID,]slotID] | drives[trayID1,[drawerID1
,]slotID1 ... trayIDn,[drawerIDn,]slotIDn] erase
```

Parameters

Parameter	Description
`drive` or `drives`	For high-capacity drive trays, specify the tray ID value, the drawer ID value, and the slot ID value for the drive. For low-capacity drive trays, specify the tray ID value and the slot ID value for the drive. Tray ID values are `0` to `99`. Drawer ID values are `1` to `5`. All slot ID maximums are 24. Slot ID values either begin at 0 or 1, depending on the tray model. Drive trays compatible with E2800 and E5700 controllers have slot ID numbers starting at 0. Drive trays compatible with E2700 and E5600 controllers have slot ID numbers starting at 1. Enclose the tray ID value, the drawer ID value, and the slot ID value in square brackets ([ ]). The drives list cannot contain all of the drives in the storage array, or the command will be rejected.

Minimum firmware level

11.70.1

Start drive initialize

The `start drive initialize` command starts a drive initialization.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, E5700, EF600 and EF300 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin role.

Context

Possible damage to the storage array configuration — As soon as you enter this command, all user data is destroyed.

Syntax

```
start drive [trayID,[drawerID,]slotID] initialize
```

Parameter

Parameter	Description
`drive`	For high-capacity drive trays, specify the tray ID value, the drawer ID value, and the slot ID value for the drive. For low-capacity drive trays, specify the tray ID value and the slot ID value for the drive. Tray ID values are `0` to `99`. Drawer ID values are `1` to `5`. All slot ID maximums are 24. Slot ID values either begin at 0 or 1, depending on the tray model. Drive trays compatible with E2800 and E5700 controllers have slot ID numbers starting at 0. Drive trays compatible with E2700 and E5600 controllers have slot ID numbers starting at 1. Enclose the tray ID value, the drawer ID value, and the slot ID value in square brackets ([ ]).

Notes

The `drive` parameter supports both high-capacity drive trays and low-capacity drive trays. A high-capacity drive tray has drawers that hold the drives. The drawers slide out of the drive tray to provide access to the drives. A low-capacity drive tray does not have drawers. For a high-capacity drive tray, you must specify the identifier (ID) of the drive tray, the ID of the drawer, and the ID of the slot in which a drive resides. For a low-capacity drive tray, you need only specify the ID of the drive tray and the ID of the slot in which a drive resides. For a low-capacity drive tray, an alternative method for identifying a location for a drive is to specify the ID of the drive tray, set the ID of the drawer to `0`, and specify the ID of the slot in which a drive resides.

Minimum firmware level

6.10

7.60 adds the `drawerID` user input.

Start drive locate

The `start drive locate` command locates a drive by turning on an indicator light on the drive.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, E5700, EF600 and EF300 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin role.

Context

Run the `stop drive locate` command to turn off the indicator light on the drive.

Syntax

```
start drive [trayID,[drawerID,]slotID] locate
```

Parameter

Parameter	Description
`drive`	For high-capacity drive trays, specify the tray ID value, the drawer ID value, and the slot ID value for the drive. For low-capacity drive trays, specify the tray ID value and the slot ID value for the drive. Tray ID values are `0` to `99`. Drawer ID values are `1` to `5`. All slot ID maximums are 24. Slot ID values either begin at 0 or 1, depending on the tray model. Drive trays compatible with E2800 and E5700 controllers have slot ID numbers starting at 0. Drive trays compatible with E2700 and E5600 controllers have slot ID numbers starting at 1. Enclose the tray ID value, the drawer ID value, and the slot ID value in square brackets ([ ]).

Notes

The `drive` parameter supports both high-capacity drive trays and low-capacity drive trays. A high-capacity drive tray has drawers that hold the drives. The drawers slide out of the drive tray to provide access to the drives. A low-capacity drive tray does not have drawers. For a high-capacity drive tray, you must specify the identifier (ID) of the drive tray, the ID of the drawer, and the ID of the slot in which a drive resides. For a low-capacity drive tray, you need only specify the ID of the drive tray and the ID of the slot in which a drive resides. For a low-capacity drive tray, an alternative method for identifying a location for a drive is to specify the ID of the drive tray, set the ID of the drawer to `0`, and specify the ID of the slot in which a drive resides.

Minimum firmware level

6.10

7.60 adds the `drawerID` user input.

Start drive reconstruction

The `start drive reconstruct` command starts reconstructing a drive.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, E5700, EF600 and EF300 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin role.

Syntax

```
start drive [trayID,[drawerID,]slotID] reconstruct
```

Parameter

Parameter	Description
`drive`	For high-capacity drive trays, specify the tray ID value, the drawer ID value, and the slot ID value for the drive. For low-capacity drive trays, specify the tray ID value and the slot ID value for the drive. Tray ID values are `0` to `99`. Drawer ID values are `1` to `5`. All slot ID maximums are 24. Slot ID values either begin at 0 or 1, depending on the tray model. Drive trays compatible with E2800 and E5700 controllers have slot ID numbers starting at 0. Drive trays compatible with E2700 and E5600 controllers have slot ID numbers starting at 1. Enclose the tray ID value, the drawer ID value, and the slot ID value in square brackets ([ ]).

Notes

The `drive` parameter supports both high-capacity drive trays and low-capacity drive trays. A high-capacity drive tray has drawers that hold the drives. The drawers slide out of the drive tray to provide access to the drives. A low-capacity drive tray does not have drawers. For a high-capacity drive tray, you must specify the

identifier (ID) of the drive tray, the ID of the drawer, and the ID of the slot in which a drive resides. For a low-capacity drive tray, you need only specify the ID of the drive tray and the ID of the slot in which a drive resides. For a low-capacity drive tray, an alternative method for identifying a location for a drive is to specify the ID of the drive tray, set the ID of the drawer to `0`, and specify the ID of the slot in which a drive resides.

Minimum firmware level

5.43

7.60 adds the `drawerID` user input.

Start drive channel fault isolation diagnostics

The `start driveChannel faultDiagnostics` command runs the drive channel fault isolation diagnostics and stores the results.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, E5700, EF600 and EF300 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin role.

Context

With firmware version 8.10, the `start driveChannel faultDiagnostics` command is deprecated.

Syntax

```
start driveChannel [(1 | 2 | 3 | 4 | 5 | 6 | 7 | 8)]
controller [(a|b)] faultDiagnostics
testDevices=[all |
controller=(a|b) |
esms=[trayID1 (left | right), ... , trayIDN (left | right)] |
drives[trayID1,[drawerID1,]slotID1 ... trayIDn,[drawerIDn,]slotIDn]
|[dataPattern=(fixed | pseudoRandom) |
patternNumber=[(0xhexadecimal | number)] |
maxErrorCount=integer |
testIterations=integer |
timeout=timeInterval]
```

Parameters

Parameter	Description
`driveChannel`	The identifier number of the drive channel that you want to locate. Valid values for the identifier number for the drive channel are `1`, `2`, `3`, `4`, `5`, `6`, `7`, or `8`. Enclose the drive channel identifier number in square brackets ([ ]).
`controller`	The identifier letter of the controller that you want to test. Valid controller identifier values are `a` or `b`, where `a` is the controller in slot A, and `b` is the controller in slot B. Enclose the controller identifier in square brackets ([ ]).
`testDevices`	The identifiers of the devices (controllers, environmental services module [ESMs], or drives) that you want to test. You can specify `all` or enter the specific identifiers for the devices that you want to diagnose.The `controller` identifiers are `a` or `b`, where `a` is the RAID controller module in slot A, and `b` is the RAID controller module in slot B. The `esms` identifiers are tray ID and left or right, where tray ID is a value from 0 through 99, and left or right are determined when viewing the drive tray from the rear. The `drive` identifiers include a tray identifier, a drawer identifier when the tray has drawers, and a slot identifier. For high-capacity drive trays, specify the tray ID value, the drawer ID value, and the slot ID value for the drive. For low-capacity drive trays, specify the tray ID value and the slot ID value for the drive. Tray ID values are `0` to `99`. Drawer ID values are `1` to `5`. All slot ID maximums are 24. Slot ID values either begin at 0 or 1, depending on the tray model. Drive trays compatible with E2800 and E5700 controllers have slot ID numbers starting at 0. Drive trays compatible with E2700 and E5600 controllers have slot ID numbers starting at 1. Enclose the tray ID value, the drawer ID value, and the slot ID value in square brackets ([ ]).
`dataPattern`	The method of repeatability that you want to test.

Parameter	Description
`patternNumber`	The hexadecimal data pattern that you want to use to run the test. This number can be any hexadecimal number between `0000` to `FFFF`. You must place `0x` in front to indicate a hexadecimal number.
`maxErrorCount`	The number of errors that you want to accept before terminating the test.
`testIterations`	The number of times that you want to repeat the test.
`timeout`	The length of time in minutes that you want to run the test.

Notes

You can enter more than one type of device to test, and you can enter more than one type of test to run.

Use the `save driveChannel faultDiagnostics` command and the `stop driveChannel faultDiagnostics` command with the `start driveChannel faultDiagnostics` command. These commands are needed to save diagnostic test results to a file and to stop the diagnostic test.

Examples of valid `patternNumber` entries are `0xA5A5`, `0x3C3C`, `8787`, and `1234`.

You also can stop this command at any time by pressing `Ctrl+C`.

Minimum firmware level

7.15

Start drive channel locate

The `start driveChannel locate` command identifies the drive trays that are connected to a specific drive channel by turning on the indicator lights for the drive tray that is connected to the drive channel.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, E5700, EF600 and EF300 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin role.

Context

Use the `stop driveChannel locate` command to turn off the indicator lights on the drive tray.

Syntax

```
start driveChannel [(1 | 2 | 3 | 4 | 5 | 6 | 7 | 8)] locate
```

Parameter

Parameter	Description
`driveChannel`	The identifier number of the drive channel that you want to locate. Valid values for the identifier number for the drive channel are `1`, `2`, `3`, `4`, `5`, `6`, `7`, or `8`. Enclose the drive channel identifier number in square brackets ([ ]).

Minimum firmware level

6.10

7.15 adds an update to the drive channel identifier.

Test email alert configuration

The `start emailAlert test` command allows you to test the alert configuration by sending a sample email message.

Supported Arrays

This command applies to an individual E2800, E5700, EF600 or EF300 storage array. It does not operate on E2700 or E5600 storage arrays.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin or Support Admin role.

Syntax

```
start emailAlert test
```

Parameters

None.

Examples

```
SMcli -n Array1 -c "start emailAlert test;"

The sample alert message was successfully sent to the email addresses.

SMcli completed successfully.
```

Minimum firmware level

8.40

Increase capacity of volume in disk pool or volume group

The `start increaseVolumeCapacity volume` command increases the capacity of either a standard volume or a repository volume in a disk pool or volume group.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, E5700, EF600 and EF300 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin role.

Context

In this command, a standard volume is also called a thick volume.

> You cannot use this command to increase the capacity of a thin volume.

Syntax

```
start increaseVolumeCapacity volume="volumeName"
incrementalCapacity=volumeCapacity
[addDrives=(trayID1,[drawerID1,]slotID1 ... trayIDn,[drawerIDn,]slotIDn)]
```

Parameters

Parameter	Description
`volume`	The name of the volume in a disk pool or volume group for which you want to increase capacity. Enclose the volume name in double quotation marks (" ").
`incrementalCapacity`	The setting to increase the storage size (capacity) for the volume. Size is defined in units of `bytes`, `KB`, `MB`, `GB`, or `TB`. The default value is `bytes`.
`addDrives`	The setting to add new drives to the volume. For high-capacity drive trays, specify the tray ID value, the drawer ID value, and the slot ID value for the drive. For low-capacity drive trays, specify the tray ID value and the slot ID value for the drive. Tray ID values are `0` to `99`. Drawer ID values are `1` to `5`. All slot ID maximums are 24. Slot ID values either begin at 0 or 1, depending on the tray model. Drive trays compatible with E2800 and E5700 controllers have slot ID numbers starting at 0. Drive trays compatible with E2700 and E5600 controllers have slot ID numbers starting at 1. Enclose the tray ID value, the drawer ID value, and the slot ID value in square brackets ([ ]). The `addDrives` parameter can only be used to increase the capacity of a volume group. The parameter cannot be used to increase the capacity of a disk pool.

Notes

In some cases a `drive` parameter might appear as valid input for the command syntax. However, you cannot use the `drive` parameter with this command.

Setting the `incrementalCapacity` parameter, starts a long-running operation that you cannot stop. Long-running operations are performed in the background and do not prevent you from running other commands. To show the progress of long-running operations, use the `show volume actionProgress` command.

The `addDrives` parameter supports both high-capacity drive trays and low-capacity drive trays. A high-capacity drive tray has drawers that hold the drives. The drawers slide out of the drive tray to provide access to the drives. A low-capacity drive tray does not have drawers. For a high-capacity drive tray, you must specify the identifier (ID) of the drive tray, the ID of the drawer, and the ID of the slot in which a drive resides. For a low-capacity drive tray, you need only specify the ID of the drive tray and the ID of the slot in which a drive resides. For a low-capacity drive tray, an alternative method for identifying a location for a drive is to specify the ID of the drive tray, set the ID of the drawer to `0`, and specify the ID of the slot in which a drive resides.

Minimum firmware level

7.83

Start input output controller (IOC) dump

The `start IOCLog` command produces a dump of the IOC log of data transmissions between a host and a controller.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, E5700, EF600 and EF300 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin role.

Context

Controllers are identified as "a " or "b". Each controller can have up to four host channels; each channel is uniquely identified by a number from 1 through 4.

Syntax

```
start IOCLog [(a1 | a2 | a3 | a4 | b1 | b2 | b3 | b4)]
[overwrite=(TRUE | FALSE)]
```

Parameters

Parameter	Description
`controller-channel identifiers`	This parameter specifies the controller and host channel from which to produce the IOC dump. Valid controller identifiers are `a` or `b`, where `a` is the controller in slot A, and `b` is the controller in slot B. Host channels have numerical identifiers. Enclose the controller identifier and host channel identifier in square brackets ([ ]). Valid controller identifier and host channel values are `a1`, `a2`, `a3`, `a4`, `b1`, `b2`, `b3`, `b4`. If you do not specify a controller, the storage management software returns a syntax error.

Parameter	Description
`overwrite`	This parameter causes the new IOC log dump to overwrite an existing dump. To overwrite the existing dump, set this parameter to `TRUE`. The default value is `FALSE`.

Notes

This command generates a debug log from the IOC of the selected controller and stores the data in a compressed format in a persistent memory buffer on the controller. You can retrieve the data from the debug log using the `save IOCLog` command. The controller returns an error for these conditions:

- The controller platform and HIC do not support an IOC dump.
- The specified controller has an outstanding IOC dump and the overwrite parameter is false.
- The specified controller identifier or channel identifier are out of the valid range.

Minimum firmware level

8.20

Start FDE secure drive erase

The `start secureErase drive` command erases all of the data from one or more full disk encryption (FDE) drives so that they can be reused as FDE drives.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, E5700, EF600 and EF300 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Security Admin role.

Context

Run this command only when the FDE drives are no longer part of a secure volume group or disk pool, or when the security key is unknown.

> To erase a FIPS drive when the drive is locked and the security key to unlock it is unavailable, use the `set drive securityID` command.

Syntax

```
[start secureErase (drive [trayID,[drawerID,]slotID] | drives [trayID1
,[drawerID1,]slotID1 ... trayIDn,[drawerIDn,]slotIDn])
```

Parameters

Parameter	Description
`drive` or `drives`	For high-capacity drive trays, specify the tray ID value, the drawer ID value, and the slot ID value for the drive. For low-capacity drive trays, specify the tray ID value and the slot ID value for the drive. Tray ID values are `0` to `99`. Drawer ID values are `1` to `5`. All slot ID maximums are 24. Slot ID values either begin at 0 or 1, depending on the tray model. Drive trays compatible with E2800 and E5700 controllers have slot ID numbers starting at 0. Drive trays compatible with E2700 and E5600 controllers have slot ID numbers starting at 1. Enclose the tray ID value, the drawer ID value, and the slot ID value in square brackets ([ ]). The drives list cannot contain all of the drives in the storage array, or the command will be rejected. To secure erase all drives, run this command twice, specifying the drive list in two separate groups.

Notes

The controller firmware creates a lock that restricts access to the FDE drives. FDE drives have a state called Security Capable. When you create a security key, the state is set to Security Enabled, which restricts access to all FDE drives that exist within the storage array.

Minimum firmware level

7.40

Start snapshot image rollback

The `start snapImage rollback` command starts a rollback operation for a set of snapshot images.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, E5700, EF600 and EF300 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin role.

Context

The content of the base volume changes immediately to match the point-in-time content of the selected snapshot image volume. The base volume immediately becomes available for read/write requests after the rollback operation has successfully completed. To stop a snapshot image rollback operation, use the `stop rollback snapImage` command.

The repository volume that is associated with the snapshot image continues to track any new changes between the base volume and the snapshot image volume that occur after the rollback operation is completed.

You cannot use this command for snapshot images involved in online volume copy.

Syntax

```
start snapImage ["snapImageName"] rollback
```

Parameter

Parameter	Description
`snapImage`	The name of the snapshot image. The name of a snapshot image is comprised of two parts: • The name of the snapshot group • An identifier for the snapshot image in the snapshot group The identifier for the snapshot image can be one of these: • An integer value that is the sequence number of the snapshot in the snapshot group. • `NEWEST` — Use this option when you want to show the latest snapshot image created in the snapshot group. • `OLDEST` — Use this option when you want to show the earliest snapshot image created in the snapshot group. Enclose the snapshot image name in double quotation marks (" ") inside square brackets ([ ]).

Notes

The name of a snapshot image has two parts separated by a colon (:):

- The identifier of the snapshot group
- The identifier of the snapshot image

For example, if you want to start a rollback operation for snapshot image 12345 in a snapshot group that has the name snapGroup1, you would use this command:

```
start snapImage ["snapGroup1:12345"] rollback;
```

To start a rollback operation for the most recent snapshot image in a snapshot group that has the name snapGroup1, you would use this command:

```
start snapImage ["snapGroup1:newest"]rollback;
```

Minimum firmware level

7.83

Test SNMP trap destination

The `start snmpTrapDestination` command tests the connection and identification of the trap receiver for a specific Simple Network Management Protocol (SNMP) community or user. This command tests the trap destination by sending a trap message to the trap receiver.

Supported Arrays

This command applies to an individual E2800, E5700, EF600 or EF300 storage array. It does not operate on E2700 or E5600 storage arrays.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin or Support Admin role.

Syntax

```
start snmpTrapDestination trapReceiverIP=ipAddress
    (communityName="communityName" | (userName="userName" [engineId=(local
| engineId)]))
```

Parameters

Parameter	Description
`trapReceiverIP`	The IP address of the SNMP manager to which you want to send trap messages.
`communityName`	The name of the SNMP community for which you want to send trap messages.
`userName`	The name of the SNMP user for which you want to send trap messages.
`engineId`	The engine ID of the SNMP user for which you want to send trap messages. The engine ID is required if there is more than one USM user with the same user name. The value may be "`local`" to specify the local SNMP agent is the authoritative agent or a hexidecimal digit string to specify a remote SNMP agent engine ID.

Minimum firmware level

8.30

Start SSD cache locate

The `start ssdCache locate` command identifies the Solid State Disks (SSDs) that are logically grouped together to form the SSD cache by blinking the indicator lights on the SSDs.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, and E5700 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800 or E5700 storage array, you must have the Support Admin role.

Context

Use the `stop ssdCache locate` command to turn off the indicator lights on the drives.

Syntax

```
start ssdCache [ssdCacheName] locate
```

Parameters

Parameter	Description
`ssdCache`	The name of the SSD cache that you want to locate. Enclose the SSD cache name in square brackets ([ ]). If the SSD cache name contains special characters or consists only of numbers, you must enclose the SSD cache name in double quotation marks (" ") inside square brackets.

Minimum firmware level

7.84

Start SSD cache performance modeling

The `start ssdCache performanceModeling` command starts performance modeling for the SSD cache.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, and E5700 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800 or E5700 storage array, you must have the Support Admin role.

Context

Performance modeling monitors and measures I/O activity for a period of time and estimates performance for various SSD cache sizes. Performance is estimated using two metrics: cache hit percentage and average response time. The performance modeling data is not available until you stop the operation using the `stop ssdCache performanceModeling` command.

Syntax

```
start ssdCache [ssdCacheName] performanceModeling
```

Parameters

Parameter	Description
`ssdCache`	The name of the SSD cache for which you want to model performance. Enclose the SSD cache name in square brackets ([ ]). If the SSD cache name contains special characters or consists only of numbers, you must enclose the SSD cache name in double quotation marks (" ") inside square brackets.

Notes

Performance modeling ends and the performance modeling data is available when one of the following conditions occurs:

- Run the `stop ssdCache performanceModeling` command.
- Retrieve the performance modeling data using the storage management software.

Performance modeling ends, but no data is available when one of the following conditions occurs:

- You reboot the controller.
- You make any changes to the SSD cache configuration.
- The state of the SSD cache changes.

Minimum firmware level

7.84

Test AutoSupport delivery settings

The `start storageArray autoSupport deliveryTest` command sends a sample AutoSupport bundle collection message so you can test the connection to the destination technical support system using the specified delivery parameters.

Supported Arrays

This command applies to an individual E2800, E5700, EF600 or EF300 storage array. It does not operate on E2700 or E5600 storage arrays.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin or Support Admin role.

Syntax

```
start storageArray autoSupport deliveryTest [replyToEmail="address"]
```

Parameters

Parameter	Description
`replyToEmail`	Allows the user to specify the reply-to email address for the AutoSupport test message. It is only used/required when delivery method is set to email.

Examples

```
SMcli -n Array1 -c "start storageArray autoSupport deliveryTest;"

SMcli -n Array1 -c "start storageArray autoSupport deliveryTest
replyToEmail=\"user@company.com\";"

The sample AutoSupport message was successfully sent to the ASUP gateway
server.

SMcli completed successfully.
```

Minimum firmware level

8.40

Start Storage Array AutoSupport Manual Dispatch

The `start storageArray autoSupport manualDispatch` command initiates a complete support bundle and ASUP dispatch for the bundle.

Supported Arrays

This command applies to an individual E2800, E5700, EF600 or EF300 storage array. It does not operate on E2700 or E5600 storage arrays.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin role.

Context

Due to the amount of time for it to complete, the command returns successful if it can start the process.

Syntax

```
start storageArray autoSupport manualDispatch
```

Parameters

None

Minimum firmware level

8.63

Start storage array configuration database diagnostic

The `start storageArray configDbDiagnostic` command runs a consistency check against a configuration database.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, E5700, EF600 and EF300 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin role.

Syntax

```
start storageArray configDbDiagnostic
[sourceLocation=(disk | onboard) |
diagnosticType=(fileSystem | mirror) |
controller[(a|b)]]
```

Parameters

Parameter	Description
`sourceLocation`	This parameter specifies the location of the database. • `disk` indicates that data comes directly from the database on the drive • `onboard` indicates that data comes from the RPA memory location The default location is `disk`.

Parameter	Description
`diagnosticType`	The level of diagnostic testing that you want to run on the database. You can run one of these levels of testing: `fileSystem` — This option checks the structural integrity of the database. `mirror` — The tests run using this option vary according to the value of the `sourceLocation` parameter: • When the **`sourceLocation`** parameter is set to `disk`, the peer controller initiates a block check. • When the **`sourceLocation`** parameter is set to `onboard` , the peer controller initiates a record check. ⓘ You can run the `mirror` option only from a command line or from the Script editor. This option is not available through the storage management software GUI. The `mirror` option starts a long running operation that you cannot stop. The default value is `fileSystem`.
`controller`	The controller that has the database on which you want to run the diagnostic tests. Valid controller identifiers are `a` or `b`, where `a` is the controller in slot A, and `b` is the controller in slot B. Enclose the controller identifier in square brackets ([ ]).

Notes

This command runs a consistency check against a configuration database. All database records are checked. Error data is written to a file in the data folder on disk automatically. You do not need to specify an output file.

ⓘ Running a consistency check with the `diagnosticType` parameter set to `mirror` and with the `sourceLocation` parameter set to `onboard` can cause the operation to run for a long time. This can have adverse effects on host I/O processing. This operation should be done only under direction from the support organization.

Upon completion of the diagnostic test, the controller firmware returns one of these results:

- `Diagnosis completed without errors. No ZIP file created.`
- `Diagnosis completed with errors. Refer to the ZIP file created at:`

```
...\Install_dir\data\FirmwareUpgradeReports\timestamp_buildNo.zip
```

If the diagnostic test detects an inconsistency in the configuration database, the controller firmware performs these actions:

- Returns a description of the inconsistency
- Saves a ZIP file containing raw binary data

The controller firmware saves the ZIP file to this location:

```
...\Install_dir\data\FirmwareUpgradeReports\timestamp_buildNo.zip
```

You can use the binary data to help determine the cause of the problem, or you can send the file containing the binary data to technical support.

To stop the database configuration diagnostic test, use the `stop storageArray configDbDiagnostic` command.

In addition, you can start the database configuration diagnostic test through the storage management software GUI; however, you cannot stop the database configuration diagnostic test through the storage management software GUI. If you want to stop a running diagnostic test, you must use the `stop storageArray configDbDiagnostic` command.

Minimum firmware level

7.75

7.83 adds these parameters:

- `sourceLocation`
- `diagnosticType`
- `controller`

Start storage array controller health image

The `start storageArray controllerHealthImage controller` command produces a storage array controller health image on storage arrays that support the controller health image feature.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, E5700, EF600 and EF300 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin role.

Context

With firmware version 8.20 the `coreDump` parameter is replaced with the `controllerHealthImage` parameter.

Use this command only under the direction of technical support.

If the storage array does not support the controller health image feature, the command returns an error.

Syntax

```
start storageArray controllerHealthImage controller [(a|b)]
```

Parameters

Parameter	Description
`controller`	This parameter specifies the controller from which to produce the controller health image. Valid controller identifiers are `a` or `b`, where `a` is the controller in slot A, and `b` is the controller in slot B. Enclose the controller identifier in square brackets ([ ]). If you do not specify a controller, the storage management software returns a syntax error.

Notes

This command forces the selected controller to dump its core data to cache. Use the `save storageArray controllerHealthImage` command to save a copy of the cache data to a host file.

Minimum firmware level

7.83

8.20 replaces the `coreDump` parameter with the `controllerHealthImage` parameter.

Test storage array directory server

The `start storageArray directoryServices test` command checks communication with all configured directory servers and validates the server domain configurations.

Supported Arrays

This command applies to an individual E2800, E5700, EF600 or EF300 storage array. It does not operate on E2700 or E5600 storage arrays.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Security Admin role.

Context

This command returns an error if at least one directory server has not already been added to the domain.

Syntax

```
start storageArray directoryServices test
```

Parameters

None.

Examples

```
SMcli -n Array1 -c "start storageArray directoryServices test;"

<test results for each domain configured are returned>

SMcli completed successfully.
```

Test external key management communication

The `start storageArray externalKeyManagement test` command uses the configured credentials (certificates, address of the KMIP server, and the KMIP port number) to verify that the storage array is able to communicate with the external KMIP server.

Supported Arrays

This command applies to an individual E2800, E5700, EF600 or EF300 storage array. It does not operate on E2700 or E5600 storage arrays.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Security Admin role.

Context

This command applies only to external key management.

Syntax

```
start storageArray externalKeyManagement test
```

Parameters

None.

Minimum firmware level

8.40

Start storage array iSNS server refresh

The `start storageArray isnsServerRefresh` command initiates a refresh of the network address information for the iSNS server.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, E5700, EF600 and EF300 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin role.

Context

If the DHCP server is marginal or unresponsive, the refresh operation can take from two to three minutes to complete.

This command is for IPv4 only.

Syntax

```
start storageArray isnsServerRefresh
```

Parameter

None.

Notes

If you used the `set storageArray isnsIPv4ConfigurationMethod` command to set the configuration but did not set the configuration to DHCP, running the `start storageArray isnsServerRefresh` returns an error.

Minimum firmware level

7.10

Start storage array locate

The `start storageArray locate` command locates a storage array by turning on the indicator lights for the storage array.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, E5700, EF600 and EF300 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin role.

Context

Use the `stop storageArray locate` command to turn off the indicator lights for the storage array.

Syntax

```
start storageArray locate
```

Parameters

None.

Minimum firmware level

6.10

Start OCSP server URL test

The `start storageArray ocspResponderUrl test` command checks for an open connection to the specified URL of the Online Certificate Status Protocol (OCSP) server.

Supported Arrays

This command applies to an individual E2800, E5700, EF600 or EF300 storage array. It does not operate on E2700 or E5600 storage arrays.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Security

Admin role.

Parameters

Parameter	Description
`url`	The literal string of the OCSP server's URL. If you do not specify a URL, the command uses the OCSP responder URL found in the certificate revocation settings.

Syntax

```
start storageArray ocspResponderUrl test (url=stringLiteral)
```

Minimum firmware level

8.42

Start storage array syslog test

The `start storageArray syslog test` command allows you to test communications between the storage array and a syslog server.

Supported Arrays

This command applies to an individual E2800, E5700, EF600 or EF300 storage array. It does not operate on E2700 or E5600 storage arrays.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Security Admin role.

Syntax

```
start storageArray syslog test id="<id>"
```

Parameters

Parameter	Description
id	Syslog configuration ID to test. The ID is available using the `show storageArray syslog` command.

Example

```
SMcli -n Array1 -c "start storageArray syslog test
id=\"331998fe-3154-4489-b773-b0bb60c6b48e\";"
SMcli completed successfully.
```

Minimum firmware level

8.42

Start synchronous mirroring synchronization

The `start syncMirror primary synchronize` command starts synchronous mirroring synchronization.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, and E5700 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800 or E5700 storage array, you must have the Storage Admin role.

Context

In previous versions of this command the feature identifier was `remoteMirror`. This feature identifier is no longer valid and is replaced by `syncMirror`.

Syntax

```
start syncMirror primary ["volumeName"] synchronize
```

Parameter

Parameter	Description
`primary`	The name of the primary volume for which you want to start synchronization. Enclose the primary volume name in double quotation marks (" ") inside of square brackets ([ ]).

Minimum firmware level

6.10

Test syslog configuration

The `start syslog test` command sends a sample message to test the syslog configuration.

Supported Arrays

This command applies to an individual E2800, E5700, EF600 or EF300 storage array. It does not operate on E2700 or E5600 storage arrays.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin or Support Admin role.

Syntax

```
start syslog test
```

Parameters

None.

Examples

```
SMcli -n Array1 -c "start syslog test;"

The sample alert message was successfully sent to the syslog servers.

SMcli completed successfully.
```

Minimum firmware level

8.40

Start tray locate

The `start tray locate` command locates a tray by turning on the indicator light.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, E5700, EF600 and EF300 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin role.

Context

Use the `stop tray locate` command to turn off the indicator light for the tray.

Syntax

```
start tray [trayID] locate
```

Parameter

Parameter	Description
`tray`	The tray that you want to locate. Tray ID values are `0` to `99`. Enclose the tray ID value in square brackets ([ ]).

Minimum firmware level

6.10

Start volume initialization

The `start volume initialize` command starts the formatting of a volume in a storage array.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, E5700, EF600 and EF300 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage

Admin role.

Context

Formatting a volume starts a long-running operation that you cannot stop.

Syntax

```
start volume [volumeName] initialize
```

Parameter

Parameter	Description
`volume`	The name of a volume that you want to format. Enclose the volume name in square brackets ([ ]). If the volume name has special characters or numbers, you must enclose the name in double quotation marks (" ") inside square brackets.

Minimum firmware level

6.10

Initialize thin volume

The `start volume initialize` command initializes or re-initializes a thin volume.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, E5700, EF600 and EF300 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin role.

Context

The action depends on the parameters used:

- Used without any of the optional parameters, this command deletes the data on the thin volume. The repository volume capacity is not affected.
- Used with any of the optional parameters, this command cause reinitialization and repository volume actions.

Initializing a thin volume starts a long-running operation that you cannot stop.

Syntax

```
start volume [volumeName] initialize
[existingRepositoryLabel=existingRepositoryName]
[diskPool=diskPoolName capacity=capacityValue]
[retainRepositoryMembers=(TRUE|FALSE)]
```

Parameter

Parameter	Description
`volume`	The name of the volume on which you are starting the initialization. Enclose the volume name in square brackets ([ ]). If the volume name contains special characters or numbers, you must enclose the volume name in double quotation marks (" ") inside square brackets.
`existingRepositoryLabel`	This parameter replaces the repository volume by the candidate volume specified. • The value specified is an existing repository volume user label. The volume specified must be an unused repository volume with the name in the proper form. • If the newly specified repository volume is on a different disk pool, the thin volume will change ownership to that pool. • The old repository volume will be deleted by default. If the existing repository volume name contains special characters or consists only of numbers, you must enclose the volume name in double quotation marks (" ").
`diskPool`	The name of the disk pool in which you want to create a new repository volume with the specified capacity. If the disk pool name contains special characters or consists only of numbers, you must enclose the disk pool name in double quotation marks (" "). You must use this parameter with the `capacity` parameter to create a new repository volume with the specified capacity.

Parameter	Description
`capacity`	The size that you want to set for the repository volume that you are creating. Size is defined in units of `bytes`, `KB`, `MB`, `GB`, or `TB`. The minimum physical capacity is 4 GB. The maximum physical capacity is 257 TB. You must use this parameter with the `diskPool` parameter to create a new repository volume with the specified capacity.
`retainRepositoryMembers`	If this parameter is set to `TRUE`, the old repository is retained. By default, the old repository is deleted. This parameter is ignored if the existing repository is reused.

Notes

If you do not specify a volume with the `volume` parameter, this command resets the metadata in the repository and, in effect, causes the thin volume to appear empty to the host. If you specify a volume with the **`volume`** parameter, that volume is either replaced by a newly created volume or by an existing volume if you specify one with the `existingRepositoryLabel` parameter. If you specify an existing volume with the `existingRepositoryLabel` parameter that is in a different disk pool, the thin volume will change ownership to the new disk pool.

The volume parameters of the thin volume, such as virtual capacity, quota and warning threshold, retain their previous values after you reinitialize the thin volume.

Immediate Availability Format (IAF) does not apply to volumes greater than 64 TB.

The following table lists the capacity limits for a thin volume.

Type of Capacity	Size
Minimum virtual capacity	32 MB
Maximum virtual capacity	256 TB
Minimum physical capacity	4 GB
Maximum physical capacity	257 TB

Thin volumes support all of the operations that standard volumes do with the following exceptions:

- You cannot change the segment size of a thin volume.
- You cannot enable the pre-read redundancy check for a thin volume.

- You cannot use a thin volume as the target volume in a volume copy.
- You cannot use a thin volume in a Synchronous Mirroring operation.

If you want to change a thin volume to a standard volume, use the volume copy operation to create a copy of the thin volume. The target of a volume copy is always a standard volume.

Minimum firmware level

7.83

8.30 increases the maximum capacity of a thin volume to 256 TB.

Start volume group defragment

The `start volumeGroup defragment` command starts a defragment operation on the specified volume group.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, E5700, EF600 and EF300 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin role.

Context

Defragmenting a volume group starts a long-running operation that you cannot stop.

Syntax

```
start volumeGroup [volumeGroupName] defragment
```

Parameter

Parameter	Description
`volumeGroup`	The name of the volume group that you want to defragment. Enclose the volume group name in square brackets ([ ]).

Notes

Host I/O errors might result in the volume groups with more than 32 volumes. This operation also might result in internal controller reboots because the timeout period ends before the volume group definition is set. If you experience this issue, quiesce the host I/O operations, and try the command again.

Minimum firmware level

6.10

Start volume group export

The `start volumeGroup export` command moves a volume group into an Exported state.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, E5700, EF600 and EF300 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin role.

Context

Then you can remove the drives that comprise the volume group and reinstall the drives in a different storage array.

Do not perform these steps without first performing the steps listed in Learn about volume group migration.

Within the volume group, you cannot move volumes that are associated with the features from one storage array to another storage array.

Syntax

```
start volumeGroup [volumeGroupName] export
```

Parameter

Parameter	Description
`volumeGroup`	The name of the volume group that you want to export. Enclose the volume group name in square brackets ([ ]).

Notes

When this command is successful, you can run the `start volumeGroup import` command to finish moving the volume group to a Complete state, which makes the volume group available to the new storage array.

If this command is unsuccessful because hardware problems prevented the completion of the export, use the

`set volumeGroup forceState` command. The `set volumeGroup forceState` command lets you use the `start volumeGroup import` command to import a volume group.

After the volume group is in an Exported state or a Forced state, you can remove the drives that comprise the volume group from the storage array. You can reinstall the drives in a different storage array.

Minimum firmware level

7.10

Start Volume Group Full Provisioning

The `start volumeGroup fullProvisioning` command starts a full provisioning operation on all volumes in the disk pool and optionally disables resource provisioning on the volume group.

Supported Arrays

This command applies to any individual storage array, including the EF600 and EF300 arrays; as long as all SMcli packages are installed.

Roles

To execute this command on an EF600 and EF300 storage array, you must have the Storage Admin role.

Context

The Resource Provisioning feature improves SSD wear-life and increases write performance by leaving a larger portion of the drive blocks in an unallocated state than a standard volume. A resource-provisioned volume is a thick volume in an SSD volume group or pool, where drive capacity is allocated (assigned to the volume), but the drive blocks are deallocated (unmapped) during volume creation. Drive blocks are allocated as needed to complete host write IOs. Host unmap operations can return drive blocks back to the unallocated state . Resource Provisioning also eliminates time-bound background initialization, allowing for large volumes to be initialized quickly.

Resource Provisioned volumes are supported only on SSD volume groups and pools, where all drives in the group or pool support the NVMe Deallocated or Unwritten Logical Block Error Enable (DULBE) error recovery capability. Performance improvement varies with each drive model and capacity.

The full provisioning format ensures all blocks needed by the volumes in the volume group are fully mapped on the drives. This command is only applicable to resource provisioned volume group. If the option to `disableResourceProvisioning` is not set to `FALSE`, then the volumes will still be resource provisioned and new volumes created on the volume group will be resource provisioned. If the option to disable resource provisioning is set to `TRUE`, then the volumes will no longer be resource provisioned and new volumes created on the volume group will not be resource provisioned.

Syntax

```
start volumeGroup[volumeGroupName] fullProvisioning
[disableResourceProvisioning=(TRUE | FALSE)]
```

Parameters

Parameter	Description
`volumeGroup`	The volume group you want to start the full provisioning operation. Enclose the volume group name in square brackets ([ ])
`disableResourceProvisioning`	The setting to specify if resource provisioning should be disabled after the full provisioning operation completes. To skip disabling resource provisioning, set this to `FALSE`. The default value is `TRUE`. To re-enable resource provisioning on a volume group and all associated volumes, use the `Start Volume Group Resource Provisioning` command.

Minimum firmware level

11.72

Start volume group import

The `start volumeGroup import` command moves a volume group into a Complete state to make a newly introduced volume group available to its new storage array.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, E5700, EF600 and EF300 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin role.

Context

The volume group must be in an Exported state or a Forced state before you run this command. Upon successfully running the command, the volume group is operational.

Within the volume group, you cannot move volumes that are associated with the features from one storage array to another storage array.

Syntax

```
start volumeGroup [volumeGroupName] import
```

Parameter

Parameter	Description
`volumeGroup`	The name of the volume group that you want to import. Enclose the volume group name in square brackets ([ ]).

Notes

Higher-level volumes that are specifically related to features (Synchronous Mirroring, Volume Copy, mapping, and persistent reservations) are removed as part of the import operation.

You must run the `show volumeGroup importDependencies` command before you run the `start volumeGroup import` command.

Minimum firmware level

7.10

Start volume group locate

The `start volumeGroup locate` command identifies the drives that are logically grouped together to form the specified volume group by blinking the indicator lights on the drives.

Supported Arrays

This command applies to any individual storage array, including the E2700, E5600, E2800, E5700, EF600 and EF300 arrays, as long as all SMcli packages are installed.

Roles

To execute this command on an E2800, E5700, EF600, or EF300 storage array, you must have the Storage Admin role.

Context

Use the `stop volumeGroup locate` command to turn off the indicator lights on the drives.

Syntax

```
start volumeGroup [volumeGroupName] locate
```

Parameter

Parameter	Description
`volumeGroup`	The name of the volume group for which you want to locate the drives that belong to that volume group. Enclose the volume group name in square brackets ([ ]).

Minimum firmware level

6.16

Start Volume Group Resource Provisioning

The `start volumeGroup resourceProvisioning` command enables resource provisioning on a given volume group and starts a resource provisioning enablement asynchronous operation on each volume in the volume group. Resource provisioning requires that all the drives in the volume group support NVMe's DULBE feature.

Supported Arrays

This command applies to any individual storage array, including the EF600 and EF300 arrays; as long as all SMcli packages are installed.

Roles

To execute this command on an EF600 and EF300 storage array, you must have the Storage Admin or Support Admin roles.

Context

To disable resource provisioning on a volume group, use the full provisioning command with the option to disable resource provisioning. A volume group will be resource provisioned when created if all the drives are DULBE capable and the storage array's `resourceProvisionedVolumes` setting is `true`.

Syntax

```
start volumeGroup[volumeGroupName] resourceProvisioning
```

Parameters

Parameter	Description
`volumeGroupName`	The volume group you want to enable the resource provisioning feature. Enclose the volume group name in square brackets ([ ]).

Minimum firmware level

11.73

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