# Sun StorageTek™ Common Array Manager CLI Guide

Sun Microsystems, Inc.
www.sun.com

Part No. 821-0821-10
February 2010 Revision A

Submit comments about this document by clicking the Feedback[+] link at: http://docs.sun.com

Please
Recycle

# Contents

# Preface

The *Sun StorageTek Common Array Manager CLI Guide* describes the commands in the `sscs` command line interface (CLI) for the Sun™ Storage J4200, J4400, and J4500 arrays, Sun Storage F5100 Flash Array, Sun StorEdge™ 6130 array, Sun StorageTek™ 6140 and 6540 arrays, Sun Storage 6180 array, Sun Storage 6580 and 6780 arrays, Sun StorageTek 2500 Series arrays, FlexLine™ 240, 280, and 380 Systems, and Sun Blade™ 6000 disk module.

# Related Documentation

| Application | Title |
|---|---|
| Software installation information for RAID arrays | *Sun StorageTek Common Array Manager Software Installation Guide* |
| Software installation, operation, and configuration information for Sun Storage J4000 and F5000 array families, and Sun Blade 6000 array families | *Sun StorageTek Common Array Manager User Guide for Open Systems* |
| Late-breaking information not included in the information set | *Sun StorageTek Common Array Manager Release Notes*<br>Release Notes for your array hardware |

In addition, Sun StorageTek Common Array Manager includes the following documentation integrated within the software:

- Sun StorageTek Common Array Manager online help

  Available via the "Help" button within the Sun StorageTek Common Array Manager browser interface.

- Service Advisor

  Provides guided, FRU-replacement procedures with system feedback for all arrays. You can access Service Advisor from the Sun StorageTek Common Array Manager browser interface.

- `sscs` man page commands

  Provides help on man page commands available on a management host or on a remote CLI client.

# Documentation, Support and Training

You can view, print, or purchase a broad selection of other Sun documentation, including localized versions, at:

`http://www.sun.com/documentation`

Support information for this product can be found at:

`http://www.sun.com/support`

Training information for this product can be found at:

`http://www.sun.com/training/`

If you have technical questions about this product that are not answered in this document, go to:

`http://www.sun.com/service/contacting`

# Sun Welcomes Your Comments

Sun is interested in improving its documentation and welcomes your comments and suggestions. You can submit your comments by clicking the Feedback[+] link at:

http://docs.sun.com

Please include the title and part number of your document with your feedback:

*Sun StorageTek Common Array Manager CLI Guide,* part number 821-0821-10.

CHAPTER 1

# Overview

This chapter provides an overview of the `sscs` administration command for Sun StorageTek and Sun Storage arrays. It contains the following sections:



## Overview of the `sscs` Command

The **sscs** command line interface (CLI) enables you to manage and monitor disk arrays. The CLI can be installed on a local data host or a remote management host.

- Local CLI

  This is the version used in a CLI-only installation of CAM, and should be used if you are root user on the local host. This version does not pass commands through the web server and provides better performance by eliminating the need to authenticate the user. There is no guest-only version of the local **sscs** command.

  Directory locations for local CLI:

  - Solaris: /opt/SUNWstkcam/bin/sscs
  - Linux: /opt/sun/cam/bin/sscs
  - Windows: Program Files\Sun\Common Array Manager\bin

- Remote CLI

  This version is required if you are not on the CAM management station or if you must authenticate as a non-root user. This version passes all requests through the web server, and is more secure than the Local CLI since all traffic is encrypted.

  Directory locations for remote CLI:

  - Solaris: /opt/se6x20/cli/bin/sscs
  - Linux: /opt/sun/cam/se6x20/cli/bin/sscs
  - 32 Bit Windows: c:\Program Files\Sun\Common Array Manager\Component\sscs\bin
  - 64 Bit Windows: c:\Program Files (x86)\Sun\Common Array Manager\Component\sscs\bin

---

**Note –** When using the remote CLI with Windows, list parameters in commands must be enclosed in double quotes. For example:

```
sscs list template "F5100-dual-host,J4500-quad-host"
```

---

# Understanding Command Syntax

Type the `sscs` command with its options from a terminal command line. You can use only the indicated option or options for that subcommand.

---

**Note –** Command syntax can vary based upon the array type (e.g., F5100, 6140, etc.) and specific array names as related to installed firmware versions. See TABLE 1-2 for proper usage of the **--help** command to obtain the correct syntax for an array type or specific array name.

---

TABLE 1-1 describes the conventions that apply to the subcommands and variables.

**TABLE 1-1** Syntax Conventions for sscs Commands

| Convention | Description |
|---|---|
| **Bold** | Text in bold should be typed exactly as shown. |
| *Italic* | Text in italics is variable and should be replaced with the name or value used at your site. Multiple variables can be separated by a comma, but not with a space.<br>Example:<br>**`sscs list volume`** `TestVOL,fvm13311` |
| [ ] (square brackets) | Text in square brackets is optional. |
| \| (vertical bar) | Text separated by a vertical bar is exclusive. Specify only one of the options. |
| { } (braces) | Text inside braces is a required argument.<br>Numbers in braces, e.g. {0} and {1}, represent variables in some error messages. |
| Short and long names | The **sscs** command accepts short or long names for each option. Short name options require a single hyphen (-). Long name options require a double hyphen (--). |
| Special characters in names | Do not use spaces, commas, colons (:), or the special characters ?,*,!,@,%, or & as a character in any name you specify unless you are prepared to escape them in the shell.<br>Any characters that you enclose within quotation marks are acceptable for names. |

# Getting Help with Commands and Their Syntax

Use the **--help** or **-H** command to view all available commands, subcommands, and their syntax. TABLE 1-2 describes how to use the **--help** command:

**TABLE 1-2** How to Use the --help Command

| Task | Command Syntax |
|---|---|
| Display a command list non-specific to an array type. | **sscs --help** |
| Display a command list specific to an array type or array name. | **sscs -H -a** <*array-type* \| *array-name*><br><br>Command example:<br>**sscs --help -a** 2510<br>Sample Command Output:<br>`add`<br>`create`<br>`delete`<br>`disable`<br>`enable`<br>`...`<br>`revive`<br>`service`<br>`snapshoot`<br>`unmap`<br>`unregister` |

**TABLE 1-2** How to Use the --help Command

| Task | Command Syntax |
|---|---|
| Display the subcommands available for a command for a specific array type or array name. | **sscs** <*subcommand*> **-H -a** <*array-type* \| *array-name*><br><br>Command example:<br>**sscs list --help -a** jbod1<br>Sample Command Output:<br>`alarm`<br>`array`<br>`device`<br>`...`<br>`storage-system`<br>`template`<br>`userrole` |
| Display syntax for a command/subcommand pair for a specific array type or array name. | **sscs** <*subcommand*> **--help -a** <*array-type* \| *array-name*> <*resource-type*><br><br>Command example:<br>**sscs list --help -a** j4400 **alarm**<br>Sample Command Output:<br>`list [-s\|--severity <0\|1\|2\|3>] [-f\|--faultdevtype <2510\|2530\|2540\|j4200\|j4400\|j4500\|F5100\|6120\|6130\|6140\|6540\|6580\|6780\|FLX240\|FLX280\|FLX380\|B6000\|NEM\|...>] [-a\|--advisor] [-S\|--Summary] alarm [string[,string...]]` |

# Logging In to the sscs Environment

If you are using the local CLI, no login is required; however, you must have root access in Solaris and Linux or administrator privileges in Windows.

A login is required when you use the remote CLI. To log into the remote CLI, follow these steps:

1. **From a terminal window, log in to the management host where sscs resides.**
2. **Enter the following commands:**

   # **cd** *CLI_directory*

   Refer to "Overview of the sscs Command" on page 1 for directory information.

   # **./sscs login -h** *localhost* **-u** *<user-name>*

3. **Enter the password for your sscs user account.**

For a thorough description about logging into the sscs using the remote CLI, see the login command and all of its options, go to "login" on page 55.

# Exit Status Codes

Upon command completion, the sscs CLI reports the following exit status codes:

**TABLE 1-3** Exit Status Codes

| Exit Status Code | Description |
|---|---|
| 0 | Successful completion |
| 15 | Object not found error |
| 25 | Command parsing failure |
| 30 | Command validation error |
| 50 | Application error |
| 75 | System error |
| 100 | Nonspecific error |

# Command Quick Reference

There are three categories of CLI commands:

- Monitoring and General Administration Commands

  These commands are supported on all arrays supported by CAM, with only a few noted exceptions.

- Array Configuration Commands

  These commands are supported only on those arrays that have one or more RAID controllers.

- SAS Domain Access Configuration Commands

  These commands are supported only on Sun just-a-bunch-of-disks (JBOD) arrays and are specific to Serial Attached SCSI (SAS) domain access configuration.

For a complete listing of arrays supported by CAM, refer to the release notes.

# Monitoring and General Administration Commands

The following table lists the commands used to monitor the array and perform general administration tasks. These commands are for all Sun arrays, including Sun Storage J4200, J4400, and J4500 arrays, Sun Storage F5100 Flash Array, Sun StorEdge 6130 array, Sun StorageTek 6140 and 6540 arrays, Sun Storage 6180 array, Sun Storage 6580 and 6780 arrays, Sun StorageTek 2500 Series arrays, FlexLine 240, 280, and 380 Systems, and Sun Blade 6000 disk module.

**TABLE 1-4** Monitoring and General Administration Commands

| Command | Description |
|---|---|
| add notification | Set up email or SNMP trap notification. |
| add registeredarray | Discovers an array or all arrays on the same subnet as the management host and registers them. |
| add userrole | Adds a user name to the user access list and defines the user privileges. |
| list alarm | Provides detailed information on a specified alarm or summary information on all alarms |
| list array | Lists detailed information about specified arrays or all array names. |
| list date | Lists the current date and time for the array in hours, minutes, and seconds. (Not supported by j4500 and B6000 JBODs.) |
| list device | List the details of a device or the devices being monitored. |
| list devices | List an overview of a device or the devices being monitored. |
| list disk | List the disk information on an array. |
| list erc | Lists the error return code of the immediately preceeding sscs command. |
| list event | Lists the Fault Management Service (FMS) event log information. |
| list firmware | Lists the firmware versions of the field-replaceable units (FRU) in this device. |
| list fru | Lists the field-replaceable units (FRUs) in this device. |
| list jobs | Lists job IDs and status associated with the specified array and optionally specified job ID |
| list log | Lists the user-initiated actions performed for all registered arrays. |
| list mgmt-sw | Lists the management software application that you are logged into. |
| list notification | Lists the remote notification provider and its status. |

**TABLE 1-4** Monitoring and General Administration Commands

| Command | Description |
|---|---|
| list registeredarray | Lists registered array information |
| list storage-system | Lists detailed information about one or more arrays. |
| list site | Lists pertinent information on the site. |
| list userrole | Lists the user name and role defining the user's array privileges. |
| login | Log in to the **sscs** command-line interface (CLI). |
| logout | Logs out of the remote sscs command-line interface session. |
| modify agent | Modify the fault management agent parameters. |
| modify array | Modifies the name assigned to the array. |
| modify firmware | Modifies the firmware versions of the specified field-replaceable units (FRUs) of the specified array |
| modify mgmt-sw | Stores the specified storage system name for the session. This command is useful for repeated operations with an array. |
| modify site | Modifies the site properties for this instance of CAM. |
| modify storage-system | Modifies the array information |
| modify userrole | Change the user role or the IP address from which the user can log in. |
| register storage-system | Registers a storage system with the host |
| register sun-connection | Registers CAM software and all monitored arrays with Auto Service Request (ASR). |
| remove alarm | Removes the current alarms. |
| remove notification | Removes a local or remote notification. |
| remove registeredarray | Removes one or more arrays from the list of registered arrays. |
| remove userrole | Removes a user role assigned to a user name. |
| service contact | Tests connectivity to a specified array (inband communication test). |
| service disable | Disables a target drive in a specified array. |
| service enable | Enables a target drive in a specified array. |
| service locate | Turns on the locator LED for an array, drive, or tray. |
| service print | Prints physical information available for a specified array. |
| service set | Changes the name of a specified array. |

**TABLE 1-4** Monitoring and General Administration Commands

| Command | Description |
|---|---|
| unregister storage-system | Unregisters an array from the list of registered storage systems. |
| unregister sun-connection | Stops notifications of system health and performance to Sun using the Auto Service Request (ASR) feature. |
| version | Shows the version of the CAM software that you are running on the management host, as well as the version of the SSCS client. |

# Array Configuration Commands

This section identifies the commands used to configure an array. These commands are supported only on those arrays that have one or more RAID controllers, including the Sun StorEdge 6130 array, Sun StorageTek 6140 and 6540 arrays, Sun Storage 6180 array, Sun Storage 6580 and 6780 arrays, Sun StorageTek 2500 Series arrays, and FlexLine 240, 280, and 380 Systems.

**TABLE 1-5** Array Configuration Commands

| Command | Description |
|---|---|
| add hostgroup | Adds hosts to a host group. |
| add license | Adds a license to the specified array. |
| create host | Creates a storage host. |
| create hostgroup | Creates a storage host group. |
| create initiator | Creates an initiator. |
| create iscsi initiator | Creates an iSCSI initiator on a host. |
| create pool | Creates an empty storage pool on the array |
| create profile | Creates a storage profile on the array. |
| create repset | Creates a storage replication set using a peer World Wide Name or remote array name (not applicable to 2500 Series). |
| create snapshot | Creates a snapshot for the specified volume. |
| create vdisk | Creates a virtual disk. |
| create volume | Creates a volume within a specified pool. |
| create volume-copy | Creates a copy of the volume (not applicable to 2500 Series). |
| delete host | Deletes one or more hosts. |
| delete hostgroup | Deletes one or more host groups. |
| delete initiator | Deletes one or more initiators. |
| delete iscsi-session | Deletes an iscsi-session |
| delete pool | Deletes one or more pools. |
| delete profile | Deletes one or more profiles. |
| delete repset | Deletes one or more replication sets (not applicable to 2500 Series). |
| delete snapshot | Deletes one or more snapshots. |
| delete vdisk | Deletes one or more named virtual disks. |
| delete volume | Deletes one or more named volumes. |
| delete volume-copy | Deletes a volume-copy (not applicable to 2500 Series). |

**TABLE 1-5** Array Configuration Commands

| Command | Description |
|---|---|
| disable snapshot | Disables one or more snapshots. |
| export array | Renders an extensible markup language (XML) representation of the array |
| export profile | Exports one or more profiles into an XML representation. |
| fail disk | Sets a disk to the failed state. |
| import array | Applies an array configuration file to the specified array. |
| import profile | Imports one or more profiles from a specified XML file. |
| initialize disk | Initializes a disk. |
| list controller | Lists configuration information for the specified controller |
| list fcport | Lists Fibre Channel port information for the controller of the specified array. |
| list host | Lists the host names and details for an individual host. |
| list hostgroup | Lists host group name and hosts for an individual host group. |
| list initiator | Lists the initiators and provides a description of each. |
| list iperformance | Displays iSCSI performance statistics for the 2510 array and enables you to define the type of iSCSI performance statistics to monitor. |
| list iscsi-port | Lists iSCSI ports. |
| list iscsi-session | Lists iSCSI sessions |
| list iscsi-target | Lists iSCSI target name configured for the specified array. |
| list license | Shows all licenses that are associated with the array, along with related licensing details (serial number, controller serial number, and further details) |
| list mapping | Lists mappings for the array. You can filter the output by specifying the name of a storage domain, a host, or a host group. |
| list os-type | Shows all of the operating systems that are supported by the array. The values returned can be used in subsequent requests to create or modify initiators, or to modify the default host type of the array. |
| list performance | Shows detailed performance statistics. You can use the following options only if a single array is specified. |
| list pool | Lists storage pool information. |
| list profile | Lists the named storage profiles |

**TABLE 1-5** Array Configuration Commands

| Command | Description |
|---|---|
| list repset | Lists replication set information (not applicable to 2500 Series). |
| list sasport | Lists SAS port information. |
| list snapshot | Lists the specified snapshot or snapshots associated with this array. |
| list tray | Lists information about one or more storage trays in the array. |
| list vdisk | Lists virtual disk (vdisk) or virtual disks information associated with this array. |
| list volume | Lists volume information. |
| list volume-copy | Lists volume copy information. If neither the source volume nor the target volume is specified, a summary of all volume copies is listed. If the source volume or the target volume is specified, a detailed listing of each is generated. |
| map host | Maps one or more volumes and snapshots to a host. Any previous mappings for the given volumes and snapshots are removed. |
| map hostgroup | Maps one or more volumes and snapshots to a host group. Any previous mappings for the given volumes or snapshots are removed. |
| map initiator | Maps one or more initiators to a volume or snapshot. |
| map snapshot | Maps one or more snapshots to a host or host group. If no host or host group is specified, the snapshot or snapshots are mapped into the Default partition. |
| map volume | Maps one or more volumes to a host or host group. Any previous mappings for the given volume or volumes are removed. |
| modify array | Modifies the configuration of the specified array |
| modify controller | Modifies the controller settings. |
| modify date | Modifies the date on the array, allowing you to set the time on the array, or to synchronize the time with the management host (that is, setting the array's time to the management host's time.) |
| modify disk | Specifies the disk role. |
| modify fcport | Modifies the Fibre Channel port settings on the specified array. |
| modify host | Modifies the host name. |
| modify hostgroup | Modifies the host group name. |
| modify initiator | Modifies an initiator. |
| modify iperformance | Modifies the settings for iSCSI performance data. |
| modify iscsi-port | Modifies an iSCSI port. |
| modify iscsi-target | Modifies an iSCSI target. |

**TABLE 1-5** Array Configuration Commands

| Command | Description |
|---|---|
| modify jobs | Cancels or prioritizes a running or outstanding job. |
| modify license | Activates replication set licenses (applicable to 2500 Series only when running firmware version 07.35.*nn.nn* or higher). |
| modify notification | Modifies notification options. |
| modify performance | Modifies settings for performance monitoring |
| modify pool | Modifies the name or description of the storage pool or the profile with which this pool is associated. |
| modify profile | Modifies a storage profile on the array. |
| modify registeredarray | Change the locally stored password for a registered array. |
| modify repset | Modifies the mode, consistency group, or replication priority of the specified replication set (not applicable to 2500 Series). |
| modify snapshot | Modifies the specified snapshot |
| modify tray | Modifies information about one or more storage trays in the array. |
| modify vdisk | Specifies modifications to a virtual disk. |
| modify volume | Modifies any of a volume's attributes |
| modify volume-copy | Modifies a volume copy (not applicable to 2500 Series). |
| offline vdisk | Sets a virtual disk offline. |
| online vdisk | Sets a virtual disk online. |
| reconstruct disk | Initiates a disk reconstruction. |
| remove hostgroup | Removes one or more hosts from a host group. |
| remove license | Removes the replication set feature license from the specified array (not applicable to 2500 Series). |
| remove notification | Removes a local or remote notification provider. |
| reset array | Resets the specified array. |
| reset controller | Resets the specified controller. |
| resnap snapshot | Resnaps one or more existing snapshots. |
| revive disk | Attempts to bring a disk to the optimal state. |
| revive vdisk | Revives a virtual disk |
| service fail | Places a field-replaceable unit of an array into a failed state. |
| service redistribute | Redistributes volumes back to their preferred owners. |

**TABLE 1-5** Array Configuration Commands

| Command | Description |
|---|---|
| service revive | Attempts to place the array controller or disk drive into the optimal state. This can create complications. Do not initiate this command without first consulting Sun Customer Service personnel. |
| snapshoot volume | Creates and manages snapshots. |
| unmap host | Unmaps one or more snapshots or volumes from a host. |
| unmap hostgroup | Unmaps one or more snapshots or volumes from a host group. |
| unmap initiator | Removes the mapping from one or more initiators to a volume or snapshot. |
| unmap snapshot | Removes the mapping from one or more snapshots to a host or hostgroup. |
| unmap volume | Unmaps one or more volumes from a host or host group. |

# SAS Domain Access Configuration Commands

This section identifies commands used in SAS domain access configuration. These commands are supported only on Sun JBOD arrays, including Sun Storage J4200, J4400, and J4500 arrays, Sun Storage F5100 Flash Array, and the Sun Blade 6000 disk module.

**TABLE 1-6** SAS Domain Access Configuration Commands

| Command | Description |
|---|---|
| disable sas-domain | Disables access configuration for a specified SAS domain. |
| enable sas-domain | Enables access configuration for a specified SAS domain. |
| export sas-domain | Copies the configuration of the specified SAS domain to a specified template file. |
| import sas-domain | Restores configuration information for a specified SAS domain from a specified template file. |
| list host-agent | Lists the host-agents in a specified SAS domain or the details for specified host-agents in a specified SAS domain. |
| list sas-domain | Lists SAS domains or the details of specified SAS domains. |
| list sas-zone | Provides a list of all SAS access configuration (zone) groups and details of those groups. |
| list template | Lists a summary of all SAS domain templates known by the current management station, or lists the details of specified templates. |
| modify sas-domain | Modifies the specified properties of a SAS domain. |
| reset sas-domain | Returns the specified SAS domain to the default settings. |

CHAPTER 2

# Common Tasks

This chapter provides examples of how to perform a basic task using a series of CLI commands. This chapter contains the following sections:



## Discovering Arrays

TABLE 2-1 identifies the sequence of CLI commands used when registering arrays with CAM.

**TABLE 2-1** CLI Commands Used When Discovering Arrays

| CLI Command | Description |
|---|---|
| sscs list storage-system<br>sscs list devices | Lists the arrays that are already registered with CAM. |
| sscs register -d storage-system | Directs CAM to discover all available arrays. |
| sscs list storage-system<br>sscs list devices | Lists all arrays registered, including the newly discovered arrays. |
| sscs unregister storage-system | Unregisters select arrays. |

# Command Sequence

1. **Identify the names of the arrays currently registered with CAM:**

```
sscs list storage-system
Array: Snoopy1
Array: Snoopy2
Array: Linus1
```

---

**Note –** The command **list devices** can also be used to identify the names of arrays currently registered with CAM.

---

2. **Discover all arrays:**

```
sscs register -d storage-system
Name                Type Network Address Serial Number
------------------- ---- --------------- ----------------------
Snoopy1             6140 xx.xx.xx.103    SUN.xxxxx-00.xxxxxxxxxx
unlabeled           6140 xx.xx.xx.112    SUN.xxxxx-00.xxxxxxxxxx
Onyx                2540 xx.xx.xx.9      SUN.xxxxx-00.xxxxxxxxxx
Hal                 6140 xx.xx.xx.72     SUN.xxxxx-00.xxxxxxxxxx
Linus1              6140 xx.xx.xx.16     SUN.xxxxx-00.xxxxxxxxxx
Snoopy2             6140 xx.xx.xx.106    SUN.xxxxx-00.xxxxxxxxxx
Johnny5             6140 xx.xx.xx.67     SUN.xxxxx.
Pedro1              2540 xx.xx.xx.6      SUN.xxxxx-00.xxxxxxxxxx
```

3. **Unregister the array Onyx:**

```
sscs unregister storage-system Onyx
```

4. **Verify the list of registered arrays to ensure that Onyx is no longer registered:**

```
sscs list storage-system
Array: Snoopy1
Array: ulabeled
Array: Hal
Array: Linus1
Array: Snoopy2
Array: Johnny5
Array: Pedro1
```

# Creating a Volume

TABLE 2-2 identifies the sequence of CLI commands used when creating a volume.

**TABLE 2-2** CLI Commands Used When Creating a Volume Snapshot

| CLI Command | Description |
|---|---|
| sscs list volume | List volumes that already exist on a specified array. |
| sscs create volume | Create a new volume on an array. |
| sscs list jobs | Verify that the volume creation job is in progress. |
| sscs list volumes | Verify the volume characteristics. |
| sscs list vdisk | Verify the characteristics of the virtual disk used by the newly created volume. |
| sscs list host | Identify the hosts available for mapping to the volume. |
| sscs map volume | Map the volume to a host. |

## Sample Data

In this example, the following sample data are used in the execution of the commands:

**TABLE 2-3** Sample Data

| | |
|---|---|
| Array Name: | den-toi-6130 |
| Pool Name: | den-pool-64k-r5 |
| Volume Name: | vol0-64k-r5 |
| Profile Name: | den-profile-64k-r5 |
| Disk Names: | t1d01, t1d02, t1d03, t1d04 |

## Command Sequence

1. **Identify the names of the volumes that already exist on the array den-toi-6130:**

```
sscs list -a den-toi-6130 volume

Volume: ACC Type: Standard Pool: Default Profile: Default
Volume: RCV Standard Pool: Default Profile: Default.
```

2. **Identify the names of the storage pools that already exist on the array den-toi-6130:**

```
sscs list -a den-toi-6130 pool

Pool: newNFSmirroringPool  Profile: NFS_Mirroring  Configured
Capacity: 0.000 MB
Pool: RAID1-32KB-NoReadAhead  Profile: RAID1-32KB-NoReadAhead
Configured Capacity: 0.000 MB
Pool: RAID5-512KB-NoReadAhead  Profile: RAID5-512KB-NoReadAhead
Configured Capacity: 0.000 MB
Pool: poolFortest6731502Raid5threeDisk  Profile:
test6731502Raid5threeDisk  Configured Capacity: 0.000 MB
Pool: den-pool-64k-r Profile: RAID0-564KB-ReadAhead  Configured
Capacity: 0.000 MB
```

3. **Verify the characteristics of the storage pool `den-pool-64k-r5`:**

```
sscs list -a den-toi-6130 pool den-pool-64k-r

Description:          null
Profile:              RAID5-64KB-ReadAhead
Total Capacity:       0.000 MB
Configured Capacity:  0.000 MB
Available Capacity:   1.197 TB
```

4. **Create a new volume on array den-toi-6130.**

   The new volume is named vol0-64k-r5, uses the storage pool named den-pool-64k-r5, and has 5GB of storage capacity:

```
sscs create -a den-toi-6130 -p den-pool-64k-r5 -s 5GB volume vol0-
64k-r5
```

5. **Verify that the volume creation job is in progress:**

```
sscs list -a den-toi-6130 jobs
Job ID: VOL:0B70418253F6  Status: In progress
```

6. **Verify the characteristics of the volume named vol0-64k-r5:**

```
sscs list -a den-toi-6130 volume vol0-64k-r5
Volume: vol0-64k-r5
Type:                          Standard
WWN:                           60:0A:0B:80:00:13:B9:8B:00:00:0B
                               :70:41:82:53:F6
Pool:                          den-pool-64k-r5
Profile:                       den-profile-64k-r5
Virtual Disk:                  1
```

```
Size:                              5.000 GB
Status:                            Online
Action:                            Ready
Condition:                         Optimal
Read Only:                         No
Controller:                        A
Preferred Controller:              A
Modification Priority:             High
Write Cache:                       Enabled
Write Cache with Mirroring:        Enabled
Write Cache without Batteries:     Disabled
Flush Cache After:                 10 Sec
Disk Scrubbing:                    Enabled
Disk Scrubbing with Redundancy:    Disabled
```

7. **List the virtual disks available on den-toi-6130:**

```
sscs list -a den-toi-6130 vdisk
Virtual Disk: 1
```

8. **Verify the characteristics of the virtual disk named 1:**

```
sscs list -a den-toi-6130 vdisk 1
Virtual Disk: 1
Status:                            Online
Number of Disks:                   4
Maximum Volume Size:               198.599 GB
RAID Level:                        5
Total Capacity:                    203.599 GB
Configured Capacity:               5.000 GB
Available Capacity:          198.599 GB
Disk Type:                   FC
Disk:                        t1d04
Disk:                        t1d03
Disk:                        t1d02
Disk:                        t1d01
Volume:                      vol0-64k-r5
```

9. **Identify the hosts available of the array den-toi-6130:**

```
sscs list -a den-toi-6130 host
Host: 450e
```

10. **Map the volume vol0-64k-r5 to the host 450e:**

```
sscs map -a den-toi-6130 -h 450e -l 1 volume vol0-64k-r5
```

11. **Ensure that the mapping was successful by verifying the characteristics of the volume named vol0-64k-r5:**

```
sscs list -a den-toi-6130 volume vol0-64k-r5

Volume: vol0-64k-r5
Type:                              Standard
WWN:                               60:0A:0B:80:00:13:B9:8B:00:00:0B
                                   :70:41:82:53:F6
Pool:                              den-pool-64k-r5
Profile:                           den-profile-64k-r5
Virtual Disk:                      1
Size:                              5.000 GB
Status:                            Online
Action:                            Ready
Condition:                         Optimal
Read Only:                         No
Controller:                        A
Preferred Controller:              A
Modification Priority:             High
Write Cache:                       Enabled
Write Cache with Mirroring:        Enabled
Write Cache without Batteries:     Disabled
Flush Cache After:                 10 Sec
Disk Scrubbing:                    Enabled
Disk Scrubbing with Redundancy:Disabled
Associations:
Host: 450e  LUN: 1  Initiator: 450e-qlc5  WWN:
21:00:00:E0:8B:06:02:E9
Host: 450e  LUN: 1  Initiator: 450e-qlc6  WWN:
21:00:00:E0:8B:06:FC:E8
```

# Creating a Snapshot

The following section will demonstrate the commands used when creating a snapshot of a volume.

# Commands Used

TABLE 2-4 identifies the sequence of CLI commands used when creating a volume snapshot.

**TABLE 2-4** CLI Commands Used When Creating a Volume Snapshot

| CLI Command | Description |
|---|---|
| sscs list volume | Verify the existence and characteristics of a volume. |
| sscs create snapshot | Create a snapshot of a volume |
| sscs list snapshot | Verify the existence and characteristics of the snapshot |
| sscs list host | Identify the hosts available for mapping to the snapshot. |
| sscs map snapshot | Map the snapshot to a host. |
| sscs unmap snapshot | Unmap the snapshot from a host. |
| sscs delete snapshot | Remove the snapshot. |

# Sample Data

In this example, the sample data listed in TABLE 2-5 are used in the execution of the commands:

**TABLE 2-5** Sample Data

| | |
|---|---|
| Array Name: | den-toi-6130 |
| Pool Name: | den-pool-64k-r5 |
| Volume Name: | vol0-64k-r5 |
| Profile Name: | den-profile-64k-r5 |
| Snapshot Name: | snapshot-vol0 |
| Reserve Volume Name: | reserve-vol0 |
| Host Name: | 450e |

# Command Sequence

1. **Verify the existence and characteristics of the volume vol0-64k-r5:**

```
sscs list -a den-toi-6130 volume vol0-64k-r5
```

```
Volume: vol0-64k-r5
Type:                           Standard
WWN:                            60:0A:0B:80:00:13:B9:8B:00:00:0B
                                :70:41:82:53:F6
Pool:                           den-pool-64k-r5
Profile:                        den-profile-64k-r5
Virtual Disk:                   1
Size:                           15.000 GB
Status:                         Online
Action:                         Ready
Condition:                      Optimal
Read Only:                      No
Controller:                     A
Preferred Controller:           A
Modification Priority:          Highest
Write Cache:                    Enabled
Write Cache with Mirroring:     Enabled
Write Cache without Batteries: Disabled
Flush Cache After:              10 Sec
Disk Scrubbing:                 Enabled
Disk Scrubbing with Redundancy:Disabled
Associations:
Host: 450e  LUN: 1  Initiator: 450e-qlc5  WWN:
21:00:00:E0:8B:06:02:E9
Host: 450e  LUN: 1  Initiator: 450e-qlc6  WWN:
21:00:00:E0:8B:06:FC:E8
```

2. **Create the snapshot volume names snapshot-vol0.**

   **sscs create -a den-toi-6130 -V vol0-64k-r5 -L full -f failsnapshot -m reserve-vol0 -w 100 snapshot snapshot-vol0**

3. **Verify that the specified volume, vol0-64k-r5, now has a snapshot named snapshot-vol0 associated with it.**

   **sscs list -a den-toi-6130 volume vol0-64k-r5**

```
Volume: vol0-64k-r5
Type:                           Standard
WWN:                            60:0A:0B:80:00:13:B9:8B:00:00:0B
                                :70:41:82:53:F6
Pool:                           den-pool-64k-r5
Profile:                        den-profile-64k-r5
Virtual Disk:                   1
Size:                           15.000 GB
Status:                         Online
Action:                         Ready
Condition:                      Optimal
```

```
Read Only:                     No
Controller:                    A
Preferred Controller:          A
Modification Priority:         Highest
Write Cache:                   Enabled
Write Cache with Mirroring:    Enabled
Write Cache without Batteries: Disabled
Flush Cache After:             10 Sec
Disk Scrubbing:                Enabled
Disk Scrubbing with Redundancy:Disabled
Snapshots:
Snapshot Volume: vol0-snap1  Creation Date: Sat Oct 25 07:40:00
36797  Reserve Volume: res-vol0
Snapshot Volume: snapshot-vol0  Creation Date: Mon Apr 25 11:40:00
36805  Reserve Volume: reserve-vol0
Associations:
Host: 450e  LUN: 1  Initiator: 450e-qlc5  WWN:
21:00:00:E0:8B:06:02:E9
Host: 450e  LUN: 1  Initiator: 450e-qlc6  WWN:
21:00:00:E0:8B:06:FC:E8
```

4. **Verify the characteristics assigned to the snapshot volume,** `snapshot-vol0`.

```
sscs list -a den-toi-6130 snapshot snapshot-vol0
Volume: snapshot-vol0
        Type:                              Snapshot
        WWN: 60:0A:0B:80:00:13:B9:8B:00:00:0B:7A:41:86:0B:02
        Virtual Disk:                      1
        Size:                              14.999 GB
        Status:                            Active
        Action:                            Ready
        Condition:                         Optimal
        Controller:                        A
        Preferred Controller:              A
        Modification Priority:             High
        Write Cache:                       Enabled
        Write Cache with Mirroring:        Enabled
        Write Cache without Batteries:     Disabled
        Flush Cache After:                 10 Sec
        Disk Scrubbing:                    Enabled
        Disk Scrubbing with Redundancy:    Disabled
        Percent Full:                      0
        Failure Policy:                    failsnapshot
        Warning Threshold:                 100
        Creation Date:                     Mon Apr 25 11:40:00 36805
        Base Volume:                       vol0-64k-r5
```

```
Reserve Volume:                 reserve-vol0
Reserve Status:                 Online
Reserve Size:                   14.999 GB
```

5. **Identify the hosts available ob the array den-toi-6130:**

```
sscs list -a den-toi-6130 host
Host: 450e
```

6. **Map a snapshot to the host 450e:**

```
sscs map -a den-toi-6130 -h 450e snapshot snapshot-vol0
```

7. **Verify the characteristics assigned to the snapshot volume, snapshot-vol0.**

```
sscs list -a den-toi-6130 snapshot snapshot-vol0
Volume: snapshot-vol0
Type:                           Snapshot
WWN:                            60:0A:0B:80:00:13:B9:8B:00:00:0B:
                                7A:41:86:0B:02
Virtual Disk:                   1
Size:                           14.999 GB
Status:                         Active
Action:                         Ready
Condition:                      Optimal
Controller:                     A
Preferred Controller:           A
Modification Priority:          High
Write Cache:                    Enabled
Write Cache with Mirroring:     Enabled
Write Cache without Batteries:  Disabled
Flush Cache After:              10 Sec
Disk Scrubbing:                 Enabled
Disk Scrubbing with Redundancy:Disabled
Percent Full:                   0
Failure Policy:                 failsnapshot
Warning Threshold:              100
Creation Date:                  Mon Apr 25 11:40:00 36805
Base Volume:                    vol0-64k-r5
Reserve Volume:                 reserve-vol0
Reserve Status:                 Online
Reserve Size:                   14.999 GB
Associations:
Host: 450e  LUN: 2  Initiator: 450e-qlc5  WWN:
21:00:00:E0:8B:06:02:E9
```

```
Host: 450e  LUN: 2  Initiator: 450e-qlc6  WWN:
21:00:00:E0:8B:06:FC:E8
```

8. **Unmap the snapshot names snapshot-vol0.**

   **`sscs unmap -a den-toi-6130 -h 450e snapshot snapshot-vol0`**

9. **Verify that snapshot-vol0 was successfully unmapped.**

   **`sscs list -a den-toi-6130 snapshot snapshot-vol0`**

```
Volume: snapshot-vol0
Type:                            Snapshot
WWN:                             60:0A:0B:80:00:13:B9:8B:00:00:0B
                                 :7A:41:86:0B:02
Virtual Disk:                    1
Size:                            14.999 GB
Status:                          Active
Action:                          Ready
Condition:                       Optimal
Controller:                      A
Preferred Controller:            A
Modification Priority:           High
Write Cache:                     Enabled
Write Cache with Mirroring:      Enabled
Write Cache without Batteries:   Disabled
Flush Cache After:               10 Sec
Disk Scrubbing:                  Enabled
Disk Scrubbing with Redundancy:  Disabled
Percent Full:                    0
Failure Policy:                  failsnapshot
Warning Threshold:               100
Creation Date:                   Mon Apr 25 11:40:00 36805
Base Volume:                     vol0-64k-r5
Reserve Volume:                  reserve-vol0
Reserve Status:                  Online
Reserve Size:                    14.999 GB
```

10. **Delete the snapshot names snapshot-vol0:**

    **`sscs delete -a den-toi-6130 snapshot snapshot-vol0`**

CHAPTER 3

# Monitoring and Administration Commands for All Arrays

This chapter describes the `sscs` commands and their options for monitoring and administrating all Sun arrays, including Sun Storage J4200, J4400, and J4500 arrays, Sun Storage F5100 Flash Array, Sun StorEdge 6130 array, Sun StorageTek 6140 and 6540 arrays, Sun Storage 6180 array, Sun Storage 6580 and 6780 arrays, Sun StorageTek 2500 Series arrays, FlexLine 240, 280, and 380 Systems, and Sun Blade 6000 disk module.

For configuration and other commands that apply only to arrays with RAID controllers, see Chapter 4.

## add notification

Sets up email or SNMP trap notification.

### Synopsis

Add email notification:

**add -e** *<email-address,...>* [ **-c** *<array_type>* ] [ **-r pager** | **email** ] [ **-m down** | **critical** | **major** | **minor** ] [ **-f** ] [ **-k** ] [ **-d** ] [ **-g** ] **notification local_email**

Add an SNMP trap notification:

**add -i** *<IP-address,...>* [ **-o** *<port_id>*] [**-t 1** | **2** | **3** | **4** | **5** ] [**-l warning** | **error** | **down** ] [**-m** <**down** | **critical** | **major** | **minor**>] [**-c** *<community-string>* ] [**-g** ] **notification trap**

Add an email filter:

**add -n** <*event-id*> **-s** info | none **notification email-filter**

Turn on the SNMP trap notifier:

**add notification trap**

## Description

Sets up email and SNMP trap notification. You can add one or more email addresses for notifications.

## Options

**-e**, **--email** <*email-address,...*>

Specifies that all notifications are sent to the given email addresses.

**-i,--ip** <*IP-address,...*>

Specifies the IP address of the host that will receive the SNMP trap data.

**-l,--traplevel** warning | error | down

Specifies the trap level associated with this notification.

**-o,--port** <*port-id*>

Specifies the port ID used to transfer notifications.

**-c,--community-string** <*community-string*>

Specifies an SNMP community. An SNMP community is a group that devices and management stations running SNMP belong to. The default value is public.

**-c,--components** <*array_type*>

Specifies the array model number. For example, j4200 or j4400.

**-r,--format** pager | email

Specifies the format of the message: email or pager. If no value is specified, the command defaults to email.

**-m,--alarm-level** down | critical | major | minor

Specifies the minimum priority level of alerts to be sent out. By default, all alerts will be sent out.

**-f,--filter**

If option is used, email filters are enabled. If option is not used, email filters are disabled.

**-k**, **--skip-aggregated**

If option is used, components of aggregated events are skipped. If option is not used, components of aggregated events are not skipped.

**-d**,**--advisor**

If option is used, Service Advisor information is added to the email. If option is not used, Service Advisor information is not added to the email.

**-g**,**--config-change**

If option is used, configuration event emails as well as alert e-mails are sent. If option is not used, configuration event emails and alert e-mails are not sent.

**-n**,**--event-number** *<event_id>*

Specifies the event code to filter.

**-s**,**--severity** `info | none`

Specifies the severity of events to report.

**-t**,**--trapnumber** `1 | 2 | 3 | 4 | 5`

Specifies the trap number associated with this notification.

**notification** `local_email | email-filter | trap`

Specifies that all notifications of the specified type are sent to the given addresses.

*local-email* - Specifies that you want to receive the notification at your local email address.

*email-filter* - Specifies that you want to filter the notification.

*trap* - Specifies that you want to receive notification using the SNMP trap notification.

## Examples

```
sscs add -i 10.10.10.1 -o 162 notification trap
```

# add registeredarray

Discovers an array or all arrays on the same subnet as the management host and registers them.

## Synopsis

```
add -d registeredarray
```

**add -i [ -q ]  registeredarray**

## Description

Discovers arrays and registers them.

## Options

**-i,--ipaddress**

Specifies the IP address of the device.

**-d**, **--discover**

Automatically discovers all arrays on the same subnet as the management host and registers them. If discover is specified, all other options are ignored and arrays are automatically discovered.

**-q,--query-for-password**

Queries for the current password for remote proxy for the registered array.

## Examples

**sscs add -i** *10.10.10.1* **registeredarray**

# add userrole

Adds a user name to the user access list and defines the user privileges.

## Synopsis

**add -u** <*user-name*> **userrole storage** | **guest**

## Description

Adds a user name to the user access list and defines the user role as having storage or guest privileges.

## Options

**-u**, **--username** <*user-name*>

Specifies a user name. The <*user-name*> must already be defined on the computer in the operating system.

**userrole** storage | guest

Specifies the new user's role.

*storage* - Provides full storage configuration and monitoring access.

*guest* - Allows user to view but not change storage configurations.

# list alarm

Provides detailed information on a specified alarm or summary information on all alarms.

## Synopsis

**list** [**-s** <**0**|**1**|**2**|**3**>] [**-f** <**2510**|**2530**|**2540**|**j4200**|**j4400**|**j4500**|**F5100**|**6120**|**6130**|**6140**|**6540**|**6580**|**6780**|**FLX240**|**FLX280**|**FLX380**|**B6000**|**NEM**>] [**-a** <*sevice-advisor-ID*>] [**-S**] **alarm** [*Alarm Id*[ , *Alarm Id...*]]

## Description

Provides detailed information on a specified alarms. When alarm IDs are not specified, it provides summary information on all alarms.

## Options

**-a**,**--advisor** *service-advisor-ID*

Specifies the Service Advisor ID.

**-s**,**--severity** <*0..3*>

Specifies a severity level at which to filter alarms so that only the alarms of that severity or higher are listed.

Severity Levels:

0 - minor

1 - major

2 - critical

3 - down

**-f**, **--faultdevtype**
<**2510**|**2530**|**2540**|**j4200**|**j4400**|**j4500**|**F5100**|**6120**|**6130**|**6140**|**6540**|**6580**|**6780**|**FLX240**|**FLX280**|**FLX380**|**B6000**|**NEM**>

Specifies the type of device to list.

**-S, --Summary**

Specifies that the system return a summary of alarm information.

**alarm** [ <*alarm-ID*,...> ]

Specifies the alarm or alarms to display. If no alarm is specified, summary information on all alarms is displayed.

## Examples

**sscs list -f** j4200 **alarm**

**sscs list -s** 2 **alarm**

### *Response Format*

(when no advisor option is specified)

**Alarm ID:** *ID*

**Severity**: *severity*

**Type:** *type*

**Topic:** *topic*

**Event Code:** *event-code*

**Date:** *date*

**Device:** *device-id*

**Descrip.:** *Description*

### *Response Format*

(when the advisor option is specified)

**Alarm ID:** *ID*

**Severity:** *severity*

**Type:** *type*

**Topic:** *topic*

**SERVICE ADVISOR**

**EventCode:** *event-code*

**EventType:** *event-type*

**Severity:** *severity-level*

**Sample Description:** *event-Description*

**Information:** *event-information*

**Probable Cause:** *probable-cause*

**Recommended Action:** *recommended-action*

**Date:** *date*

**Device:** *device-ID*

**Descrip.:** *Description*

# list array

Lists detailed information about specified arrays or all array names.

## Synopsis

**list array** [*array-name*[, *array-name*...]]

## Description

Lists detailed information about one or more arrays. If you do not specify an array name, then all array names are listed.

## Examples

**sscs list array** array00

### *Response Format*

Summary of arrays when no <*array-name*> value is specified:

**Array:** *array-name*

```
...
Array: array-name
```

## *Response Format*

Detail of array when the <*array-name*> value is specified:

---

**Note –** A value for the Lock Key ID field is displayed only if the array supports Data Encryption Services.

---

```
Array: array-name
Array Type: array-type
Serial Number: serial-number
Firmware Version: firmware-version
Array WWN: array-WWN
Health Status: OK | Degraded
Hot-Spare Pool Disks: number-of-hot-spare-drives (FC, SATA, and SAS)
Node WWN: node-WWN
Default Host Type: host-type
Default Cache Block Size: 4K | 16K
Default Cache Start %: <0..100>
Default Cache Stop %: <0..100>
Disk Scrubbing: Disabled | Enabled
Failover Alert Delay: 1..300 minutes
Lock Key ID: <lock-key-id>
Drives: <number_of_hot_spare_drives SATA and FC>
Status: <ok | degraded>
Tray Id: <tray-id>
...
Tray Id: <tray-id>
Host: <host_name>
...
Host: <host_name>
Host Group: <host_group>
...
Host Group: <host_group>
Pool: <pool_name>
...
Pool: <pool_name>
```

# list date

Lists the current date and time for the array in hours, minutes, and seconds.

## Synopsis

**list -a** <*array-name*> **date**

## Description

Lists the current date and time for the array in hours, minutes, and seconds. The time zone of the management system is assumed to be the time zone of the array.

---

**Note –** This command is not supported by any JBOD array.

---

## Options

**-a**, **--array** <*array-name*>

Specifies the array for which you want to see the date.

## Examples

**sscs list -a** *array00* **date**

### *Response Format*

**Date:** *weekday month day HH:MM:SS YYYY*

*Example*

Tue Dec 20 16:09:36 2004

# list device

Provides detailed information on a specified device or summary information on all devices.

## Synopsis

**list** [ **-n** <*array-name*> ] [ **-i** <*IP-address*>] **device** [ <*device-ID* [,*device-ID...*]>]

## Description

List the details of a device or the devices being monitored.

## Options

**-n**,**--name** <*array-name*>

Specifies the array name for which you want to see the details. If no array is specified, summary information for all arrays is displayed.

---

**Note –** Other commands may use **-a,--array** or **-d,--device** in place of **-n,--name**.

---

**-i**,**--ip** <*IP-address*>

Specifies the IP address of the connected host when using remote proxy.

*device-ID*

Specifies one or more device IDs.

## Examples

**sscs list device**

```
Device Name      : F5100g
Type             : f5100
IP Address       : camtest17
Monitored On     : camtest17
Key              : SUN.f5100.508002000048f100
Active           : Y
WWN              : 508002000048f100
Alternate IP     : camtest17
Alt IP Number    : 10.9.178.48
Management Level : D
Said             : 508002000048f100
Time Added       : 2008-10-28 13:35:28
```

**sscs list -n fms-6780-1 device**

```
Device Name       : den-6780-1
Type              : 6780
IP Address        : 192.168.128.101
```

```
Monitored On      : camtest29
Key               : SUN.24643-01.SF74700358
Active            : Y
Unique Identifier : 200400a0b829ec26
Alternate IP      : fms-6780-1b
Alt IP Number     : 10.9.176.231
Management Level  : D
Said              : 600A0B800029EC260000000048931900
Time Added        : 2009-02-20 15:15:42
Port WWNs         :
201400a0b829ec26,202400a0b829ec26,203400a0b829ec26,204400a0b
829ec26,205400a0b829ec26,206400a0b829ec26,207400a0b829ec26,208400a0
b829ec26,2015
00a0b829ec26,202500a0b829ec26,203500a0b829ec26,204500a0b829ec26,205
500a0b829ec26
,206500a0b829ec26,207500a0b829ec26,208500a0b829ec26
```

**sscs list -i** 192.168.128.101 **device**

```
Device Name       : den-6780-1
Type              : 6780
IP Address        : 192.168.128.101
Monitored On      : camtest29
Key               : SUN.24643-01.SF74700358
Active            : Y
Unique Identifier : 200400a0b829ec26
Alternate IP      : fms-6780-1b
Alt IP Number     : 10.9.176.231
Management Level  : D
Said              : 600A0B800029EC260000000048931900
Time Added        : 2009-02-20 15:15:42
Port WWNs         :
201400a0b829ec26,202400a0b829ec26,203400a0b829ec26,204400a0b
829ec26,205400a0b829ec26,206400a0b829ec26,207400a0b829ec26,208400a0
b829ec26,2015
00a0b829ec26,202500a0b829ec26,203500a0b829ec26,204500a0b829ec26,205
500a0b829ec26
,206500a0b829ec26,207500a0b829ec26,208500a0b829ec26
```

# list devices

Provides summary information on all devices.

## Synopsis

**list devices**

## Description

List a summary of the devices being monitored.

## Examples

**list devices**

### *Response Format*

`Monitored On:` *Interface*

`Device:` *Array/system being monitored*

`Type:` *Array/system model*

`IP Address:` *IP-address*

`WWN:` *World Wide Name*

`Active:` *Is the device active?* `Y | N`

`ASR:` *Is Auto Service Request on?* `Y | N`

# list disk

List the disk information on an array.

## Synopsis

**list -a** <*array-name*> `[` **-t** <*tray-name* >`]` **disk** `[` <*disk-name,...*> `]`

## Description

Lists disk information.

## Options

**-a**,**--array** <*array-name*>

Specifies the name of the array where the disk resides.

**-t,--tray** <*tray-name*>

Specifies to display disk information only within a specified tray in a specified array. The **-t** option is not valid for JBOD arrays.

**disk** <*disk-name,...*>

This option provides detailed information on the specified disks. When disks are not specified, this option provides detailed information on all the disks in the tray.

## Examples

---

**Note –** The information returned in the command output varies based on the type of disk (e.g. SATA, SSD, etc.).

---

List detailed information for an SSD disk:

```
list -a fms-6780-1 disk t1d16

Tray: 1 Disk: t1d16
Capacity: 68.366 GB
Type: SSD
Average Erase Count (%) 0
Remaining Spare Blocks (%) 99
Speed (RPM): 0
Status: Optimal
State: Enabled
Role: Data
Virtual Disk: jzSSD
Firmware: MS04
Serial number: STS0000025F5
WWN: 50:00:A7:20:00:00:35:7C:00:00:00:00:00:00:00:00
Security Capable: false
Security Enabled: false
Disk Locked: false
Security Key Id:
```

List detailed information for a SATA disk:

```
list -a fms-6780-1 disk t1d05

Tray: 1 Disk: t1d05
Capacity: 931.513 GB
Type: SATA
Speed (RPM): 7200
Status: Optimal
State: Enabled
Role: Unassigned
Virtual Disk: -
Firmware: 0710
Serial number:GTF002PBHM7M6F
WWN: 20:00:00:A0:B8:62:3F:90:00:00:00:00:00:00:00:00
Security Capable: false
Security Enabled: false
Disk Locked: false
Security Key Id:
```

# list erc

Lists the command error return code.

## Synopsis

```
list erc
```

## Description

Lists the error return code of the immediately preceding sscs command.

## Examples

The following examples demonstrate the execution of an `sscs` command, followed by the `list erc` command to check the error code.

```
sscs list storage-system
Array: JBODTest
Array: Test10x86
Array: Demo-w2k3
Array: Demo2_JBOD
Array: ColoSata
```

```
Array: Denver
Array: Ruby
Array: NMS-OZ-12
Array: JBOD3Test
Array: JBOD4Top

sscs list erc
0

sscs list storage-system NMS-OZ-12
Name:               NMS-OZ-12
ID:                 NMS-OZ-12
Type:               6130
Version:            06.19.25.13
Vendor:             SUN Microsystems
Model:              Sun StorEdge 6130 System
Capacity:           2.483 TB
Available Capacity: 2.077 TB

sscs list erc
0

sscs list storage-system NMS-OZ-21
NMS-OZ-21: The object was not found.

sscs list erc
100
```

# list event

Lists the Fault Management Service (FMS) event log information.

## Synopsis

**list** [ **-s** <**0..3**> ] [ **-d** *<array-name>* ] [ **-t** *<type>* ] [ **-a** ] [ **-f** *<keyword>* ] [ **-l** *<limit>* ] **event** [ *<event_id,...>* ]

## Description

Lists the FMS event log information. You can filter by device type and severity level.

## Options

**-s**,**--severity** *<0..3>*

Specifies a severity level at which to filter events so that only the events of that severity or higher are listed.

Severity Levels:

0 – minor

1 – major

2 – critical

3 – down

**-d,--device** *<array-name>*

List only events for the given device.

---

**Note –** Other commands may use **-a,--array** or **-n,--name** in place of **-d,--device**.

---

**-t,--type** *<type>*

List only events of the given event type. Valid types can be obtained by first listing event details.

**-a,--aggregated**

Specifies that all events are listed and aggregated so that related events are grouped together.

**-f, --filter** *<keyword>*

Filter output on the event Description by using the given keyword parameter.

**-l,--last** *<limit>*

Limit the number of events printed by the given number.

**event** *<event_id , ...>*

Specifies the event ID.

## Examples

Get details of an event ID:

```
sscs list event 12

Severity:        Minor
Date:            Wed Jan 21 10:56:57 MST 2009
Device:          ralphie (StorageTek 6140)
Component:       -
Type:            Discovery
```

```
Information:     Discovered a device of type 6140 named ralphie
Event Code:      57.14.16
Aggregated:      No
Description:     Discovered a device of type 6140 named ralphie
Probable Cause:     A discovery operation has found a monitorable
device.
Recommended Action: No action required.
```

# list firmware

Lists the firmware versions of the field-replaceable units (FRUs) in this device.

## Synopsis

**list** [ **-a** *<array-name*[*, array-name...*]> ] [ **-t**
<<**disk**|**expander**|**sim**>|<**ctrl**|**system**|**iom**|**disk**>> ] [ **-x**
<<**disk**|**expander**|**sim**>|<**ctrl**|**system**|**iom**|**disk**>> ] **firmware**

## Description

Lists the firmware versions of the field-replaceable units in this device. You can define the FRUs to include or exclude.

## Options

**-a,--array** *<array-name*[*, array-name...*]>

Shows the firmware revision level of the field-replaceable units for the specified arrays only.

**-t,--type** <<**disk**|**expander**|**sim**>|<**ctrl**|**system**|**iom**|**disk**>>

Shows the firmware revision level for the specified component types. The **-t** option can be used multiple times in the same command (see examples). Mutually exclusive options **disk**, **expander**, and **sim** apply to JBOD arrays. Mutually exclusive options **ctrl** (array controller), **system** (NVSRAM), **iom**, and **disk** (disk drive or FMod) apply to RAID arrays.

**-x, --exclude** <<**disk**|**expander**|**sim**>|<**ctrl**|**system**|**iom**|**disk**>>

Excludes the specified component types from the list of firmware revision levels. The **-x** option can be used multiple times in the same command (see examples). Mutually exclusive options **disk**, **expander**, and **sim** apply to JBOD arrays. Mutually exclusive options **ctrl** (array controller), **system** (NVSRAM), **iom**, and **disk** (disk drive or FMod) apply to RAID arrays.

### Examples

List the component firmware revisions for all arrays:

```
sscs list firmware
```

List the component firmware revisions for a specified array:

```
sscs list -a jbod1 firmware
```

List the component firmware revisions for specified component types in a specified array:

```
sscs list -a jbod1 -t disk -t sim firmware
```

List the component firmware revisions for a specified array, excluding specified component types:

```
sscs list -a array1 -x ctrl -x iom firmware
```

## list fru

Lists the field-replaceable units (FRUs) in this device.

### Synopsis

**list -d** *<array-name>* [ **-t** *<type-name>* ] [ **-s** ] **fru** [*<fru-name*[*,fru-name...*]*>*]

### Description

Lists the field-replaceable units in this array. You can filter by component type.

### Options

**-d, --device** *<array-name>*

Specifies the array for which to list installed FRUs.

**Note –** Other commands may use **-a,--array** or **-n,--name** in place of **-d,--device**.

**-t,--type** *<type-name>*

Specifies the type of field-replaceable units installed in this device to list. Use the **-s** option to see which FRU types would be valid for the chosen device.

**Note –** The **all** option for type name is no longer valid for use.

**-s,--summary**

Lists a summary of this field-replaceable unit.

**fru** [*<fru-name>*[,*fru-name...*]>]

If no FRU names are specified, lists the FRUs on the specified device. If FRU names are specified, lists the details of those FRUs.

## Examples

```
sscs list -d j4400_test fru

Name          FRU    Alarm  State    Status   Revision  Unique Id
-----------   ------ ------------------------  ------    ----------
Disk.00       Disk   -      Enabled OK       0B92      0751S371QV3
LN371QV
Disk.01       Disk   -      Enabled OK       0B92      0751S3B1DC3
LN3B1DC
Disk.02       Disk   -      Enabled OK       0B92      0749S374JE3
LN374JE
```

```
sscs list -d j4400_test -s fru Disk.00

Availability             : Running/Full Power
Capacity                 : 146GB
Caption                  : disk
Enabled State            : Enabled
Firmware                 : 0B92
Host Path                : camtest99:/dev/rdsk/c3t97d0p0
Id                       : disk00.  0751S371QV        3LN371QV
IdentifyingNumber        :   0751S371QV        3LN371QV
Model                    : ST314655SSUN146G
Name                     : disk00.  0751S371QV        3LN371QV
Physical ID              : disk00.  0751S371QV        3LN371QV
Product Firmware Version : 0B92
Product Name             : SEAGATE ST314655SSUN146G
```

```
Revision Level           : 0B92
SAS Address              : 50:00:C5:00:07:BB:59:65
Serial Number            :   0751S371QV        3LN371QV
Speed                    : 3G
Status                   : OK
Type                     : SAS
Valid SUN Disk           : TRUE
Vendor                   : SEAGATE
sun-mgmt-data-host       : 10.9.178.47
sun-mgmt-data-host-name  : camtest99
```

# list jobs

Lists job IDs and status associated with the specified array and optionally specified job ID.

---

**Note –** This command does not apply to JBOD arrays.

---

## Synopsis

**list -a** <*array-name*> **jobs** [<*job-id*[, *job-id*...]>]

## Description

Lists job IDs and status associated with the specified array and optionally specified job ID.

## Options

**-a,--array** <*array-name*>

Specifies the name of the array.

**jobs** [<*job-id*[, *job-id*...]>]

Specifies the job's identifier. If one or more job IDs are given, this option lists detailed information on the jobs. If no job ID is given, this option lists summary information on all jobs.

## Examples

```
sscs list -a array01 jobs
```

*Response Format (when no <job-ID> value is specified)*

```
Job ID: job-ID Status: job-status
```

*Response Format (when one or more <job-IDs> values are specified)*

```
Job ID: job-ID
Type: job-type
Status: Pending | In Progress
% Complete: complete
Time to Completion: time-to-complete or Unknown
Priority: priority
Volume: volume-name
```

# list log

Lists the user-initiated actions performed for all registered arrays.

## Synopsis

**list** [ **-s** { [ *mmdd* ] *HHMM* | *mmddHHMM* [ *cc* ] *yy* } [ *.SS* ] ] [ **-f** { [ *mmdd* ] *HHMM* | *mmddHHMM* [ *cc* ] *yy* } [ *.SS* ] ] [ **-t** <*number-of-messages*> ] **log**

## Description

Lists the user-initiated actions performed for all registered arrays. You can filter the listings by date and time or most recent entries. If you do not specify any options, all log messages are displayed.

## Options

**-s**,**--start** { [ *mmdd* ] *HHMM* | *mmddHHMM* [ *cc* ] *yy* } [ *.SS* ]

Lists all log messages starting at the date specified by the date options. Use with the **-f**,--**finish** subcommand to specify a date range.

**-f**,**--finish** { [ *mmdd* ] *HHMM* | *mmddHHMM* [ *cc* ] *yy* } [ *.SS* ]

Lists all log messages ending at the date specified by the date options. Use with the `-s,--start` subcommand to specify a date range.

*mmdd*

Specifies the month and day. For example, 0331 for March 31.

*HHMM*

Specifies the hour and minute. The hour is based on a 24-hour clock. For example, 1:30 p.m. is 1330.

*cc*

Specifies the century part of the year.

*yy*

Specifies the two-digit year.

*.SS*

Specifies the seconds of the hour.

**-t**, **--tail** <*number*>

Lists the most recent log messages as specified by *number*.

## Examples

```
sscs list -t 100 log
```

Lists the last 100 messages.

### *Response Format*

*Timestamp* : *message*

# list mgmt-sw

## Synopsis

```
list mgmt-sw
```

## Description

Lists the management software application that you are logged into.

## Examples

```
sscs list mgmt-sw
```

### *Response Format*

```
Application Name: "Sun StorageTek(TM) Common Array Manager"
User: storage
Current Logins: 2
Server: 10.8.88.173
Server OS: SunOS
Server OS Version: 5.10
Product Version: 4.2.0.0
Build Date: 2005/12/03
Install Info: 4.2.0.0 Build 61
Critical Alarms: 13
Down Alarms: 0
Major Alarms: 24
Minor Alarms: 0
```

# list notification

## Synopsis

```
list notification
```

## Description

Lists the remote notification provider and its status.

## Examples

```
sscs list notification
```

*Response Format*

**Email Configuration**
**SMTP Server for Email** : *server*
**SMTP Server User Name** : *user-name*
**SMTP Server Password** : *password*
**Use Secure SMTP Connection**: `true | false`
**Email Address of Sender** : *email-address*
**Maximum Email Size MB** : *size-in-megabytes*

**Email Entries**

| **Entry** | **Email/Events Type** | | **Device** | **Priority** | **Events** |
|---|---|---|---|---|---|
| *entry-no* | *email-address* | *notification-type* | *device-type* | *priority* | *events* |

**Active**
*active-flag*

**SNMP Trap Configuration**
**Notifier State** : `Enabled | Disabled`

**SNMP Trap Entries**

| **ID** | **IP Name/Address** | **Port** | **Minimum Alert Level** |
|---|---|---|---|
| *trap-id* | *ip-address* | *port* | *trap-level* |

# list registeredarray

Lists registered array information.

## Synopsis

**list** [ **-a** <*array-name*[,*array-name...*]> ] **registeredarray**

## Description

Lists registered array information or the names of all arrays.

## Options

**-a,--array** <*array-name*[,*array-name...*]>

Specifies the registered array or arrays to list. If no arrays are specified, a list of all array names is provided.

## Examples

**sscs list registeredarray**

```
Array: array01
Array: array02
Array: j4400_test
Array: j4500_test2
```

**sscs list -a** array01 **registeredarray**

```
Array: array01
  IP Address:  10.80.194.32
  IP Address:  10.80.194.33
```

# list site

## Synopsis

**list site**

## Description

Lists pertinent information for the installation site.

## Example

**sscs list site**

```
*Company Name       : Sun Microsystems
*Site Name          : Interop Lab
Address             :
Address 2           :
Mail Stop           :
*City               : Broomfield
State               :
Zip Code            :
*Country            : USA
*Contact First Name : Fred
*Contact Last Name  : Jones
Telephone Number    :
Extension           :
*Contact Email      : Fred.Jones@sun.com
```

# list storage-system

Lists detailed information about one or more arrays.

## Synopsis

**list storage-system** [<*array-name*[,*array-name...*]>]

## Description

Lists detailed information about one or more arrays. If you do not specify an array name, then all array names are listed.

## Options

**storage-system** [<*array-name*[,*array-name...*]>]

If no array names are specified, all array names are listed. If array names are specified, details for those arrays will be listed.

## Examples

**sscs list storage-system**

### *Response Format*

Summary of arrays when no <array-name> value is specified

**Array:** *array-name*

...

**Array:** *array-name*

Detail of array when the <*array-name*> value is specified

```
./sscs list storage-system j4400_test
  Name:                  j4400_test
    ID:                  j4400_test
    Type:                J4400
    Version:             3R21
    Vendor:              SUN Microsystems
```

```
Model:                Sun Storage J4400
Capacity:             3.074 TB
```

# list userrole

Lists the user name and role defining the user's array privileges.

## Synopsis

```
list userrole [ <storage | guest> ]
```

## Description

Lists the user name and role defining the array privileges.

## Options

**userrole** storage | guest

List the users with the specified role. The storage role allows write access so that the user can configure the array. The guest role can only monitor the array.

## Example

```
sscs list userrole storage
```

### *Response Format*

**User Name:** *user-name* **User Role:** *user-role*

...

**User Name:** *user-name* **User Role:** *user-role*

# login

Log in to the **sscs** command-line interface (CLI).

## Synopsis

**login -h** <*host-name*> [ **-s CAM** | **Legacy** ] [ **-t** ] [ **-f** ] [ **-u** <*user-name*> ]

## Description

Log in to the **sscs** command-line interface (CLI) on the management system specified by the **-h** <*host-name*>. This command starts a CLI session on the management host.

There are two versions of the CLI:

- Local
- Remote

The local CLI requires a user to run the command as administrator from a shell on the management host. Because of this limitation, the **login** and **logout** commands are not supported.

Both CLI versions can manage any array that has been registered and added to the Common Array Manager inventory. The array type and array management path (in-band, out-of-band, proxy agents) has no limitations with local or remote CLI usage. Both CLIs manage the same arrays with the same command set.

### *Logging In and Out Using the CLI*

The following explains how to log in to and out of the management host using the CLI. The options for accessing the CLI are presented in the next section.

There are different CLI directories for the remote and local CLIs.

1. **Telnet or ssh to the CAM workstation.**

   **ssh root@cam_workstation1**

2. **Change to the CLI directory (varies by operating system).**

   a. **Access the remote** `CLI` **directory:**

   - Solaris - `/opt/se6x20/cli/bin/sscs`
   - Linux - `/opt/sun/cam/se6x20/cli/bin/sscs`
   - Windows - Program Files > Sun > Common Array Manager > bin folder

3. **Log into the remote CLI by typing the following command:**

% **sscs login -h** <*host-name*> **-u** <*user-name*>

---

**Note –** The Local CLI on a data host does not require the login command. You will need the terminal window login to the host.

---

   b. **Access the local** `CLI` **directory:**

- Solaris - `/opt/SUNWstkcam/bin/sscs`
- Linux - `/opt/sun/cam/bin/sscs`
- Windows - Program Files > Sun > Common Array Manager > bin folder

---

**Note –** **sscs** has an inactivity timer. The session terminates if you do not enter any **sscs** commands for 30 minutes. You must log in again before you can enter a command after the timeout.

---

## Options

**-h**,**--hostname** <*host-name*>

Required. Specifies the management host name.

**-s**,**--system-type** `CAM | Legacy`

This option specifies whether you are logging into any of the current arrays supported by the Common Array Manager or the now legacy 6920 array. In some cases, using the **-s CAM** option may log you in faster as it skips a step of listening for a response from the legacy array.

You no longer have to specify the system type to login.

**-t**,**--http**

Enables you to use the HTTP protocol to connect to the CAM server, instead of HTTPS. An HTTP connector is configured in Tomcat, the servlet container in Java, for the Java Web Console at port 6789. If SSL is not functioning between the client and the server, this might be required.

**-f**,**--force**

Exists for backward compatibility with legacy management applications that only allow one login per user. This option forces a login to the management host. If another user with the same user name is already logged on, the duplicate user is then logged off.

**-u**,**--username** <*user-name*>

Specifies the user name to log in.

## Example

```
./sscs login -h localhost -u root
```

# logout

## Synopsis

**logout**

## Description

Logs out of the remote sscs command-line interface session. This command is not supported with the local version of the CLI.

## Examples

**./sscs logout**

# modify agent

Modify the fault management agent parameters.

## Synopsis

**modify** [ **-a** ] [ **-d** ] [ **-r** ] [ **-i** <*integer*> ] **agent** [<*agent-id*>[,*agent-id...*]]

## Description

Modify the fault management agent parameters. Fault Management Service (FMS) periodically scans devices for new messages and updated health status. This command allows changing the scan interval as well as enabling or disabling the scan. If no options are given the current agent settings are printed out.

## Options

**-a,--activate**

Specifies that the system activate the monitoring agent.

**-d,--deactivate**

Specifies that the system deactivate or turn off the monitoring agent.

**-r,--run**

Specifies that the system schedule the agent to run either immediately or as soon as the currently scheduled run has finished.

**-i,--interval** *<integer>*

Specifies the interval, in minutes, before the agent scan runs.

**agent** [*<agent-id>*[,*agent-id...*]]

Specifies the agent that you want to modify. The name of the agent monitoring the device can be retrieved using the `list device` command

## Examples

```
sscs modify -i 5 agent
```

# modify array

## Synopsis

**modify -N** *<new-array-name>* **array** *<array-name>*

## Description

Modifies the name assigned to the array.

---

**Note –** Refer to the `modify array` command in Chapter 4 for extensive configuration options that apply to arrays with RAID controllers.

---

## Options

**-N**, **--new-name** *<new-array-name>*

Specifies the new name of the array.

**array** *<array-name>*

Specifies the name of the array to be modified.

## Examples

```
sscs modify -N array2 array jbod1
```

# modify firmware

Modifies the firmware versions of the specified field-replaceable units (FRUs) of the specified array, and installs the CAM baseline firmware or user-provided firmware image to the FRUs in the device.

## Synopsis

**modify -a** *<array-name>* [ **-f** ] [ **-o** ][ **-t**
<<**disk**|**expander**|**sim**>|<**ctrl**|**system**|**iom**|**disk**>> ] [ **-x**
<<**disk**|**expander**|**sim**>|<**ctrl**|**system**|**iom**|**disk**>> ] [ **-p** *<path>* ] [ **-c**
*<field-name>* ] [ **-w** ] **firmware**

## Description

Modifies the firmware versions of the specified field-replaceable units (FRUs) of the specified array, and installs the CAM baseline firmware or user-provided firmware image to the FRUs in the device.

## Options

**-a,--array** *<array-name>*

Modifies the firmware revision level of the specified field-replaceable units for the specified array only.

**-c,--component** *<field-name>*

Modifies the firmware for the selected components. To get the valid values, execute the **sscs list -a** *<array-name>* **firmware** command. Values for either the Name or Model fields can be used in place of *<field-name>*. If a Name value is used, only the given component will be modified. If a Model value is used, all components with the given model name will be modified.

---

**Note –** For RAID arrays only: NVSRAM does not have a component name or model name. Use **-c system** to install or modify NVSRAM firmware.

---

**-f,--force**

Modifies the firmware revision level of the all field-replaceable units even if the firmware revision level is already at the baseline level.

**-o,--offline**

Specifies to allow installation of firmware to FRU components excluded from installation by default. Certain FRU component types (such as disk drives, SIMs, and expanders) require I/O operations to stop before a firmware installation. As a precaution, these components are excluded from the firmware installation by default. To install firmware on these component types, stop all I/O operations on these components and use this option.

**-p,--path** <*path*>

Specifies the full path of the firmware image file. Loads firmware from a file directly onto the array. Caution should be exercised when using this command because unsupported firmware can be loaded onto a field-replaceable unit. If the **-p** option is provided, the **-c** option is required. The full path of the firmware image file must be specified when using the **-p** option. If the **-p** option is not specified, this command will default to the CAM baseline firmware image.

---

**Note –** For Windows OS only, replace \ (backslash) with / (slash) when specifying the firmware image file path. For example, use C:/TEMP/firmware-img.fw instead of C:\TEMP\firmware-img.fw.

---

**-t,--type** <<**disk**|**expander**|**sim**>|<**ctrl**|**system**|**iom**|**disk**>>

Modifies the firmware revision level of the field-replaceable units of the specified type only. The **-t** option can be used multiple times in the same command. Mutually exclusive options **disk**, **expander**, and **sim** apply to JBOD arrays. Mutually exclusive options **ctrl** (array controller), **system** (NVSRAM), **iom**, and **disk** (disk drive or FMod) apply to RAID arrays.

**-w,--no-warn**

Modifies the firmware without displaying the standard warning.

**-x,--exclude** <<**disk**|**expander**|**sim**>|<**ctrl**|**system**|**iom**|**disk**>>

Excludes the specified component type from the firmware install. The **-x** option can be used multiple times in the same command. Mutually exclusive options **disk**, **expander**, and **sim** apply to JBOD arrays. Mutually exclusive options **ctrl** (array controller), **system** (NVSRAM), **iom**, and **disk** (disk drive or FMod) apply to RAID arrays.

## Examples

```
modify -a MyArray -f firmware
```

# modify mgmt-sw

## Synopsis

**modify -X** *<array-name>* **mgmt-sw**

## Description

Stores the specified storage system name for the session. This command is useful for repeated operations with an array. After this command is executed, the -a option for subsequent sscs commands is not necessary.

## Options

**-X,--storage-system** *<array-name>*

Specifies the name of the storage system.

## Example

**modify -X** MyArray **mgmt-sw**

# modify site

Modifies the site properties for this instance of CAM.

## Synopsis

**modify** [**-r** *<site-info*[ , *site-info...*]>] **site** [*<site-info=-value*[ , *site-info=value...*]>]

## Description

Modifies the site properties for this instance of CAM. The site properties contain information needed for notification providers. Upon command execution, updated site information is displayed.

## Options

**-r,--remove** *<site-info*[ , *site-info...*]

Removes the specified site information. Possible values for *site-info* are: **customer**, **contract**, **name**, **address**, **address2**, **mailStop**, **city**, **state**, **zip**, **country**, **contact**, **phone**, **extension**, and **email**.

**site** [<*site-info=value*[, *site-info=value...*]]

Modifies existing site settings or adds new site information. Possible values for *site-info* are: **customer**, **contract**, **name**, **address**, **address2**, **mailStop**, **city**, **state**, **zip**, **country**, **contact**, **phone**, **extension**, and **email**. Possible values for *value* consist of an alphanumeric string. If the string includes spaces, enclose the values in quotes.

## Examples

```
sscs modify site name="Development Lab"

*Company Name       : Sun
*Site Name          : Development Lab
Address             :
Address 2           :
Mail Stop           :
*City               : Broomfield
State               :
Zip Code            :
*Country            : USA
*Contact First Name : Bob
*Contact Last Name  : Tester
Telephone Number    :
Extension           :
*Contact Email      : bob.tester@sun.com
```

```
sscs modify -r name site

*Company Name       : Sun
*Site Name          :
Address             :
Address 2           :
Mail Stop           :
*City               : Broomfield
State               :
Zip Code            :
*Country            : USA
*Contact First Name : Bob
*Contact Last Name  : Tester
Telephone Number    :
Extension           :
*Contact Email      : bob.tester@sun.com
```

# modify storage-system

Modifies the array information.

## Synopsis

**modify** [ **-N** <*new-array-name*> ] [ **-d** <*description-text*> ] [ **-u** <*user-name*> ] [ **-q** ] [ **-U** <*user-name*> ] [ **-Q** ] **storage-system** <*array-name*>

## Description

Modifies array information such as array name, description, and user name.

## Options

**-d,--description** <*description-text*>

Provides a textual description of the array.

**-N,--new-name** <*new-array-name*>

Changes the array name.

**-Q,--query-for-device-specific-password**

Queries for device-specific password.

**-q,--query-for-password**

Changes the array password.

**-U,--device-specific-user** <*user-name*>

Specifies to use a device-specific user-name.

**-u,--user-name** <*user-name*>

Changes a username on the array.

**storage-system** <*array-name*>

Specifies the array where the changes will take effect.

## Example

```
sscs modify -q storage-system MyArray
Enter the array password:
```

```
Confirm password:
```

# modify userrole

Change the user role or the IP address from which the user can log in.

## Synopsis

**modify -u** <*user-name*> **-p** <**true**|**false**> **-i** <**ANY**|*IP-address*[,*IP-address...*]> **userrole** <**storage**|**guest**>

## Description

Modifies a user role or the IP address from which the user can log in. The storage role can perform configuration changes while the guest role can just monitor an array.

## Options

**-u**,**--username** <*user-name*>

Specifies the user name that has an assigned role (storage or guest).

**-p**,**--password-required** true | false

Specifies whether to require user login with a password.

**-i**,**--ip-address** ANY | <*ip-address*[,*ip-address...*]>

Specifies the IP addresses from which the user can log in. You can let the user log in from anywhere or restrict access to specified IP addresses.

**userrole** storage | guest

Specifies the role assigned to the user.

## Examples

```
sscs modify -u bsmith -p true -i ANY userrole guest
```

# register storage-system

## Synopsis

**register -i** <*ip-address*> [ **-s** <*array-name*> ] [ **-p** <*port-id*> ]
[ **-u** <*user-name*> ] [ **-q** ] [ **-U** <*user-name*> ] [ **-Q** ] **storage-system**

**register -d storage-system**

## Description

Registers a storage system with the host.

## Options

**-d,--discover**

Specifies that the host will discover a registered array.

**-i,--ipaddress** <*ip-address*>

Specifies the IP address of the storage system that you want to register.

**-p,--port** <*port-id*>

Specifies the port ID of the storage system that you want to register.

**-s,--set-name** <*array-name*>

Specifies an array name.

**-u,--user** storage | root | guest

Specifies the user name that has an assigned role.

**-q,--query-for-password**

Specifies whether to query for a password for this registered storage system.

**-U,--device-specific-user** <*user-name*>

Specifies a specific name for this device.

**-Q,--query-for-device-specific-password**

Specifies whether to query for a specific password for this registered device.

# register sun-connection

Registers CAM software and all monitored arrays with Auto Service Request.

## Synopsis

**register** [ **-u** <*sun-online-account-username*> ] [ **-H** <*proxy-host-name*> ] [ **-P** <*proxy-port-number*> ] [ **-U** <*proxy-username*> ] [ **-t** ] **sun-connection**

## Description

Registers CAM software and all monitored arrays with Auto Service Request. Auto Service Request monitors the array system health and performance and automatically notifies the Sun Technical Support Center when critical events occur. Critical alarms generate an Auto Service Request case. The notifications enable Sun Service to respond faster and more accurately to critical on-site issues. All newly discovered arrays will also be registered with the saved registration options.

## Options

**-H**,**--proxyHost** <*proxy-host-name*>

Specifies the proxy host name.

**-P**,**--proxyPort** <*proxy-port-number*>

Specifies the proxy port number.

**-t,--testMessage**

Specifies to send a test message using the current settings.

**-U**, **--proxyUser** <*proxy-username*>

A proxy host authenticated user name.

**-u**,**--user** <*sun-online-account-username*>

Specifies a valid Sun online account user name. To get one, go to: https://portal.sun.com/portal/dt/

## Examples

```
sscs register -H Proxy1 -P 8080 -u MySunAcctId sun-connection
```

# remove alarm

## Synopsis

**remove** [**-s** <**0**|**1**|**2**|**3**>] [**-f** <*device-type*>] [**-A**] **alarm** [<*alarm-ID*[,*alarm-ID...*]>]

## Description

Removes the current alarms.

## Options

**-f**,**--faultdevtype** <*device-type*>

Removes alarms by the device type using a device key filter.

**-s**,**--severity** 0 | 1 | 2 | 3

Specifies the severity level for which you want to remove alarms.

Severity Levels:

0 – minor

1 – major

2 – critical

3 – down

**-A**,**--All**

Removes all of the alarms.

**alarm** [<*Alarm-ID*[,*Alarm-ID...*]>]

Specifies the alarm ID or alarm IDs you want to remove.

## Examples

**sscs remove -f** 6140 **alarm**

**sscs remove -s** 2 **alarm**

**sscs remove -A alarm**

# remove notification

Removes a local or remote notification.

## Synopsis

**remove** [**-e** <*email-address*[,*email-address...*]>] **notification local_email** | **email-filter** | **trap**

**remove** [**-i** <*IP-address*>] [**-o** <*port-id*>] [**-t 1** | **2** | **3** | **4** | **5** ] **notification local_email** | **email-filter** | **trap**

**remove -d** <*array-name*[,*array-name...*]> **notification local_email** | **email-filter** | **trap**

## Description

Removes a local or remote notification.

## Options

**-d**, **--id** <*array-name*[,*array-name...*]>

Removes the specified device ID notification.

**-e**,**--email** <*email-address*[,*email-address...*]>

Stops notifications to the specified recipient.

**-i**, **--ip** <*IP-address*>

Stops sending SNMP trap data to the IP address of the specified host.

**-t**,**--trapnumber** 1 | 2 | 3 | 4 | 5

Stop notifications for the specified trap number.

**-o,--port** <*port-id*>

Specifies the port ID used to transfer notifications.

**local-email**

Removes the notification from your local email address.

**email-filter**

Removes the email filter from the notification.

**trap**

Removes the SNMP trap notification.

### Examples

**sscs remove -e** *john.doe@address.com* **notification local_email**

**sscs remove -t 2 notification trap**

## remove registeredarray

Removes one or more arrays from the list of registered arrays.

### Synopsis

**remove -a** <*array-name*[,*array-name...*]> **registeredarray**

### Description

Removes one or more arrays from the list of registered arrays.

### Options

**-a**,**--array** <*array-name*[,*array-name...*]>

Specifies the registered arrays to remove.

### Example

**sscs remove -a** *array00* **registeredarray**

## remove userrole

Removes a user role assigned to a user name.

### Synopsis

**remove -u** <*user-name*[,*user-name...*]> **userrole** <**storage**|**guest**>

## Description

Removes the privileges (storage or guest role) assigned to a user name.

## Options

**-u**,**--username** <*user-name*[,*user-name...*]>

Specifies the user name.

**userrole** storage | guest

Specifies the user's role to remove.

## Examples

**sscs remove -u** *jf39992* **userrole guest**

# service contact

Tests connectivity to a specified array (inband communication test).

## Synopsis

**service -a** <*array-name*> **contact**

## Description

Tests connectivity to a specified array (inband communication test).

## Options

**-a,--array** <*array-name*>

Specifies the array to which connectivity is tested.

## Examples

**sscs service -a** j4400_test **contact**

```
Executing the contact command on j4400_test
Completion Status: Success
```

# service disable

Disables a target drive in a specified array.

## Synopsis

**service -a** *<array-name>* **-t** *<fru-name>* **disable**

## Description

Disables a target drive in a specified array.

## Options

**-a,--array** *<array-name>*

Specifies the array containing the target drive to disable.

**-t,--target** *<fru-name>*

Specifies the name of the field-replaceable unit to disable. This parameter needs to be set to either the FRU name or the FRU ID, both of which can be obtained using variations of the `list fru` command. See "list fru" on page 46 for further details.

## Examples

```
sscs service -a j4400_test -t Disk.00 disable
```

# service enable

Enables a target drive in a specified array.

## Synopsis

**service -a** *<array-name>* **-t** *<target-fru-name>* **enable**

## Description

Enables a target drive in a specified array.

## Options

**-a,--array** *<array-name>*

Specifies the array containing the target drive to enable.

**-t,--target** *<target-fru-name>*

Specifies the name of the field-replaceable unit to enable. This parameter needs to be set to either the FRU name or the FRU ID, both of which can be obtained using variations of the `list fru` command. See "list fru" on page 46 for further details.

## Examples

```
service -a j4400_test -t Disk.00 enable
```

# service locate

Turns on the locator LED for an array, drive, or tray.

## Synopsis

**service -a** *<array-name>* [ **-t** *<target-fru-name>* ] [ **-o** ] **locate**

## Description

Identifies the array, drive, or tray whose locator LED will be turned on.

## Options

**-a**,**--array** *<array-name>*

Specifies the array whose locator LED will be turned on, or the array containing a specified target FRU.

**-t**,**--target** *<target-fru-name>*

Specifies the name of the field-replaceable unit whose locator LED will be turned on. This parameter needs to be set to either the FRU name or the FRU ID, both of which can be obtained using variations of the `list fru` command. See "list fru" on page 46 for further details.

**-o**,**--off**

Specifies to turn off the locate LED.

## Examples

Turn on the locate LED for a specified array:

```
service -a j4500_rocky locate
```

Turn on the locate LED for a target disk in a specified array:

```
service -a j4500_rocky -t Disk.00 locate
```

Turn off the locate LED for a target disk in a specified array:

```
service -a j4500_rocky -t Disk.00 -o locate
```

# service print

Prints physical information available for a specified array.

## Synopsis

**service -a** *<array-name>* **-t arrayprofile print**

## Description

Prints the contents of the array profile for a specified array.

## Options

**-a**, **--array** *<array-name>*

Specifies the array for which information is printed.

**-t,--target** arrayprofile

Specifies a target file to print.

## Examples

Print the specified array's profile:

```
service -a j4500_rocky -t arrayprofile print
```

# service set

Changes the name of a specified array.

## Synopsis

**service -a** <*array-name*> **set name=**<*new-array-name*>

## Description

Changes the name of a specified array.

## Options

**-a,--array** <*array-name*>

Specifies the array for which you want to change the name.

## Examples

Change array name from `array_bob` to `array_steve`:

**sscs service -a** array_bob **set name=**array_steve

# unregister storage-system

Unregisters an array from the list of registered storage systems.

## Synopsis

**unregister storage-system** <*array-name*[ , *array-name...*]>

## Description

Unregisters an array from the list of registered storage systems.

## Options

**storage-system** <*array-name*[ , *array-name...*]>

Specifies the storage system or systems that you want to unregister from the list of registered storage systems.

### Example

**sscs unregister storage-system** *array19*

## unregister sun-connection

Stops notifications of system health and performance to Sun using the Auto Service Request (ASR) feature.

### Synopsis

**unregister sun-connection**

### Description

Unregisters CAM software and all monitored arrays from Auto Service Request (ASR) which monitors the array system health and performance and automatically notifies the Sun Technical Support Center when critical events occur. Newly discovered arrays will not be registered with the saved registration options.

### Examples

**sscs unregister sun-connection**

## version

Shows the version of the CAM software that you are running on the management host, the version of the SSCS client, or the version of the pclient.

### Synopsis

**-V,--version**

If running the remote CLI, shows the version of the CAM software that you are running on the management host and the version of the SSCS client. If running the local CLI, only the version of the current CAM installation will be shown.

**-v**

If running the remote CLI, shows the version of the pclient. Not valid with the local CLI.

## Description

Shows the version of the CAM software that you are running on the management host, the version of the SSCS client, or the version of the pclient.

## Examples

**sscs -V**

```
Sun StorageTek(TM) Common Array Manager v6.3.0.12
sscs client v2.1.4
```

**sscs -v**

```
$Id: pclient.c,v 1.1 2007/03/24 18:55:51 wf142404 Exp $
```

CHAPTER 4

# Configuration Commands for Arrays with RAID Controllers

This chapter describes the `sscs` commands and their options for arrays with RAID controllers, including the Sun StorEdge™ 6130 array, Sun StorageTek™ 6140 and 6540 arrays, Sun Storage 6180 array, Sun Storage 6580 and 6780 arrays, Sun StorageTek 2500 Series arrays, and FlexLine™ 240, 280, and 380 Systems.

For monitoring and administration commands for all Sun arrays, see Chapter 3.

## add hostgroup

### Synopsis

Adds hosts to a host group.

**add -a** *<array-name>* **-h** *<host-name,...>* **hostgroup** *<host-group-name>*

### Description

Adds hosts to a host group.

### Options

**-a**,**--array** *<array-name>*

Specifies the array associated with this host.

**-h**,**--host** *<host-name,...>*

Specifies the host or hosts that you want to add to the host group.

**hostgroup** <*host-group-name*>

Specifies a host group name of up to 16 alphanumeric characters, underscores, dashes, and spaces.

### Examples

```
sscs add -a array00 -h host01,host02 hostgroup hg01
```

# add license

Adds a license to the specified array.

### Synopsis

**add -a** <*array-name*> **-l** <*license-file*> **license**

### Description

Adds a license to the specified array.

### Options

**-a**,**--array** <*array-name*>

Specifies the array to associate with this license.

**-l**,**--license** <*license-file*>

Specifies the license to associate with this array. The location specified must be a regular file path supported by the management host OS (URL paths are not supported). The license file can be in either the .xml or .key formats.

---

**Note –** The file extension does not need to be specified.

---

### Examples

```
sscs add -a array_test -l C:\temp\licenses\snapshot-license license
```

Adds a license to the `array_test` array from the specified location.

# create host

Creates a storage host.

## Synopsis

**create -a** <*array-name*> [ **-g** <*host-group-name*> ] **host** <*host-name*>

**create -a** <*array-name*> [**-g** <*hostgroup-name*>] [**-w** <*string[,string...]*>] [**-d** <*description-text*>] **host** <*host-name*>

## Description

Creates a storage host where data is initiated. You can create up to 256 hosts per array on the 6130/6140 arrays and up to 512 hosts on the 6540 array.

## Options

**-a,--array** <*array-name*>

Specifies the name of the array on which you want to create a host. For cross-platform compatibility, you can substitute `-X,--storage-device` in place of the `-a,--array` option.

**-w,--wwn** <*string*>

Specifies the initiator World Wide Name (WWN).

**-d,--description** <*description-text*>

Specifies the host description.

**-g,--hostgroup** <*host-group-name*>

Specifies a host group with which you associate this new host.

**host**

Specifies the name of the host that you want to create, using up to 16 alphanumeric characters, underscores, dashes, and spaces.

## Examples

**sscs create -a** array00 **host** host1

# create hostgroup

Creates a storage host group.

## Synopsis

**create -a** <*array-name*> **hostgroup** <*host-group-name*>

## Description

Creates a group of hosts to share storage. You can create up to 256 host groups per array on the 6130/6140 arrays and up to 512 on the 6540 array.

## Options

**-a**, **--array** <*array-name*>

Specifies the array on which you want to create a host group.

**hostgroup** <*host-group-name*>

Specifies the name of the host group that you want to create, using up to 16 alphanumeric characters, underscores, dashes, and spaces.

## Examples

**sscs create -a** array00 **hostgroup** hg1

# create initiator

Creates an initiator.

## Synopsis

**create -a** <*array-name*> **-w** <*initiator-WWN*> [ **-h** <*host-name*> ] [ **-o** <*OS-type-name*> **solaris_dmp | solaris** | **sun_storedge** | **sun_storedge_nas_gateway** | **aix** | **hpux** | **linux** | **lnxavt** | **irix** | **ptx** | **netware_failover** | **netware_non_failover** | **win2k_clustered** | **win2k_non_clustered** | **winnt** | **winnt_non_clustered** | **win2k_non_clustered_dmp** | **win2k_clustered_dmp** | **aixavt** | **winnt_clustered** ] **initiator** <*initiator-name*>

## Description

Creates a FC initiator on a host.

## Options

**-a**,**--array** <*array-name*>

Specifies the array. For cross-platform compatibility, you can substitute `-X`, `--storage-device` in place of the `-a`, `--array` option.

**-w**,**--wwn** <*initiator-WWN*>

Specifies the initiator World Wide Name (WWN). For example: 210000e08b047212.

**-h**,**--host** <*host-name*>

Specifies the data storage host name.

**-o**,**--os-type** <*OS-type-name*>

Use the command **sscs list -a** *array-name* **os-type** to view all of the operating systems that are supported by the array.

**initiator** <*initiator-name*>

Specifies an initiator name of up to 16 alphanumeric characters, underscores, dashes, and spaces.

## Examples

**sscs create -a** array00 **-w** 210000e08b047212 **-h** host01 **-o** `aix` **initiator** myInitiator-01

# create iscsi initiator

Creates an iSCSI initiator on a host.

## Synopsis

**create -a** <*array-name*> [ **-h** <*host-name*> ] [ **-o** <**solaris_dmp | solaris** | **sun_storedge** | **sun_storedge_nas_gateway** | **aix** | **hpux** | **linux** | **irix** | **ptx** | **netware_failover** | **netware_non_failover** | **win2k_clustered** | **win2k_non_clustered** | **winnt** | **winnt_non_clustered** |

**win2k_non_clustered_dmp** | **win2k_clustered_dmp** | **aixavt** | **winnt_clustered**>] [ **-i** <*iqn-string*>] [ **-u** <**none** | **CHAP**>] [ **-c** <*string*> ] **initiator** <*initiator-name*>

## Description

Creates an iSCSI initiator on a host.

## Options

**-a**,**--array** <*array-name*>

Specifies the array. For cross-platform compatibility, you can substitute `-X,--storage-device` in place of the `-a,--array` option.

**-h**,**--host** <*host-name*>

Specifies the data storage host name.

**-o**,**--os-type** <*OS-type-name*>

Use the command **sscs list -a** *array-name* **os-type** to view all of the operating systems that are supported by the array.

**-i,--iqn** <*iqn-string*>

Specifies the iSCSI qualified name (IQN) for the initiator.

**-u,--authentication** <none|CHAP>

Specifies to use the Challenge Handshake Authentication Protocol (CHAP) authentication method for accessing the target. Values are CHAP or none.

**-c,--chap-secret** <*string*>

Specifies the CHAP secret ID (up to 256 alphanumeric characters) used to authenticate the target.

**initiator** <*initiator-name*>

Specifies an initiator name of up to 16 alphanumeric characters, underscores, dashes, and spaces.

## Examples

```
sscs create -a IEC_iSCSI_LCA -h Myhost_19852 -o solaris -i iqn.2001-
06.com.sun:fvt3init21.sys1 -u CHAP -c 123123123123123123 initiator
initiSCSI
```

# create pool

Creates an empty storage pool on the array.

## Synopsis

**create -a** <*array-name*> **-p** <*profile-name*> [ **-d** <*description*> ] **pool** <*pool-name*>

## Description

Creates an empty storage pool on the array and assigns a profile to it.

## Options

**-a**,**--array** <*array-name*>

Specifies the array. For cross-platform compatibility, you can substitute `-X,--storage-device` in place of the `-a,--array` option.

**-d**,**--description** <*description*>

Specifies a description of the pool. The description can be up to 256 alphanumeric characters, which can include underscores, dashes, colons, commas, parentheses, curly brackets, square brackets, ticks, tildes, bars, periods, or spaces.

**-p**,**--profile** <*profile-name*>

Specifies a profile to associate with the pool.

**pool** <*pool-name*>

Specifies a pool name of up to 16 alphanumeric characters, underscores, dashes, and spaces.

## Examples

**sscs create -a** array00 **-p** Database **pool** SP048763

# create profile

Creates a storage profile on the array.

## Synopsis

**create -a** *<array-name>* **-r** <<**0**|**1**>|<**3**|**5**|**6**>> **-s** <**16K**|**32K**|**64K**|**128K**|**256K**|**512K**> **-h** <**on**|**off**> **-n** <**variable**|*<1..224>*|*<1..30>*> [**-k** <**ANY**|**FC**|**SAS**|**SATA**|**SSD**>] [**-H** <**yes**|**no**>] [**-d** *<profile-description>*] **profile** *<profile-name>*

## Description

Profiles for the most common configurations come with the software. This command creates a custom storage profile and assigns it to an array.

## Options

**-a**, **--array** *<array-name>*

Specifies the array name.

**-d**, **--description** *<profile-description>*

Specifies a profile description of up to 256 alphanumeric characters, which can include underscores, dashes, colons, commas, parentheses, curly brackets, square brackets, ticks, tildes, bars, periods, or spaces.

**-k,--disk-type** <**ANY**|**FC**|**SAS**|**SATA**|**SSD**>

Specifies the disk type:

ANY - Any type of disk

FC - Fibre Channel

SAS - Serial Attached SCSI

SATA - Serial Advanced Technology Attachment

SSD - Solid State Device

**-h,--readahead** <**on**|**off**>

Specifies whether the read ahead option is on or off.

**-H,--dedicated-hot-spare** <**yes**|**no**>

Specifies whether you want this disk to be a dedicated hot spare.

**-n,--number-of-disks** <**variable**|*<1..224>*|*<1..30>*>

Specifies the number of disks. variable indicates that the number of disks is not fixed and can change. *<1..224>* is used in combination with RAID levels 0 and 1. *<1..30>* is used in combination with RAID levels 3, 5, and 6.

**-r,--raid-level** <<**0**|**1**>|<**3**|**5**|**6**>>

Specifies the RAID level. <**0**|**1**> is used in combination with number-of-disks 1 to 224. <**3**|**5**|**6**> is used in combination with number-of-disks 1 to 30.

**-s,--segsize** <**16K**|**32K**|**64K**|**128K**|**256K**|**512K**>

Specifies the segment size.

**profile** *<profile-name>*

Specifies a profile name of up to 32 alphanumeric characters, underscores, dashes, and spaces.

## Examples

**sscs create -a** array00 **-r** 1 **-s** 64K **-h** on **-n** variable **-D** FC **-d** Custom-Database-Profile **profile** DatabaseProfile

# create repset

Creates a storage replication set using a peer World Wide Name or remote array name (not applicable to 2500 Series).

## Synopsis

**create -a** *<array-name>* **-l** *<volume-name>* **-w** *<peer-WWN>* **-o** *<volume-name>* **-m sync**| **async** [ **-G yes** | **no** ] [ **-R lowest** | **low** | **medium** | **high** | **highest** ] [ **-s enable** | **disable** ] **repset**

**create -a** *<array-name>* **-l** *<volume-name>* **-A** *<remote-array-name>* **-o** *<volume-name>* **-m sync**| **async** [ **-G yes** | **no** ] [ **-R lowest** | **low** | **medium** | **high** | **highest** ] [ **-s enable** | **disable** ] **repset**

## Description

Creates a storage replication set linking the local volume with the remote volume via a peer World Wide Name or remote array name (not applicable to 2500 Series).

## Options

**-a**, **--array** *<array-name>*

Specifies the array. For cross-platform compatibility, you can substitute `-X,--storage-device` in place of the `-a,--array` option.

**`-A,--remote-array`** *<remote-array-name>*

Specifies the remote array. Options `-A` and `-w` are mutually exclusive.

**`-G,--consistency-group`** `yes | no`

Specifies whether or not you want to add this replication set to the array consistency group. Note that the default value (no) is only allowed with the asynchronous mode option.

**`-l,--local-volume`** *<volume-name>*

Specifies the local volume name.

**`-m,--mode`** `sync | async`

Specifies whether the mode is synchronous or asynchronous.

**`-o,--remote-volume`** *<remote-volume-name>*

Specifies the remote volume name.

**`-R,--replication-priority`** `lowest | low | medium | high | highest`

Specifies the priority of this replication set. If no priority is specified, the default is medium.

**`-s,--auto-sync`** `enable | disable`

Specifies whether the auto synchronization policy is enabled. If it is not specified, the default is `disabled`.

**`-w,--peer-wwn`** *<peer-WWN>*

Specifies the peer World Wide Name.

## Examples

**`sscs create -a`** europe **`-l`** euro_sales **`-w`** `17:76:18:12:18:49:18:62:19:14:19:39:19:47:19:61` **`-o`** euro_sales **`-m`** `async` **`-G`** `no` **`-R`** `medium` **`-s`** `enable` **`repset`**

Creates a replication set of the euro_sales volume that exists on the array named europe. In the process, it uses the euro_sales volume on the array whose WWN is `17:76:18:12:18:49:18:62:19:14:19:39:19:47:19:61` and sets it to synchronize asynchronously with a medium priority with the write order not preserved and resynchronization performed automatically. This repset is called `euro_sales/1`.

**sscs create -a** corp_west **-l** crm-sales **-w** 17:76:18:12:18:49:18:62:19:14:19:39:19:47:19:61 **-o** crm-sales **-m** async **-G** no **-R** medium **-s** enable **repset**

Creates a replication set of the crm-sales volume that exists on the array named corp_west. In so doing, it uses the crm-sales volume on the array whose WWN is 17:76:18:12:18:49:18:62:19:14:19:39:19:47:19:61 and sets it to synchronize asynchronously with the highest priority with the write order preserved and resynchronization performed automatically. This repset is called crm-sales/1.

**sscs create -a** europe **-l** euro_sales **-A** corporate **-o** euro_sales **-m** async **-G** no **-R** medium **-s** enable **repset**

Creates a replication set of the euro_sales volume that exists on the array named europe. In the process, it uses the euro_sales volume on the corporate array and sets it to synchronize asynchronously with a medium priority with the write order not preserved and resynchronization performed automatically. This repset is called euro_sales/1.

**sscs create -a** corp_west **-l** crm-sales **-A** corporate **-o** crm-sales **-m** async **-G** yes **-R** highest **-s** enable **repset**

Creates a replication set of the crm-sales volume that exists on the array named corp_west. In so doing, it uses the crm-sales volume on the corporate array and sets it to synchronize asynchronously with the highest priority with the write order preserved and resynchronization performed automatically. This repset is called crm-sales/1.

# create snapshot

Creates a snapshot for the specified volume.

## Synopsis

**create -a** *<array-name>* **-V** *<source-volume-name>* [**-f** <**failbasewrite**|**failsnapshot**>] [**-v** *<virtual-disk-name>*] [**-m** *<volume-name>*] [**-w** *<0..100>*] [**-n** *<<1..224>|<1..30>>*] [**-d** *<disk-name*[*, disk-name...*]*>*] [**-r** *<<***0**|**1**>|<**3**|**5**|**6**>>] [**-k** <**ANY**|**FC**|**SAS**|**SATA**|**SSD**>] [**-Z** *<number<***TB**|**GB**|**MB**|**KB**|**Bytes**|**BLK**>>] [**-C** *<integer>*] [**-L** <**low**|**verylittle**|**little**|**average**|**high**|**full**>] [**-l** *<0..100>*] [**-P** *<pool-name>*] [**-D** *<description-text>*] **snapshot** *<snapshot-name>*

## Description

Creates a snapshot for the specified volume. Once the snapshot volume is created, it can be treated as any other volume, with the exception that it cannot be used to create another snapshot.

## Options

**-a,--array** *<array-name>*

Specifies the array associated with this snapshot. For cross-platform compatibility, you can substitute **-X,--storage-device** in place of the **-a,--array option**.

**-C,--snapshot-count** *<integer>*

Specifies the number of intended snapshots for the volume.

**-D,--description** *<description-text>*

Specifies a description of the snapshot.

**-d,--disk** *<disk-name*[ , *disk-name...*]*>*

Specifies the name of the disk or disks that will be used to create the snapshot volume. Options **-d** and **-n** cannot be used at the same time, and specification of either one results in a new virtual disk being created.

**-f,--fail-policy** <**failbasewrite**|**failsnapshot**>

The fail policy specifies what to do if and when the snapshot fills up:

failbasewrite - Stop allowing writes to the base volume.

failsnapshot - Stop allowing writes to the snapshot. This is the default.

**-k,--disk-type** <**ANY**|**FC**|**SAS**|**SATA**|**SSD**>

Specifies the disk type:

ANY - Any type of disk

FC - Fibre Channel

SAS - Serial Attached SCSI

SATA - Serial Advanced Technology Attachment

SSD - Solid State Device

**-L,--snapshot-level** <**low**|**verylittle**|**little**|**average**|**high**|**full**>

The snapshot level should be set to the percentage of the base volume that is expected to be overwritten during the snapshot's lifetime. This determines the amount of storage allocated to the snapshot (that is, the size of its reserve volume). To maintain the snapshot of the base volume's state, data in the base volume that is about to be overwritten is copied into the snapshot reserve space.

The snapshot levels equate to the following percentages:

10% - low

25% - verylittle

40% - little

50% - average

75% - high

100% - full

**-l,--snapshot-percentage** *<0..100>*

Specifies what percentage of the volume is to be used for snapshot creation.

**-m,--reserve-name** *<volume-name>*

Specifies the name of the reserve volume. If no name is specified, a name is created and assigned automatically.

**-n,--number-of-disks** *<<1..224>|<1..30>>*

Specifies the number of disks in the snapshot volume. *<1..224>* is used in combination with RAID levels 0 and 1. *<1..30>* is used in combination with RAID levels 3, 5, and 6.

**-P,--snapshot-pool** *<pool-name>*

Specifies the name of the snapshot.

**-r,--raid-level** <<**0**|**1**>|<**3**|**5**|**6**>>

Specifies the RAID level. <**0**|**1**> is used in combination with number-of-disks 1 to 224. <**3**|**5**|**6**> is used in combination with number-of-disks 1 to 30.

**-v,--reserve-vdisk** *<virtual-disk-name>*

This option is mutually exclusive from the **-d**, **-k**, **-n**, and **-r** options.

If a reserve virtual disk is not specified:

- An existing virtual disk is used if possible.
- If no existing virtual disk is found, a new virtual disk is created, if that possibility exists; otherwise, an error message is reported.

If a reserve virtual disk is specified:

- If it is incompatible with the reserve volume, it results in a failure.
- If there is not enough free space, it results in an error.

**-V,--volume** *<source-volume-name>*

Specifies the source volume from which to take a snapshot.

**-w,--warning-threshold** *<0..100>*

Specifies when to inform you that the snapshot reserve volume is near capacity. If a warning threshold is not specified, 50% is used.

**-Z,--snapshot-reserve-size** *<number*<**TB**|**GB**|**MB**|**KB**|**Bytes**|**BLK**>>

Specifies the amount of space you want to reserve for capacity of the snapshot reserve volume.

**snapshot** *<snapshot-name>*

Specifies the snapshot name of up to 16 alphanumeric using characters, underscores, dashes, and spaces.

## Examples

**sscs create -a** array00 **-V** vol0 **snapshot** vol01_snap

# create vdisk

Creates a virtual disk.

## Synopsis

**create -a** *<array-name>* **-p** *<pool-name>* **-d** *<disk-name*[ *, disk-name...*]> [**-S**] **vdisk** *<virtual-disk-name>*

**create -a** *<array-name>* **-p** *<pool-name>* **-n** *<integer>* [**-S**] **vdisk** *<virtual-disk-name>*

## Description

Creates a virtual disk.

---

**Note –** For the 6140 array, this command is only supported with firmware version 07.xx.xx.xx.

---

## Options

**-a**,**--array** *<array-name>*

Specifies the array associated with this virtual disk.

**-d**,**--disk** *<disk-name*[,*disk-name...*]*>*

Specifies particular disks to be added to the virtual disk.

**-n**,**--number-of-disks** *<integer>*

Specifies the number of disks to be added to the virtual disk.

**-p**,**--pool** *<pool-name>*

Specifies the storage pool associated with this virtual disk.

**-S,--secure**

Specifies to create a secure virtual disk.

**vdisk** *<virtual-disk-name>*

Specifies the virtual disk that you want to modify.

## Examples

```
sscs create -a array00 vdisk vdisk1
```

# create volume

Creates a volume within a specified pool.

## Synopsis

**create -a** *<array-name>* **-p** *<pool-name>* **-s** *<number<***TB**|**GB**|**MB**|**KB**|**Bytes**|**BLK***>>* [**-v** *<virtual-disk-name>*] [**-n** *<<1..30>|<1..224>>*] [**-d** *<disk-name*[*, disk-name...*]*>*] [**-c** *<***A**|**B***>*] [**-S**] **volume** *<volume-name>*

**create -a** *<array-name>* **-p** *<pool-name>* **-s** *<number<***TB**|**GB**|**MB**|**KB**|**Bytes**|**BLK***>>* **-Z** *<number<***TB**|**GB**|**MB**|**KB**|**Bytes**|**BLK***>>* [**-v** *<virtual-disk-name>*] [**-n** *<<1..30>|<1..224>>*] [**-d** *<disk-name*[*, disk-name...*]*>*] [**-f** *<***volume**|**snapshot***>*] [**-w** *<0..100>*] [**-P** *<pool-name>*] [**-V** *<virtual-disk-name>*] [**-c** *<***A**|**B***>*] [**-S**] **volume** *<volume-name>*

**create -a** *<array-name>* **-p** *<pool-name>* **-s** *<number<***TB**|**GB**|**MB**|**KB**|**Bytes**|**BLK***>>* **-C** *<integer>* **-L** *<***low**|**verylittle**|**little**|**average**|**high**|**full***>* [**-v** *<virtual-disk-name>*] [**-n** *<<1..30>|<1..224>>*] [**-d** *<disk-name*[*, disk-name...*]*>*] [**-f** *<***volume**|**snapshot***>*] [**-w** *<0..100>*] [**-P** *<pool-name>*] [**-V** *<virtual-disk-name>*] [**-c** *<***A**|**B***>*] [**-S**] **volume** *<volume-name>*

**create -a** *<array-name>* **-p** *<pool-name>* **-s** *<number<***TB**|**GB**|**MB**|**KB**|**Bytes**|**BLK***>>* **-C** *<integer>* **-l** *<0..100>* [**-v** *<virtual-disk-name>*] [**-n** *<<1..30>|<1..224>>*] [**-d** *<disk-name*[*, disk-name...*]*>*] [**-f** *<***volume**|**snapshot***>*] [**-w** *<0..100>*] [**-P** *<pool-name>*] [**-V** *<virtual-disk-name>*] [**-c** *<***A**|**B***>*] [**-S**] **volume** *<volume-name>*

## Description

Creates a volume within a specified pool. You can have up to 2048 volumes per array.

## Options

**-a**, **--array** *<array-name>*

Specifies the array. For cross-platform compatibility, you can substitute **-X,--storage-device** in place of the **-a,--array** option.

**-C,--snapshot-count** *<integer>*

Specifies the number of intended snapshots for the volume.

**-c,--controller** *<***A**|**B***>*

Specifies the controller.

**-d**, **--disk** *<disk-name*[*, disk-name...*]*>*

Specifies the name of the disk. You can use this option with either the -n option or the -v option, but not with both -n and -v at the same time.

**-f,--favor** *<***volume**|**snapshot***>*

Favors the volume or snapshot.

**-L,--snapshot-level** *<***low**|**verylittle**|**little**|**average**|**high**|**full***>*

Specifies the level of snapshot activity. The snapshot levels equate to the following percentages:

low - 10%

verylittle - 25%

little - 40%

average - 50%

high - 75%

full - 100%

**-l,--snapshot-percentage** *<0..100>*

Specifies what percentage of the volume is to be used for snapshot creation.

**-n**, **--number-of-disks** *<1..30>* or *<1..224>*

Specifies the number of disks in the volume. You can use this option with either the **-d** option or the **-v** option, but not with both **-d** and **-v** at the same time. Number-of-disks *<1..30>* is used in combination with a RAID level set at 3, 5, and 6. Number-of-disks *<1..224>* is used in combination with a RAID level set at 0 or 1.

**-P,--snapshot-pool** *<pool-name>*

Specifies the name of the snapshot.

**-p**, **--pool** *<pool-name>*

Specifies the name of the snapshot pool.

**-S,--secure**

Specifies to create a secure volume.

**-s,--size** *<number*<**TB**|**GB**|**MB**|**KB**|**Bytes**|**BLK**>>

Specifies the volume size. Sizes can be in terabytes, gigabytes, megabytes, kilobytes, bytes, or blocks.

**-V,--reserve-vdisk** *<virtual-disk-name>*

Specifies a reserve virtual disk.

**-v**, **--vdisk** *<virtual-disk-name>*

Specifies the name of the virtual disk. You can use this option with either the -d option or the -n option, but not with both -d and -n at the same time.

**-w,--warning-threshold** *<0..100>*

Specifies when to inform you that the snapshot reserve volume is near capacity. If a warning-threshold is not specified, 50% is the default.

**-Z,--snapshot-reserve-size** <*number*<**TB**|**GB**|**MB**|**KB**|**Bytes**|**BLK**>>

Specifies the amount of space you want to reserve for capacity of the snapshot reserve volume.

**volume** <*volume-name*>

Specifies the volume name of up to 16 alphanumeric characters.

## Examples

```
sscs create -a array01 -p pool1 -s 20GB volume ORACLE-1
```

# create volume-copy

Creates a copy of the volume (not applicable to 2500 Series).

## Synopsis

**create -a** <*array-name*> **-s** <*source-volume-name*> **-t** <*target-volume-name*> [ **-p lowest** | **low** | **medium** | **high** | **highest** ] **volume-copy**

## Description

Creates a copy of the volume.

**-a**,**--array** <*array-name*>

Specifies the array associated with this volume.

**-p**,**--priority** lowest | low | medium | high | highest

Specifies the priority of this volume copy. If no priority is specified, the default is medium.

**-s**,**--source-volume** <*volume-name*>

Specifies the source volume name associated with this volume copy.

**-t**,**--target-volume** <*volume-name*>

Specifies the target volume name associated with this volume copy.

### Examples

**sscs create -a** array00 **-s** vol01 **-t** vol02 **volume-copy**

## delete host

Deletes one or more hosts.

### Synopsis

**delete -a** <*array-name*> **host** <*host-name,...*>

### Description

Deletes one or more hosts.

### Options

**-a,--array** <*array-name*>

Specifies the array associated with this host. For cross-platform compatibility, you can substitute `-X, --storage-device` in place of the `-a, --array` option.

**host** <*host-name,...*>

Specifies the host or hosts to delete.

### Examples

**sscs delete -a** array00 **host** host01

## delete hostgroup

Deletes one or more host groups.

### Synopsis

**delete -a** <*array-name*> **hostgroup** <*host-group-name,...*>

### Description

Deletes one or more host groups.

## Options

**-a**,**--array** *<array-name>*

Specifies the array associated with this host group.

**hostgroup** *<host-group-name,...>*

Specifies the host group or host groups to delete.

## Examples

**sscs delete -a** array00 **hostgroup** hg01

# delete initiator

Deletes one or more initiators.

## Synopsis

**delete -a** *<array-name>* [ **-T** *<wwn | initiator_name>*] **initiator** *<initiator-ID,...>*

## Description

Deletes one or more initiators. The initiator or initiators must be unmapped or the command will fail.

## Options

**-a**,**--array** *<array-name>*

Specifies the array associated with this initiator or initiators. For cross-platform compatibility, you can substitute `-X,--storage-device` in place of the `-a,--array` option.

**-T**,**--name-type** *<wwn | iqn | initiator_name>*

Specifies the initiator type, either an iSCSI initiator or FC initiator. For iSCSI, specify the iSCSI qualified name (IQN) or name of the initiator. For FC, specify the World Wide Name or name of the initiator.

**initiator** *<initiator-ID,...>*

Specifies the initiator identifier.

### Examples

**sscs delete -a** array00 **initiator** myInitiator-01,myInitiator-02

## delete iscsi-session

Deletes an iscsi-session.

### Synopsis

**delete -a** <*array-name*> **iscsi-session** <*session-identifier[,session-identifier...]*>

### Description

Deletes iSCSI sessions associated with a specified array.

### Options

**-a**,**--array** <*array-name*>

Specifies the name of the array.

**iscsi-session** <*session-identifier*>

Specifies one or more iSCSI sessions to delete.

### Examples

**sscs delete --array** iSCSILCA2 **iscsi-session** 40:00:01:37:00:05:8

Deletes iSCSI session 40:00:01:37:00:05:8 for array iSCSILCA2.

## delete pool

Deletes one or more pools.

### Synopsis

**delete -a** <*array-name*> **pool** <*pool-name,...*>

## Description

Deletes one or more storage pools. This operation removes all associated virtual disks and volumes during the deletion of the storage pool. You can perform this action only when all volumes in the pool are unmapped.

## Options

**-a**,**--array** <*array-name*>

Specifies the array associated with this pool. For cross-platform compatibility, you can substitute `-X,--storage-device` in place of the `-a,--array` option.

**pool** <*pool-name,...*>

Specifies the storage pool or list of pools to delete.

## Examples

**sscs delete -a** array00 **pool** SP048763

# delete profile

Deletes one or more profiles.

## Synopsis

**delete -a** <*array-name*> **profile** <*profile-name,...*>

## Description

Deletes one or more storage profiles. You can only perform this function on a storage profile that has no storage pools associated with it.

## Options

**-a**,**--array** <*array-name*>

Specifies the array associated with this profile.

**profile** <*profile-name,...*>

Specifies the profile or profiles to delete.

### Examples

**sscs delete -a** array00 **profile** MyProfile

## delete repset

Deletes one or more replication sets (not applicable to 2500 Series).

### Synopsis

**delete -a** <*array-name*> **repset** <*repset-name,...*>

### Description

Deletes one or more replication sets.

### Options

**-a**,**--array** <*array-name*>

Specifies the array from which you want to delete the replication set. For cross-platform compatibility, you can substitute `-X,--storage-device` in place of the `-a,--array` option.

**repset** <*repset-name,...*>

Specifies the replication set or sets to delete.

### Examples

**sscs delete -a** corporate **repset** finance/1

Deletes the replication of the finance volume on the array named corporate.

**sscs delete -a** corp_west **repset** crm-sales/1

Deletes the replication of the crm-sales volume on the array named corp_west.

# delete snapshot

Deletes one or more snapshots.

## Synopsis

**delete -a** <*array-name*> **snapshot** <*snapshot-name,...*>

## Description

Deletes the specified snapshot.

## Options

**-a**,**--array** <*array-name*>

Specifies the array associated with this snapshot. For cross-platform compatibility, you can substitute `-X,--storage-device` in place of the `-a,--array` option.

**snapshot** <*snapshot-name,...*>

Specifies the snapshot or snapshots to delete.

## Examples

**sscs delete -a** array00 **snapshot** snap1

# delete vdisk

Deletes one or more named virtual disks.

## Synopsis

**delete -a** <*array-name*> **vdisk** <*vdisk-name,...*>

## Description

Deletes one or more specified virtual disks.

## Options

**-a**,**--array** *<array-name>*

Specifies the array associated with this virtual disk. For cross-platform compatibility, you can substitute `-X,--storage-device` in place of the `-a,--array` option.

**vdisk** *<vdisk-name,...>*

Specifies the vdisk or vdisks to delete.

### Examples

**sscs delete -a** array00 **vdisk** vdisk1

## delete volume

Deletes one or more named volumes.

### Synopsis

**delete -a** *<array-name>* **volume** *<volume-name,…>*

### Description

Deletes one or more named volumes. The volume must be unmapped or the deletion fails.

### Options

**-a**,**--array** *<array-name>*

Specifies the array associated with this volumes. For cross-platform compatibility, you can substitute `-X,--storage-device` in place of the `-a,--array` option.

**volumes** *<vdisk-name,…>*

Specifies the volumes or volumes to delete.

### Examples

**sscs delete -a** array00 **volume** ORACLE-1

# delete volume-copy

Deletes a volume-copy (not applicable to 2500 Series).

## Synopsis

**delete -a** [ *<array-name>* ] **-s** [ *<source-volume-name>* ] **-t** [ *<target-volume-name>* ] **volume-copy**

## Description

Deletes a volume copy. This operation breaks the copy relationship between the two volumes, but it does not delete the volumes themselves. It also removes the read-only permission on the target volume.

## Options

**-a**,**--array** *<array-name>*

Specifies the array associated with this volume copy.

**-s**,**--source-volume** *<volume-name>*

Specifies the source volume associated with this volume copy.

**-t**,**--target-volume** *<volume-name>*

Specifies the target volume associated with this volume copy.

## Examples

**sscs delete -a** array00 **-s** vol01 **-t** vol02 **volume-copy**

# disable snapshot

Disables one or more snapshots.

## Synopsis

**disable -a** *<array-name>* **snapshot** *<snapshot-name[,snapshot-name...]>*

## Description

Disables one or more snapshots. Disabling a volume snapshot does not remove either the volume snapshot or its associated reserve volume.

When you disable a volume snapshot, only the specified snapshots are disabled. All other snapshots remain functional.

## Options

**-a**, **--array** <*array-name*>

Specifies the array associated with this snapshot.

**snapshot** <*snapshot-name,...*>

Specifies the names of the snapshots that you want to resnap.

## Examples

**sscs disable -a** array00 **snapshot** snapshot1, snapshot2

Disables snapshot1 and snapshot2 on array00.

# export array

Renders an extensible markup language (XML) representation of the array.

## Synopsis

**export** [**-L**] **array** <*array-name*>

## Description

This command renders an extensible markup language (XML) representation of array configuration. Alternately, an array's current encryption key can be retrieved. Command output can then be redirected to a file.

## Options

**-L,--lock-key**

Specifies to retrieve the current encryption key from the specified array. The command will prompt you for the encryption key pass phrase. To ensure accuracy, you will be prompted to enter the pass phrase twice. (For security, the supplied pass phrase will not be echoed back to you). If the **-L** option is not supplied, the array configuration is exported.

---

**Note –** Successful execution of this command produces XML standard output that can be redirected to a file on the local system.

---

**array** <*array-name*>

Specifies the array that you want to export.

### Examples

```
sscs export array array00 > /tmp/array00_backup.xml
```

## export profile

Exports one or more profiles into an XML representation.

### Synopsis

**export -a** <*array-name*> **profile** > [ <*profile-name,...*> ]

### Description

Exports one or more profiles into an XML representation. This outputs to standard output, and then you redirect it to a file or another mechanism.

### Options

**-a**,**--array** <*array-name*>

Specifies the array from which you want to export the profile.

**profile** <*profile-name,...*>

Specifies the profile or profiles to export. If no profiles are specified, all profiles are exported.

## Examples

```
sscs export -a array00 profile > /tmp/all_profiles.xml
```

# fail disk

Sets a disk to the failed state.

## Synopsis

**fail -a** *<array-name>* [ **-t** *<tray-name>* ] **disk** *<disk-name>*

## Description

Sets a disk to the failed state. This can create complications. Do not initiate this command without first consulting Sun Customer Service personnel.

## Options

**-a**,**--array** *<array-name>*

Specifies the array on which you want to fail the disk.

**-t**,**--tray** *<tray-name>*

Identifies the tray where the disk resides.

**disk**

Specifies the name of the disk.

## Examples

```
sscs fail -a Array01 -t Tray20 disk t20d16
```

```
sscs fail -a Array01 disk t20d16
```

# import array

Applies an array configuration file to the specified array.

## Synopsis

**import -x** <*XML-location*> [ **-L** <*list*> ] [ **-n** ] **array** <*array-name*>

## Description

Applies an array configuration file to the specified array. This enables you to import the configuration file from one array to overwrite the configuration for this array.

Use the **-n** option to preserve the current array configuration, including the mapping between the access LUN (LUN 31) and the management host. This mapping is required for in-band management of the array.

## Options

**-x**, **--xml** <*XML-location*>

Specifies the location of the XML file to be imported. The XML location can be in the form of a url (http://... or file:///...) or a file name.

**-L**, **--list**

Specifies that no import take place. Instead, the array is checked against the XML file to ensure that it is compatible.

**-n**, **--noclear**

Specifies that the current array configuration will not be cleared.

**array** <*array-name*>

Specifies the array to which the configuration file is applied.

## Examples

**sscs import -x** file:///tmp/array00_configuration.xml **array** array00

### *Response Format*

(when the list option is used)

```
Array array-name is [not] compatible with XML file XML-location.
```

# import profile

Imports one or more profiles from a specified XML file.

## Synopsis

**import -a** <*array-name*> **-x** <*XML-location*> [ **-f** ] **profile** [ <*profile-name,...*> ]

**import -a** <*array-name*> **-x** <*XML-location*> **-L profile** [ <*profile-name,...*> ]

## Description

Imports one or more profiles from a specified XML file. This allows you to import the configuration profile from one array to overwrite the configuration profile for this array.

## Options

**array** <*array-name*>

Specifies the array to which you want to import the profile.

**-x**, **--xml** <*XML-location*>

Specifies the location of an XML file containing the profiles to be imported. The XML location can be in the form of a URL (http://... or file:///...) or a file name.

**-f**, **--force**

Specifies the following actions when conflicts occur with the profiles:

**Exists** – Profiles are not imported.

**Duplicate Settings** – Profiles are imported, creating a new profile.

**Conflicting** – Profiles are imported, replacing the current profile of the same name.

**In Use** – Profiles are not imported.

**New** – Profiles are imported.

If the force option is not specified, the following occurs:

**Exists** – Profiles are not imported.

**Duplicate Settings** – Profiles are not imported.

**Conflicting** – Profiles are not imported.

**In Use** – Profiles are not imported.

**New** – Profiles are imported.

In all cases, both successful and failed imports are reported.

**-L,--list**

Lists all profiles. If the list option is specified, no import takes place. All profiles in the XML file (or all those specified by way of the <profile-name>) are listed, and each is identified as follows:

**Exists** – The profile already exists with all of the same parameter values.

**Duplicate Settings** – A profile with exactly the same parameters (the description and version can be different), but a different name exists, and no profile with the given name is in use by the system.

**Conflicting** – A profile with the same name exists, has different parameters, and is not currently in use by the system.

**In Use** – A profile with the same name exists, has different parameters, and is currently in use by the system.

**New** – None of the above labels apply.

**profile** *<profile-name,...>*

Specifies the profile or profiles to import. If no profile names are specified, all profiles in the given XML location are used.

## Examples

**sscs import -a** array00 **-f -x** file:///tmp/all_profiles.xml **profile**

### *Response Format*

(when --list option is used**)**

**profile_name:** Exists

**profile_name:** Duplicate Settings

**profile_name:** New

```
profile_name: Conflicting
```

# initialize disk

Initializes a disk.

## Synopsis

**initialize -a** *<array-name>* [ **-t** *<tray-name>* ] **disk** [ *<disk-name>*]

## Description

Initializes a disk. If a disk from another array is inserted, and you want to use it in a different array, you might need to initialize it to remove any latent virtual disk information. All data on the disk will be lost. This can create complications. Do not initiate this command without first consulting Sun Customer Service personnel.

## Options

**-a**,**--array** *<array-name>*

Specifies the array on which you want to initialize the disk.

**-t**,**--tray** *<tray-name>*

Identifies the tray where the disk resides.

**disk**

Specifies the name of the disk.

## Examples

```
sscs initialize -a Array01 -t Tray2 disk Disk6
```

# list controller

Lists configuration information for the specified controller.

## Synopsis

**list -a** <*array-name*> **controller** [ **A** | **B** ]

## Description

Lists configuration information for the specified controller.

## Options

**-a**, **--array** <*array-name*>

Specifies the array for which you want to view controller information.

**controller A** | **B**

Specifies the controller for which you want to view information. If no controller is specified, summary information for both controllers is displayed.

## Examples

**sscs list -a** array01 **controller**

### *Response Format*

**Controller:** A | B

**Mode:** Active | Inactive

**Quiesced:** True | False

**Status:** Removed | Optimal | RPA Par Error | Failed | Service Mode

**Drive Interface:** FC | SATA | SAS | SSD

**Cache Memory Size:** *n* MB

**Manufacturer:** *manufacturer*

**Serial Number:** *serial-number*

**Ethernet Port:** 1

**Use DHCP/BOOTP:** On | Off

**IP Address:** *IP-address*

**Gateway:** *IP-address*

**Net Mask:** *net-mask*

# list fcport

Lists Fibre Channel port information for the controller of the specified array.

## Synopsis

**list -a** <*array-name*> [ **-c A** | **B** ] **fcport** [ <*FC-port-ID,...*> ]

## Description

Lists Fibre Channel (FC) port information for the controller of the specified array.

## Options

**-a**,**--array** <*array-name*>

Specifies the name of the array where the controller resides.

**-c**,**--controller A** | **B**

Specifies the controller for which you want Fibre Channel port information.

**fcport** <*fcport-ID,...*>

Specifies the Fibre Channel port or ports for which you want information. Ports are specified as A/1 to A/4 and B/1 to B/4. If no FC port is specified, details for all ports are displayed.

## Examples

**sscs list -a** array00 **fcport** A/1

### *Response Format*

**Array:** *array-name* **Controller: A** | **B FCPort:** *fcport-ID*

**Port WWN:** *port-WWN*

**Node WWN:** *node-WWN*

**Topology: ARB Loop** | **Fabric** | **PTP** | **FAB Loop** | **Unknown**

**Speed:** *current-speed* Gb/s (Giga bits per second)

**Maximum Speed:** *maximum-speed* Gb/s

**Loop ID:** *0..127* | **N/A** | **Any**

**Preferred Loop ID:** *0..127* | **N/A** | **Any**

**Channel Number:** *channel-number*

**Channel Joined With Another: True** | **False**

**Link Status: Up** | **Down**

# list host

Lists the host names and details for an individual host.

## Synopsis

**list -a** <*array-name*> **host** [ <*host-name,...*> ]

## Description

Lists the host names and details for an individual host.

## Options

**-a**,**--array** <*array-name*>

Specifies the array associated with this host. For cross-platform compatibility, you can substitute `-X,--storage-device` in place of the `-a,--array` option.

**host** <*host-name,...*>

Specifies the host or hosts that you want to view in detail. When no host is specified, the names of all the hosts in the array are listed.

## Examples

**sscs list -a** array00 **host**

### *Response Format*

(when no <*host-name*> value is specified)

**Host:** *host-name*

. . .

**Host:** *host-name*

### *Response Format*

(host detail when <*host-name*> value is specified)

**Host:** *host-name*

**Host Group:** *hostgroup-name*

**Initiator:** *initiator-name*

. . .

**Initiator:** *initiator-name*

**Volume:** *volume-name* **LUN**:*LUN-ID*

. . .

**Volume:** *volume-name* **LUN**:*LUN-ID*

# list hostgroup

Lists host group name and hosts for an individual host group.

## Synopsis

**list -a** <*array-name*> **hostgroup** [ <*host-group-name,...*> ]

## Description

Lists host group name and hosts for an individual host group.

## Options

**-a**, **--array** *<array-name>*

Specifies the array associated with this host group.

**hostgroup** *<host-group-name,...>*

Specifies the host group that you want to view. When no host group is specified, the names of all the host groups in the array are listed.

## Examples

**sscs list -a** array00 **hostgroup**

### *Response Format*

(when no *<host-group-name>* value is specified)

**Host Group:** *host-group-name*

. . .

**Host Group:** *host-group-name*

### *Response Format*

(host detail when the *<host-group-name>* value is specified)

**Host Group:** *host-group-name*

**Host:** *host-name*

. . .

**Host:** *host-name*

**Volume:** *volume-name* **LUN**:*LUN-ID*

. . .

**Volume:** *volume-name* **LUN**:*LUN-ID*

# list initiator

Lists the initiators and provides a description of each.

## Synopsis

**list -a** <*array-name*> [ **-T** <**wwn** | **initiator_name**> ] **initiator** [ <*initiator-ID,...*> ]

## Description

Lists the initiators and provides a description of each.

## Options

**-a**,**--array** <*array-name*>

Specifies the array associated with this initiator. For cross-platform compatibility, you can substitute `-X,--storage-device` in place of the `-a,--array` option.

**-T**,**--name-type** <wwn | iqn | initiator_name>

Specifies the initiator identifier; a World Wide Name, iSCSI qualified name (IQN), or a named initiator.

**initiator** <*initiator-ID,...*>

Specifies the initiator identifier.

## Examples

**sscs list -a** array01 **-T** initiator_name **initiator** myInitiator-01

**sscs list -a** array01 **initiator** myInitiator-01

**sscs list -a** iSCSILCA_2 **-T** iqn **initiator**

### *Response Format*

(list of initiators when no <*initiator-ID*> value is specified)

**Initiator:** *initiator-ID*

...

**Initiator:** *initiator-ID*

### *Response Format*

(detail about the initiator when an <*initiator-ID*> value is specified)

**Initiator:** *initiator-ID*

**WWN:** *initiator-WWN*

**Host:** *host-name*

**OS Type:** *host-type*

# list iperformance

Displays iSCSI performance statistics for the 2510 array and enables you to define the type of iSCSI performance statistics to monitor.

## Synopsis

To display the performance statistics:

**list -a** <*array-name*[,*array-name...*]> **-T** [**-b** <**true** | **false**>] **iperformance**

To define the type of iSCSI performance statistics to monitor and the sort order of the output:

**list -a** <*array-name*[,*array-name...*]> **-t** <**array_stats** | **controller_stats** | **volume_stats**> [**-c** <**A**|**B**>] [**-h** <*host-name*[,*host-name...*]>] [**-g** <*hostgroup-name*[,*hostgroup-name...*]>] [**-v** <*volume-name*[,*volume-name...*]>] [**-s** <**name** | **total_iops** | **read_percent** | **write_percent** | **total_data** | **avg_read_size** | **avg_read_rate** | **peak_read_rate** | **avg_write_size** | **avg_write_rate** | **peak_write_rate** | **cache_hit_percent**>] [**-b** <**true**|**false**>] **iperformance**

## Description

Displays iSCSI performance statistics for the 2510 array and enables you to define the type of iSCSI performance statistics to monitor and the sort order of the output.

Only valid for 2510 arrays running firmware version 07.35.*nn.nn* or higher.

## Options

**-a**,**--array** <*array-name*>

Specifies the name of the array associated with this iSCSI performance request.

**-b**,**--baseline** <**true** | **false**>

Sets the baseline time for the iSCSI array. If true, the current array time is used as the baseline time.

**-t**,**--type** <array_stats | controller_stats | volume_stats>

Specifies the type of statistics to list: array, controller, or volume.

**-c**,**--controller** <**A** | **B**>

Specifies controller A or controller B.

**-h**,**--host** <*host-name*[,*host-name...*]>]

Specifies the host name of one or more hosts.

**-g**,**--hostgroup** <*hostgroup-name*[,*hostgroup-name...*]>

Specifies the name of one or more host groups.

**-v**,**--volume** <*volume-name*[,*volume-name*...]>

Specifies one or more volumes.

**-s**,**--sort** <name | total_iops|read_percent|write_percent | total_data | avg_read_size |avg_read_rate| peak_read_rate | avg_write_size | avg_write_rate | peak_write_rate | cache_hit_percent>]

Specifies the value for sorting the performance output.

## Examples

**Display Statistics:**

**sscs list -a** iSCSILCA_2 **-T iperformance**

### *Response Format*

**Array:** iSCSILCA_2

**State:** Off

**Polling Interval:** 1 minute

**Data Retention Period:** 1 hour

**BASELINE STATISTICS**

**Controller A Baseline Time:** *date* **at** *time*

**Controller B Baseline Time:** *date* **at** *time*

**MAC Transmit Statistics**

**MAC Receive Statistics**

**TCP Statistics**

**IPv4 Statistics**

**IPv6 Statistics**

**Target (Protocol) Statistics**

**Define statistics to display:**

```
sscs list --array iSCSILCA_2 --type array_stats --sort total_iops
iperformance
```

List array statistics for iSCSILCA_2 and sort by total I/O operations per second.

# list iscsi-port

Lists iSCSI ports.

## Synopsis

**list -a** <*array-name*> [**-c** <**A**|**B**>] **iscsi-port** [*iscsiport-id*[,*iscsiport-id*...]]

## Description

Lists information for one or more iSCSI ports configured for a specified array.

## Options

**-a**,**--array** <*array-name*>

Specifies the name of the array.

**-c**,**--controller** <**A** | **B**>

Specifies controller A or B for which you want information.

[*iscsiport-id*[,*iscsiport-id*...]]

Specifies one or more iSCSI port IDs. For a detailed listing, specify controller/port.

## Examples

**sscs list --array** iSCSILCA_2 **iscsi-port** B/1

Lists detail for iSCSI port 1 on controller B for array iSCSILCA_2.

### *Response Format*

**Array:** iSCSILCA_2

**Controller:** A

**iSCSI Port:** B/1

**Port MAC:** 00:A0:B8:20:34:69

**Speed:** 100 Mbps

**Maximum Speed:** 1 Gbps

**Link Status:** Up

**Listening Port:** 3260

**MTU:** 1500

**ICMP Ping Responses:** Enabled

**IPv4:** Enabled

**DHCP:** Off

**IP Address:** 10.8.88.167

**Gateway:** 10.8.88.1

**Netmask:** 255.255.255.0

**VLAN:** Disabled

**VLAN ID:** 0

**Ethernet Priority:** Disabled

**Priority:** 3

# list iscsi-session

Lists iSCSI sessions.

## Synopsis

**list -a** <*array-name*> **iscsi-session** [*session-identifier*[**,***session-identifier*...]]

## Description

Lists iSCSI sessions associated with a specified array. To list details of a specific iSCSI session, include the iSCSI session ID.

## Options

**-a**, **--array** <*array-name*>

Specifies the name of the array.

**iscsi-session** [*session-identifier*[,*session-identifier*...]]

Specifies the iSCSI session ID.

## Examples

**sscs list -a** iSCSILCA_2 **iscsi-session** 40:00:01:37:00:00:8003

### *Response Format*

**iSCSI Session**

**iSCSI Target:** iqn.1992-01.com.lsi:1535.600a0b80003487c10000000046cc4a1d

**iSCSI Session Identifier (SSID):** 40:00:01:37:00:00:8003

**Initiator Session Identifier (ISID):** 40:00:01:37:00:00

**Target Portal Group Tag:** 2

**Initiator iSCSI Name:** iqn.1991-05.com.microsoft:funk.sun.com

**Initiator iSCSI Label:** i1193868006

**Initiator iSCSI Alias:** fi1193868006

**Host:** fh1193262432

i**SCSI Session Connection ID(s)**

**Connection ID (CID):** 0x1

**Ethernet Port:** Controller B, Port 2

**Initiator IP Address:** 10.8.88.103

**Negotiated Login Parameters**

**Authentication Method:** None

**Header Digest Method:** None

**Data Digest Method:** None

**Maximum Connections:** 4

**Target Alias:** iSCSI_LCA2

**Initiator Alias:** fi1193868006

**Target IP Address:** 10.8.88.175

**Target Portal Group Tag:** 2

**Initial R2T:** Yes

**Maximum Burst Length:** 262144 Bytes

**First Burst Length:** 8192 Bytes

**Default Time to Wait:** 0 Seconds

**Default Time to Retain:** 60 Seconds

**Maximum Outstanding R2T:** 16

**Error Recovery Level:** 0

**Maximum Receive Data Segment Length:** 65536 Bytes

# list iscsi-target

Lists iSCSI targets.

## Synopsis

**list -a** *<array-name>* **iscsi-target** *target-name*

## Description

Lists iSCSI target name configured for the specified array. To list details, specify the iSCSI target name. Target name is the iSCSI qualified name (IQN), for example: iqn.199201.com.sun:1535.600a0b80002f9da0000000000461255f9.

## Options

**-a**, **--array** *<array-name>*

Specifies the name of the array.

**iscsi-target** *target-name*

Specifies the iSCSI qualified name of the iSCSI target.

## Examples

```
sscs list --array iSCSILCA_2 iscsi-target
```

### *Response Format*

```
iSCSI Target Name:  iqn.1992-01.com.sun:1535.
600a0b80003487c10000000046cc4a1d
```

```
sscs list --array iSCSILCA_2 iscsi-target iqn.1992-
01.com.sun:1535.600a0b80003487c10000000046cc4a1d
```

### *Response Format*

```
iSCSI Target Name:   iqn.1992-01.com.lsi:1535.
600a0b80003487c10000000046cc4a1d

 Alias: iSCSI_LCA2

 Authentication: NONE

 CHAP Secret: *****

 Unnamed Discovery:  Enabled

 Sessions: 1

 iSNS: Enabled

  IPv4: 10.8.88.56

  DHCP: Off

  Port: 3205

 Initiators

  server1: iqn.1991-05.com.microsoft:sun-pojdhrbx7tt

  server2: iqn.1991-05.com.sun.microsoft.jcz
```

**server3:** iqn.1991-05.com.microsoft:sun-pojdhrbx7rr

**server4:** iqn.1986-03.com.sun:01:0003ba3145ed.47032ecf

**server5:** iqn.1986-03.com.sun:01:00144f010116.46fa5d9a

**server6:** iqn.1986-03.com.sun:01:0003ba0442dd.47062a0f

**server7:** iqn.1991-05.com.microsoft:sun-pojdhrbx7qq

**server8:** iqn.2001-04.com.example.storage.tape:sys1.xyz

**server9:** iqn.1991-05.com.microsoft:funk.sun.com

**server10:** iqn.1991-05.com.microsoft:jim.bur.sun.com

**server11:** iqn.1991-05.com.microsoft:parash.india.sun.com

**server12:** iqn.1991-05.com.microsoft:pookawinxp

**server13:** iqn.1991-05.com.microsoft:nms-lab8

# list license

Shows all licenses that are associated with the array, and related licensing details.

## Synopsis

**list -a** <*array-name*> **license** [ <*license-name,...*> ]

## Description

Shows all licenses that are associated with the array, along with related licensing details (serial number, controller serial number, and further details).

**-a**, **--array** <*array-name*>

Specifies the array associated with this license.

**license** <*license-name,...*>

Specifies the name of a license or licenses. If you list specific licenses, then only the details of those licenses are shown.

## Examples

**sscs list -a** corporate **license** <*license-name,...*>

Lists all of the licenses on the corporate array.

**sscs list -a** corp_west **license** ReplicationSet

Lists the details of the replication set license on the corp_west array.

## *Response Format*

(when no <*license-name*> values are specified)

**Array:** *array-name*

**WWN:** *World-Wide-name*

**Serial Number:** *serial-number*

**Featured Enable Identifier:** *identifier*

**License:** *license-name*

**Description:** *description*

**Status:** `Enabled | Disabled`

**Quantity Licensed:** *quantity*

**Quantity Used:** *quantity*

## *Response Format*

(when <*license-name*> values are specified)

**Array:** *array-name*

**WWN:** *World-Wide-name*

**Serial Number:** *serial-number*

**Featured Enable Identifier:** *identifier*

**License:** *license-name*

**Description:** *description*

**Status:** `enabled | disabled`

**Quantity Licensed:** *quantity*

**Quantity Used:** *quantity*

**Replication License Status:** `Activated | Deactivated`

**Repository Volume:** *replication-repository-name* **Size:** *number-of-megabytes* **Vdisk:** *virtual-disk-identifier*

**Licensed Items Sample Formats:**

**Snapshot:**

**Licensed Items:**

**Base Volume:**vol_b13 Snapshot Volume:new-snap

**Base Volume:**dk_rep3 Snapshot Volume:dk_snap1

**StorageDomain:**

**Licensed Items:**

**Host Group:** t_hostgroup_2

**Host:** MIG-1

**VolumeCopy**

**Licensed Items:**

**Source Volume:**dk_rep1 Target Volume:dk_rep2

**Source Volume:**dk_vol3 Target Volume:dk_rep4

# list mapping

Lists the mapping for each host, host group, and storage domain.

## Synopsis

**list -a** <array-name> **mapping**
[**DefaultStorageDomain**|**Host**|**HostGroup**[**,DefaultStorageDomain**|**Host**|**HostGroup...**]]

## Description

Lists mappings for the array. You can filter the output by specifying the name of a storage domain, a host, or a host group.

## Options

**-a**,**--array** <*array-name*>

Lists all mappings for the specified array. Filters the output based on the name of a storage domain, host, or host group supplied.

**mapping**
**[DefaultStorageDomain|Host|HostGroup[,DefaultStorageDomain|Host|HostGroup...]]**

Lists mapping for the specified storage domain.

## Examples

**sscs list -s** array1 **mapping host** host1

Lists all of the mappings on array1 for host1.

### *Response Format*

```
Volume:JKTest  LUN: 0  Mapped To: diag-e4500a  Target Type: Host
Permission: Read/Write
```

# list os-type

Shows the operating system types on this array.

## Synopsis

**list -a** <*array-name*> **os-type**

## Description

Shows all of the operating systems that are supported by the array. The values returned can be used in subsequent requests to create or modify initiators, or to modify the default host type of the array.

## Options

**-a**, **--array** <*array-name*>

Shows the array name.

**os-type**

Shows all of the operating systems that are supported by the array.

### *Response Format*

**WNTNCLSP5** - Windows NT nonclustered (SP 5 or higher)
**W2KNETNCL** - Windows 2000/Server 2003 nonclustered
**SOL** - Solaris (with Traffic Manager)
**HPX** - HP-UX
**AIX** - AIX
**IRX** - Irix
**LNX** - Linux
**WNTCLSP5** - Windows NT clustered (SP 5 or higher)
**W2KNETCL** - Windows 2000/Server 2003 clustered
**AIXAVT** - AIX (with Veritas DMP)
**W2KNETCLDMP** - Windows 2000 clustered DMP
**NWRFO** - Netware failover
**IRX_FO**
**AIX_FO**
**SOLAVT** - Solaris (with Veritas DMP or other)
**W2KNETNCLDMP** - Windows 2000 nonclustered DMP

# list performance

Shows detailed performance statistics.

## Synopsis

**list -a** <*array-name,...*> **-T performance**

**list -a** <*array-name,...*> **-t array_stats** | **controller_stats** | **volume_stats** [ **-c A** | **B** ] [ **-h** <*host-name,...*> ] [ **-g** <*host-group-name,...*> ] [ **-v** <*volume-name,...*> ] [ **-s name** | **total_iops** | **read_percent** | **write_percent** | **total_data** | **avg_read_size** | **avg_read_rate** | **peak_read_rate** | **avg_write_size** | **avg_write_rate** | **peak_write_rate** ] **performance**

## Description

Shows detailed performance statistics. You can use the following options only if a single array is specified:

**--controller, --volume, --host, and --hostgroup**

**Note –** When using the local CLI **sscs** command, performance monitoring must be enabled before executing the **list performance** subcommand. Performance monitoring is turned on via the **modify performance** subcommand. See "modify performance" on page 171 for further information.

## Options

**-a**,**--array** *<array-name>*

Specifies the array or arrays associated with this performance request.

**-T**,**--settings**

Shows the current settings for the array, including state, polling interval, and data retention period. If this option is specified, all other options (except array) are ignored.

**-t**,**--type** array_stats | controller_stats | volume_stats

Specifies the type of statistics to list: array, controller, or volume.

**-c**,**--controller A** | **B**

Specifies the controller name.

**-v**,**--volume** *<volume-name,...>*

Specifies the volume name or volume names associated with this performance request.

**-h**,**--host** *<host-name,...>*

Specifies the host name or host names associated with this volume.

**-g**,**--hostgroup** *<host-group-name,...>*

Specifies the host group or host groups associated with this volume.

**-s**,**--sort** name | total_iops | read_percent | write_percent | total_data | avg_read_size | avg_read_rate | peak_read_rate | avg_write_size | avg_write_rate | peak_write_rate | cache_hit_percent

Specifies the sorting mechanism.

**performance**

Specifies the performance subcommand.

### *Response Format*

(if settings are specified)

**Array:** *array-name*

**State:** on | off

**Polling Interval:** 1 minute | 5 minutes | 15 minutes

**Data Retention Period:** forever | 1 hour | 2 hours | 4 hours | 1 day

### *Response Format*

```
NAME TOT IOPS READ % WRITE% TOT DATA AVG R SIZE AVG R /s PEAK R /s ....
==== ======== ====== ====== ======== ========== ======== =========
vol1      0.0   0.00   0.00      0.0        0.0      0.0       0.0
...
vol2      3.6   7.32  34.77   1030.3       32.7      4.5      10.4
```

# list pool

Lists storage pool information.

## Synopsis

**list -a** *<array-name>* **pool** [ *<pool-name,...>* ]

## Description

Lists storage pool information.

## Options

**-a**,**--array** *<array-name>*

Specifies the array associated with this pool. For cross-platform compatibility, you can substitute `-X,--storage-device` in place of the `-a,--array` option.

**pool** *<pool-name,...>*

Specifies the pool or pools for which you want detailed information. If no pools are specified, this subcommand lists summary information for all pools.

## Examples

**sscs list -a** array01 **pool** SP048763

### *Response Format*

(summary of all pools when no <*pool-name*> value is specified)

**Pool:** *pool-name* **Profile:** *profile-name* **Configured Capacity:** *capacity*

....

**Pool:** *pool-name* **Profile:** *profile-name* **Configured Capacity:** *capacity*

### *Response Format*

(detail of a pool when a <*pool-name*> value is specified)

**Pool:** *pool-name*

**Description:** *description*

**Profile:** *profile-name*

**Total Capacity:** *capacity* MB | GB | TB

**Configured Capacity:** *capacity* MB | GB | TB

**Available Capacity:** *capacity* MB | GB | TB

  **Volume:** *volume-name1*

  **Volume:** *volume-name2*

# list profile

Lists the named storage profiles.

## Synopsis

**list -a** <*array-name*> **profile** [ <*profile-name,...*> ]

## Description

Lists the named storage profiles.

## Options

**-a**,**--array** <*array-name*>

Specifies the array associated with this profile.

**profile** <*profile-name,...*>

Specifies the profile or profiles for which you want detailed information. If no profiles are specified, this subcommand lists summary information for all profiles.

## Examples

**sscs list -a** array00 **profile** MyProfile

### *Response Format*

(summary of all profiles when no <*profile-name*> value is specified)

**Profile:** *profile-name*

...

**Profile:** *profile-name*

### *Response Format*

(detail of a profile when a <*profile-name*> value is specified)

**Profile:** *profile-name*

**Profile in Use:** yes | no

**Factory Profile:** yes | no

**Description:** *profile-description*

**RAID Level:** 0 | 1 | 3 | 5 | 6

**Segment Size:** 8 KB | 16 KB | 32 KB | 64KB | 256KB

**Read Ahead:** on | off

**Optimal Number of Drives:** variable | *2..30*

**Disk Type:** ANY | FC | SATA | SAS | SSD

**Pool:** *pool-name*

....

**Pool:** *pool-name*

# list repset

Lists replication set information (not applicable to 2500 Series).

## Synopsis

**list -a** <*array-name*> **repset** [ <*repset-name,...*> ]

## Description

Lists replication set information.

## Options

**-a**, **--array** <*array-name*>

Specifies the array from which you want to obtain replication set information. For cross-platform compatibility, you can substitute `-X, --storage-device` in place of the `-a, --array` option.

**repset <***repset-name,...***>**

Specifies the replication set or sets. If you do not specify a replication set, then a summary of all the replication sets on the array is listed.

## Examples

**sscs list -a** corporate **repset**

Lists all of the repsets on the array named corporate.

**sscs list -a** corporate **repset** mail/1

Lists the details of the replication set mail/1 on the array named corporate.

### *Response Format*

(summary of all replication sets when no replication set name is specified)

**Replication set:** *local-volume-name/1* **Consistency Group:** yes | no **Remote volume:** *remote-vol* **Replication Peer:** *replication-peer-name*

...

**Replication set:** *local-volume-name/1* **Consistency Group:** yes | no **Remote volume:** *remote-vol* **Replication Peer:** *replication-peer-name*

### *Response Format*

(details when a replication set name is specified)

**Replication set:** *repset-name*

**Local volume:** *volume-name*

**Synchronization progress:** Replicating | Unsynchronized | Synchronization in progress | Suspended | Failed | Not Ready | Failed Suspended

**Role:** Primary | Secondary

**Size:** *size-in-megabytes*

**Replication peer:** *remote-array-name*

**Replication peer WWN:** *remote-array-WWN*

**Remote volume:** *remote-volume-name*

**Remote volume WWN:** *remote-volume-WWN*

**Mode:** Synchronous | Asynchronous

**Consistency group:** yes | no

**Replication priority:** lowest | low | medium | high | highest

**Auto synchronize:** Enabled | Disabled

# list sasport

Lists SAS port information.

## Synopsis

**list -a** <*array-name*> [ **-c A** | **B** ] **sasport** [ *sasport-id,..* ]

## Description

Lists pertinent SAS port information.

## Options

**-a**, **--array** *<array-name>*

Specifies the array for which you want to obtain SAS port information.

**-c,--controller A** | **B**

Specifies the controller for which you want to view SAS port information. If no controller is specified, summary information for both controllers is displayed.

**sasport** *<sasport-ID,...>*

Specifies the SAS port or ports for which you want information. Ports are specified as A/1 to A/4 and B/1 to B/4. If no SAS port is specified, details for all ports are displayed.

## Examples

```
sscs list -a Quartz sasport

Array: Quartz
 Controller:      B
 SAS Port:        B/1
 Port WWN:        50:0A:0B:81:D2:BA:60:04
 Speed:           1 Gb/s
 Maximum Speed:   7 Gb/s
 Channel Number:  1
 Link Status:     Up


Array: Quartz
 Controller:      B
 SAS Port:        B/2
 Port WWN:        50:0A:0B:81:D2:BA:60:0C
```

```
 Speed:           1 Gb/s
 Maximum Speed:   7 Gb/s
 Channel Number:  2
 Link Status:     Up

Array: Quartz
 Controller:      B
 SAS Port:        B/3
 Port WWN:        50:0A:0B:81:D2:BA:60:08
 Speed:           1 Gb/s
 Maximum Speed:   7 Gb/s
 Channel Number:  3
 Link Status:     Up

Array: Quartz
 Controller:      A
 SAS Port:        A/1
 Port WWN:        50:0A:0B:81:D2:BB:10:04
 Speed:           1 Gb/s
 Maximum Speed:   7 Gb/s
 Channel Number:  1
 Link Status:     Up

Array: Quartz
 Controller:      A
 SAS Port:        A/2
 Port WWN:        50:0A:0B:81:D2:BB:10:0C
 Speed:           1 Gb/s
```

```
 Maximum Speed:   7 Gb/s
 Channel Number:  2
 Link Status:     Up

Array: Quartz
 Controller:      A
 SAS Port:        A/3
 Port WWN:        50:0A:0B:81:D2:BB:10:08
 Speed:           1 Gb/s
 Maximum Speed:   7 Gb/s
 Channel Number:  3
 Link Status:     Up
```

# list snapshot

Lists the specified snapshot or snapshots associated with this array.

## Synopsis

**list -a** <*array-name*> **snapshot** [ <*snapshot-name,...*> ]

## Description

Lists the specified snapshot or snapshots associated with this array.

## Options

**-a**,**--array** <*array-name*>

Specifies the array associated with this snapshot.

**snapshot** <*snapshot-name,...*>

Specifies the snapshot or snapshots you want to view. If you do not specify a snapshot, the names of all the snapshots in the array are listed.

## Examples

**sscs list -a** array00 **snapshot** snap1

### *Response Format*

(when no <*snapshot-name*> value is specified)

**Snapshot**: *snapshot-name*

...

**Snapshot:** *snapshot-name*

### *Response Format*

(detailed output if one or more <*snapshot-name*> values are specified)

**Volume:** *snapshot-volume-name*

**Type:** *snapshot*

**WWN:** *WWN*

**Virtual Disk:** *virtual-disk-name-of-parent-volume*

**Size:** *size-of-parent* MB

**State:** *state*

**Status:** *status*

**Action:** *action*

**Condition:** Optimal | Degraded | Failed | Impaired

**Controller:** A | B

**Preferred Controller:** A | B

**Modification Priority:** lowest | low | medium | high | highest

**Write Cache:** Enabled | Disabled

**Write Cache With Replication:** Enabled | Disabled

**Write Cache Without Batteries:** Enabled | Disabled

**Flush Cache After:** *time*

**Disk Scrubbing:** Enabled | Disabled

**Disk Scrubbing With Redundancy:** Enabled | Disabled

**Percent Full:** *0..100%*

**Failure Policy:** failbasewrite | failsnapshot

**Warning Threshold:** *0..100*

**Creation Date:** *date*

**Base Volume:** *base-volume-name*

**Reserve Volume:** *reserve-volume-name*

**Reserve Status:** online | offline

**Reserve Size:** *n*

**Response Format Notes:**

Pools and profiles may be empty, and represented by the symbol '-' (dash).

For a standard volume, this indicates that the current configuration for the volume does not fall into any pool's defined parameters. For snapshot volumes these values will always be empty.

# list tray

Lists information about one or more storage trays in the array.

## Synopsis

**list -a** <*array-name*> **tray** [ <*tray-name,...*> ]

## Description

Lists information about one or more storage trays in the array.

## Options

**-a**, **--array** <*array-name*>

Specifies the array associated with this tray.

**tray** <*tray-name,...*>

Specifies the tray ID or tray IDs you want to display. If no tray ID is specified, then the names of all the trays in the array are listed.

## Examples

**sscs list -a** array01 **tray** 1

### *Response Format*

(summary of all trays when no <*tray-ID*> value is specified)

**Tray:** *tray-ID*

....

**Tray:** *tray-ID*

### *Response Format*

(detail of a tray when a <*tray-ID*> value is specified)

**Tray:** *tray-ID*

**Array Type:** 6140

**Role:** Drive Module | Controller Module | Unknown

**State:** Enabled | Disabled

**Status:** OK | ID mismatch | ID conflict | ESM firmware mismatch ESM miswire | minihub speed mismatch | unsupported

**Disk Type:** FC | SATA | SAS | SSD

**Number of Disks:** *n*

# list vdisk

Lists virtual disk (vdisk) or virtual disks information associated with this array.

## Synopsis

**list -a** <*array-name*> **vdisk** [ <*virtual-disk-name,...*>]

## Description

Lists virtual disk (vdisk) or virtual disks information associated with this array.

## Options

**-a**, **--array** *<array-name>*

Specifies the array or arrays associated with this virtual disk.

**vdisk** *<virtual-disk-name,...>*

Specifies the virtual disk or disks you want to show. If no virtual disk names are specified, all virtual disk names are listed.

## Examples

**sscs list -a** array01 **vdisk** disk 1,2,3,4

### *Response Format*

(summary of all vdisks when no *<virtual-disk-name>* value is specified)

**VDisk:** *virtual-disk-name*

....

**VDisk:** *virtual-disk-name*

### *Response Format*

(detail of a vdisk when a *<virtual-disk-name>* value is specified)

**Virtual Disk:** *virtual-disk-name*

**Status:** Optimal | Degraded | Failed | Impaired

**State:** *State (Ready, Degraded, etc.)*

**Number of Disks:** *number-of-disks*

**RAID Level:** 0 | 1 | 3 | 5 | 6

**Total Capacity:** *capacity*

**Configured Capacity:** *capacity*

**Available Capacity:** *capacity*

**Array Name:** *array-name*

**Array Type:** *array-type*

**Disk Type:** FC | SATA | SAS | SSD

**Maximum Volume Size:** *size*

**Associated Disks:**

**Disk:** *disk-name*

....

**Disk:** *disk-name*

**Associated Volumes:**

**Volume:** *volume-name*

....

**Volume:** *volume-name*

# list volume

Lists volume information.

## Synopsis

**list -a** <*array-name*> [ **-p** <*pool-name*> ] [ **-v** <*virtual-disk-name*> ] **volume** [ <*volume-name,...*> ]

## Description

Lists volume information.

## Options

**-a**,**--array** <*array-name*>

Specifies the array associated with this volume. For cross-platform compatibility, you can substitute `-X,--storage-device` in place of the `-a,--array` option.

**-p**,**--pool** <*pool-name*>

Specifies the pool name associated with this volume. If a pool is specified, all volumes in that pool are listed.

-**v**,**--vdisk** <*virtual-disk-name*>

Specifies the *virtual-disk* associated with this volume.

**volume** <*volume-name,...*>

Specifies the volume name or names associated with this array. If no volumes are specified, a summary of all volumes is listed. Use pool and virtual-disk to display listed volumes.

## Examples

**sscs list -a** array01 **-p** *pool1* **volume** ORACLE-1

### *Response Format*

(summary of all volumes when no <*volume-name*> value is specified)

**Volume:** *volume-name* **Type:** *type* **Pool:** *pool-name* **Profile** *profile-name*

....

**Volume:** *volume-name* **Type:** *type* **Pool:** *pool-name* **Profile** *profile-name*

### *Response Format*

(detailed output if specified volume is a standard, source, or target volume)

**Volume:** *volume-name*

**Type:** Standard | Source | Target | Replicated

**WWN:** *WWN*

**Pool:** *pool-name*

**Profile:** *profile-name*

**Virtual Disk:** *virtual-disk-name*

**Size:** *size*

**State:** Free | Mapped

**Status:** Online | Offline

**Action:** *current-action*

**Condition:** Optimal | Degraded | Failed | Impaired

**Read Only:** Yes | No

**Controller:** A | B

**Preferred Controller:** A | B

**Modification Priority:** Lowest | Low | Medium | High | Highest

**Write Cache:** Enabled | Disabled

**Write Cache With Replication:** Enabled | Disabled

**Write Cache Without Batteries:** Enabled | Disabled

**Flush Cache After:** *time*

**Disk Scrubbing:** Enabled | Disabled

**Disk Scrubbing With Redundancy:** Enabled | Disabled

Volume Copy Targets:

Target Volume: *volume-name*

...

Target Volume: *volume-name*

**Snapshot:** *snapshot-name* **Creation Time:** *time* **Reserve:** *reserve*

...

**Snapshot:** *snapshot-name* **Creation Time:** *time* **Reserve:** *reserve*

Associations:

**Host:** *host-name* **LUN:** *LUN-ID* **Initiator:** *initiator* **WWN:** *WWN*

*or*

**Host Group**: *hostgroup-name* **LUN:** *LUN-ID* **Initiator:** *initiator* **WWN:** *WWN*

**Response Format Notes:**

Pools and profiles can be empty, in which case they are represented by the symbol '-' (dash).

For a standard volume, this indicates that the current configuration for the volume does not fall into any pool's defined parameters.

# list volume-copy

Lists volume-copy information (not applicable to 2500 Series).

## Synopsis

**list -a** <*array-name*> [ **-s** <*source-volume-name,...*> ] [ **-t** <*target-volume-name,...*> ] **volume-copy**

## Description

Lists volume copy information. If neither the source volume nor the target volume is specified, a summary of all volume copies is listed. If the source volume or the target volume is specified, a detailed listing of each is generated.

## Options

**-a**, **--array** <*array-name*>

Specifies the array associated with the volumes that you want to list.

**-s**, **--source-volume** <*source-volume-name,...*>

Specifies the source volume or volumes that you want to list.

**-t**, **--target-volume** <*target-volume-name,...*>

Specifies the target volume or volumes that you want to list.

## Examples

**sscs list -a** array00 **-s** *vol1,vol3* **volume-copy**

### *Response Format*

(summary of all volume copies when no volume copy name is specified)

**Source Volume:** *source-volume-name* **Target Volume:** *target-volume-name*

...

**Source Volume:** *source-volume-name* **Target Volume:** *target-volume-name*

### *Response Format*

(detailed output if a <*volume-copy*> *value is specified*)

**Volume Copy:**

**Source Volume:** *source-volume-name*

**Target Volume:** *target-volume-name*

**Target Read Only:** Enabled | Disabled

**Status:** In Progress | Completed | Stopped

**Percent Complete:** 0...100

**Priority:** lowest | low | medium | high | highest

**Copy Start Timestamp:** *timestamp*

**Copy Completion Timestamp:** *timestamp*

# map host

Maps one or more volumes to a host.

## Synopsis

**map -a** <*array-name*> [ **-P readwrite | readonly** ] [ **-v** <*volume-name,...*> ] [**-s** <*snapshot-volume-name,...*> ] [ **-l** <*0..255*> ] **host** <*host-name*>

## Description

Maps one or more volumes and snapshots to a host. Any previous mappings for the given volumes and snapshots are removed.

## Options

**-a**,**--array** <*array-name*>

Specifies the array associated with this host. For cross-platform compatibility, you can substitute `-X,--storage-device` in place of the `-a,--array` option.

**-l**,**--lun-id** <*0..255*>

Specifies a logical unit number (LUN). A LUN can be specified only when mapping a single volume. If no LUN is specified, as many successive unused LUNs as needed are used, starting with the first available LUN. You can have up to 256 LUNs per host or hostgroup.

**-P, --permission** `readwrite | readonly`

Specifies that the permission for accessing this snapshot is read-write or read-only.

**-s**,**--snapshot** <*snapshot-volume-name,...*>

Specifies the snapshot volume name or names associated with this host.

**-v**,**--volume** <*volume-name,...*>

Specifies the volume associated with this host.

**host** *<host-name>*

Specifies the host that you want to map to the volume.

## Examples

**sscs map -a** array00 **-v** vol01,vol02 **host** host01

# map hostgroup

Maps one or more volumes to a host group.

## Synopsis

**map -a** *<array-name>* [**-s** *<snapshot-name[,snapshot-name...]>*] [**-v** *<volume-name[,volume-name...]>*] [**-l** *<0..255>*] **hostgroup** *<hostgroup-name>*

## Description

Maps one or more volumes and snapshots to a host group. Any previous mappings for the given volumes or snapshots are removed.

## Options

**-a**, **--array** *<array-name>*

Specifies the array associated with this host group.

**-v**, **--volume** *<volume-name[,volume-name...]>*

Specifies the volumes to be mapped to this host group.

**-s**, **--snapshot** *<snapshot-name[,snapshot-name...]>*

Specifies the snapshot volumes to be mapped to this host group.

**-l**, **--lun-id** *<0..255>*

Specifies the LUN ID of the initiator that you want to map to this host group. A LUN can be specified only when mapping a single volume. If no LUN is specified, as many successive unused LUNs as necessary are used, starting with the first available unused LUN. You can have up to 256 LUNs per host or hostgroup.

**hostgroup** *<host-group-name>*

Specifies the host group name.

## Examples

**sscs map -a** array00 **-v** vol01,vol02 **hostgroup** hg01

# map initiator

Maps one or more initiators to a volume or snapshot.

## Synopsis

**map -a** *<array-name>* [ **-P readwrite** | **readonly** ] [ **-v** *<volume-name,...>* [ **-s** *<snapshot-volume-name,...>* ] [ **-l** *<0..255>* ] **initiator** *<initiator-name,...>*

## Description

Maps an initiator to a volume or snapshot. Any previous mappings for the given volumes or snapshots are removed.

## Options

**-a**,**--array** *<array-name>*

Specifies the array associated with the initiator. For cross-platform compatibility, you can substitute `-X,--storage-device` in place of the `-a,--array` option.

**-l**,**--lun-id** *<0..255>*

Specifies the logical unit number of this initiator. A LUN can be specified only when mapping a single initiator. If no LUN is specified, the first available LUN is used. You can have up to 256 LUNs per host or hostgroup.

**-P, --permission** `readwrite | readonly`

Specifies that the permission for accessing this volume is read-write or read-only.

**-s**,**--snapshot** *<snapshot-volume-name,...>*

Specifies the snapshot volumes to be mapped to this initiator.

**-v**,**--volume** *<volume-name,...>*

Specifies the volumes to be mapped to this initiator.

**initiator** *<initiator-name,...>*

Specifies the initiator name to which the array is being mapped. If no volume or snapshot is specified, the initiator is mapped into the default partition.

### Examples

**sscs map -a** array00 **-v** v01 **initiator** init01

# map snapshot

Maps one or more snapshots to a host or host group.

### Synopsis

**map -a** *<array-name>* [ **-P readwrite** | **readonly** ] [ **-i** *<initiator-name>* ] [**-h** *<host-name>*| **-g** *<host-group-name>* ] [ **-l** *<0..255>* ] **snapshot** *<snapshot-name,...>*

### Description

Maps one or more snapshots to a host or host group. If no host or host group is specified, the snapshot or snapshots are mapped into the Default partition.

### Options

**-a**,**--array** *<array-name>*

Specifies the array associated with this snapshot. For cross-platform compatibility, you can substitute `-X,--storage-device` in place of the `-a,--array` option.

**-g**,**--hostgroup** *<host-group-name>*

Specifies the host group that you want to map to the snapshots.

**-h**,**--hostname** *<host-name>*

Specifies the host that you want to map to the snapshot.

**-i**,**--initiator** *<initiator-name>*

Specifies the initiator that you want to map to the snapshot.

**-l**,**--lun-id** *<0..255>*

Specifies the logical unit number of this initiator. A LUN can be specified only when mapping a single volume. If no LUN is specified, the first available LUN is used. You can have up to 256 LUNs per host or hostgroup.

**-P, --permission** readwrite | readonly

Specifies that the permission for accessing this snapshot is read-write or read-only.

**snapshot** <*snapshot-name,...*>

Specifies the name or names of the snapshot you want to map. Any previous mappings for the snapshots will be removed.

### Examples

**sscs map -a** array00 **-g** hg01 **snapshot** snap1, snap2

## map volume

Maps one or more volumes to a host or host group.

### Synopsis

**map -a** <*array-name*> [ **-P readwrite** | **readonly**] [ **-i** <*initiator-name*> ] [**-h** <*host-name*> ] [ **-g** <*host-group*> ] [ **-l** <*0..255*> **] volume** <*volume-name,...*>

### Description

Maps one or more volumes to a host or host group. Any previous mappings for the given volume or volumes are removed.

### Options

**-a**,**--array** <*array-name*>

Specifies the array associated with this volume. For cross-platform compatibility, you can substitute -X,--storage-device in place of the -a,--array option.

**-g**,**--hostgroup** <*host-group-name*>

Specifies the host group name associated with this volume.

**-h**,**--hostname** <*host-name*>

Specifies the host that you want to map to the volume.

**-i**,**--initiator** <*initiator-name*>

Specifies the initiator that you want to map to the volume.

**-l**, **--lun-id** *<0..255>*

Specifies the logical unit number of this initiator. A LUN can be specified only when mapping a single volume. If no LUN is specified, the first available LUN is used. You can have up to 256 LUNs per host or hostgroup.

**-P, --permission** readwrite | readonly

Specifies that the permission for accessing this volume is read-write or read-only.

**volume** *<volume-name,...>*

Specifies the volume name to which the array is being mapped.

If no host or host group is specified, the volume or volumes are mapped into the default partition.

## Examples

**sscs map -a** array00 **-g** hg01 **volume** vol01,vol02

# modify array

Modifies the configuration of the specified array.

## Synopsis

**modify** [**-o** <**solaris_dmp**|**solaris**|**sun_storedge**|**sun_storedge_nas_gateway**|**aix**|**hpux**|**linux**|**irix**|**ptx**|**netware_failover**|**netware_non_failover**|**win2k_clustered**|**win2k_non_clustered**|**winnt**|**winnt_non_clustered**|**win2k_non_clustered_dmp**|**win2k_clustered_dmp**|**aixavt**|**winnt_clustered**|**vmware**|**hpux_tpgs**>] [**-s** *<0..100>*] [**-S** *<0..100>*] [**-k** <**disable**|*1..30*>] [**-f** *<0..60>*] [**-h** *<0..8>*] [**-T** <**wwn**|**array_name**>] [**-b** <**4K**|**8K**|**16K**|**32K**>] [**-N** *<new-array-name>*] [**-p** *<password>*] [**-L** [*<prefix>*]] **array** *<array-name>*

**modify -R** [**-T** <**wwn**|**array_name**>] **array** *<array-name>*

## Description

Modifies the configuration of the specified array.

## Options

**-o**,**--os-type**
<**solaris_dmp**|**solaris**|**sun_storedge**|**sun_storedge_nas_gateway**|**aix**|**hpux**|**linux**|**irix**|**ptx**|**netware_failover**|**netware_non_failover**|**win2k_clustered**|**win2k_non_clustered**|**winnt**|**winnt_non_clustered**|**win2k_non_clustered_dmp**|**win2k_clustered_dmp**|**aixavt**|**winnt_clustered**|**vmware**|**hpux_tpgs**>

Specifies the operating system type. Use the command **sscs list -a** *array-name* **os-type** to view all of the operating systems that are supported by the array.

**-b,--cache-block-size** <**4K**|**8K**|**16K**|**32K**>

Specifies the cache block size.

**-f**,**--failover-alert** *<0..60>*

Specifies the LUN failover alert time frame, in seconds. The system alerts you to an array failover at the allotted time.

**-h**,**--hot-spare** *<0..8>*

Specifies the hot-spare count for the array. When a hot-spare drive count is specified, an algorithm distributes hot-spare drives across the trays of the array. To specify a drive, use the subcommand modify disk. The hot-spare count limit is dependent on the array:

- 15 for 6130 running firmware version 07.10.*nn.nn* or lower
- 15 for 6140 and 6540 running firmware version 07.10.*nn.nn* or lower, OR firmware version 07.15.*nn.nn* or higher.
- 15 for 2500 series arrays running firmware version 07.10.*nn.nn* or lower, OR firmware version 07.35.*nn.nn* or higher.
- Unlimited for 6580 and 6780 arrays.

**-k**,**--disk-scrubbing** disable | *<1..30>*

Specifies the interim after which the system scrubs the disk.

**-L,--lock-key** [<*prefix*>]

Specifies for the array to generate a new array lock key using the specified lock key prefix. If no prefix value is specified, the array name is used as the prefix. The command will prompt you for a new pass phrase. To ensure accuracy, you will be prompted to enter the pass phrase twice. If the new pass phrase is accepted, all existing unlocked secure drives on the array will be rekeyed with the new lock key.

---

**Note –** Successful execution of this command produces XML standard output that can be redirected to a file on the local system. A copy of the lock key will be retained by CAM as a backup, with older lock keys being obsoleted.

---

**-N**,**--new-name** <*new-array-name*>

Specifies the new name of the array.

**-p**,**--password** <*password*>

Specifies the array password.

**-R,--redistribute-volumes**

Specifies to redistribute volumes on the specified array naming type.

**-s**,**--cache-start** <*0..100*>

Specifies the array cache start.

**-S**,**--cache-stop** <*0..100*>

Specifies the array cache stop.

**-T**,**--name-type** <wwn | array_name>

Specifies the array naming type.

**array** <*array-name*>

Specifies the name of the array to be modified.

## Examples

```
sscs modify -f 30 -T array_name array ARRAY1
```

# modify controller

Modifies the controller settings.

## Synopsis

**modify -a** <*array-name*> [**-e** <**1**|**2**>] [**-d** <**on**|**off**>] [**-i** <*ip-address*>] [**-g** <*ip-address*>] [**-m** <**netMask**>] **controller** <**A**|**B**>

Modifies the Ethernet port of a controller using the specified IP parameters.

**modify -a** <*array-name*> [ **-e 1** | **2** ] **-d** <**on**|**off**> **controller** <**A**|**B**>

Modifies the IP parameters of a controller's Ethernet port using the Dynamic Host Control Protocol (DHCP).

**modify -a** <*array-name*> **-E controller <A**|**B>**

Verifies the network connectivity between the array controller and the management software.

**modify -a** <*array-name*> **-e** <**1|2**> [**-v** <**enable|disable**>] [**-d** <**on|off**>] [**-i** <*ip-address*>] [**-g** <*ip-address*>] [**-m** <*netMask*>] **controller** <**A|B**>

Modifies controller IP parameters, including option to enable or disable IPv4. Only supported on 6580 and 6780.

**modify -a** <*array-name*> **-e** <**1|2**> [**-V** <**enable|disable**>] [**-d** <**on|off**>] [**-I** <*v6-ip-address*>] [**-r** <*v6-ip-address*>] [**-m** <**enable|disable**>] [**-d** <**full|half**>] [**-s** <**PORT_SPEED_NONE|PORT_AUTO_NEGOTIATED|PORT_10MBPS_HALF_DUPLEX|PORT_10MBPS_FULL_DUPLEX|PORT_100MBPS_HALF_DUPLEX|PORT_100MBPS_FULL_DUPLEX|PORT_1000MBPS_HALF_DUPLEX|PORT_1000MBPS_FULL_DUPLEX**>] **controller** <**A|B**>

Modifies controller Ethernet port and IP parameters, including IPv6 options and port speed. IPv6 is only supported on 6140 and 6540 arrays with firmware version 07.15.*nn.nn* or higher, 2500 series arrays with firmware version 07.35.*nn.nn* or higher, and 6580 and 6780 arrays. Port speed option only supported on 6580 and 6780 arrays.

## Options

**-a**,**--array** <*array-name*>

Specifies the array associated with this controller.

**-d**,**--dhcp** on | off

Specifies whether the dynamic host control protocol (DHCP) is active.

**-d,--duplex** <**full|half**>

Specifies port capability, full or half duplex.

**-e**,**--ethernet-port** 1 | 2

Specifies the Ethernet port number.

**-E**,**--test-communication**

Verifies the network connectivity between the array controller and the management software.

**-g**,**--gateway** <*gateway-address*>

Specifies the gateway IP address. IP addresses can be either Domain Name System (DNS) names or dotted decimal addresses.

**-i**,**--ipaddress** <*IP-address*>

Specifies the controller's IP address. IP addresses can be either Domain Name System (DNS) names or dotted decimal addresses.

**-I,--v6-address** <*v6-ip-address*>

Specifies IPv6 IP address.

**-m**, **--netmask** <*netmask*>

Specifies the controller's network mask.

**-m,--mode** <**enable|disable**>

Enables or disables port mode.

**-r,--router** <*v6-ip-address*>

Specifies router IP address.

**-s,--speed**
<**PORT_SPEED_NONE|PORT_AUTO_NEGOTIATED|PORT_10MBPS_HALF_DUPLEX|PORT_10MBPS_FULL_DUPLEX|PORT_100MBPS_HALF_DUPLEX|PORT_100MBPS_FULL_DUPLEX|PORT_1000MBPS_HALF_DUPLEX|PORT_1000MBPS_FULL_DUPLEX**>

Specifies the port speed. Port speed option only supported on 6580 and 6780 arrays.

**-V,--ip-v6** <**enable|disable**>

Enables or disables IPv6. IPv6 only supported on 6140 and 6540 arrays with firmware version 07.15.*nn.nn* or higher, 2500 series arrays with firmware version 07.35.*nn.nn* or higher, and 6580 and 6780 arrays.

**-v,--ip-v4** <**enable|disable**>

Enables or disables IPv4.

**controller A** | **B**

Specifies the controller to modify.

## Examples

**sscs modify -a** array00 **-g** 10.0.5.2 **controller A**

**sscs modify -a** array00 **-e** 2 **-d** on **controller A**

**sscs modify -a** array00 **-E controller B**

# modify date

Modifies the date on the array.

## Synopsis

**modify -a** *<array-name>* [**-G** <**true | false**>] [**-s**] **date** <**HHMM|mmddHHMM|mmddHHMM.SS|mmddHHMMyy|mmddHHMMccyy|mmddHHMMccyy.SS**>

## Description

Modifies the date on the array, allowing you to set the time on the array, or to synchronize the time with the management host (that is, setting the array's time to the management host's time.)

## Options

**-a**,**--array** *<array-name>*

Specifies the array for which you want to specify date information.

**-G**,**--GMT** true | false

Specifies whether to set Greenwich Mean Time (GMT) to true or false. If GMT is set to true, the date is GMT time. If GMT is set to false, the local time zone on the host system is assumed.

**-s**,**--synchronize**

Specifies whether to synchronize the date with the date on the element manager host. If this option is already set, you will not be able to specify a date.

**date**

Specifies the date.

*mmdd*

Specifies the month and day. For example, 0331 is March 31.

*HHMM*

Specifies the hour and minute. The hour is based on a 24-hour clock. For example, 1:30 p.m. is 1330.

*cc*

Specifies the century part of the year.

*yy*

Specifies the two-digit year.

*.SS*

Specifies the seconds of the hour.

## Examples

**sscs modify -G false date** 010112002003.00

# modify disk

Specifies a disk's role or prepares a secure disk (or disks) for use in non-secure volumes through erasure.

## Synopsis

**modify -a** <*array-name*> **-h** <**true**|**false**> **disk** <*disk-name*>

**modify -a** <*array-name*> **-e** [**-t** <*tray-name*>] **disk** <*disk-name*[,*disk-name...*]>

## Description

This command either specifies a disk's role or prepares a secure disk (or disks) for use in non-secure volumes through erasure.

## Options

**-a**,**--array** <*array-name*>

Specifies the array associated with the specified disk(s).

**-e,--erase**

Specifies to erase all data from specified security-enabled disk(s) not currently used in any volume group. This will prepare the specified disk(s) for use in non-secure volume groups.

---

**Caution –** This command will destroy all data on the specified disk(s) and is an irreversible operation.

---

**-h**,**--hot-spare** <**true**|**false**>

Specifies whether you want this disk to be a designated hot-spare.

**-t,--tray** *<tray-name>*

Specifies the tray name associated with the specified disk(s).

**disk** *<disk-name>*

Specifies the disk that you want to modify.

### Examples

**sscs modify -a** array00 **-h true disk** t0d01

## modify fcport

Modifies the Fibre Channel port settings on the specified array.

### Synopsis

**modify -a** *<array-name>* **-c A** | **B -l** *<0..125>*| n/a | any **fcport** *<FC-port-ID>*

### Description

Modifies the Fibre Channel port settings on the specified array.

### Options

**-a**,**--array** *<array-name>*

Specifies the array associated with this controller.

**-c**,**--controller A** | **B**

Specifies the controller.

**-l**,**--loop-id** *<0..125>* | n/a | any

Specifies the preferred loop ID.

**fcport** *<FC-port-ID>*

Specifies the Fibre Channel port number that you want to modify. Ports are specified as A/1 to A/4 and B/1 to B/4. If no FC port is specified, details for all ports are displayed.

## Examples

**sscs modify -a** array00 **-c B -l** 125 **fcport** 1

# modify host

Modifies the host name.

## Synopsis

**modify -a** <*array-name*> [ **-N** <*host-name*>] [ **-g** <*host-group-name*> ] **host** <*host-name*>

## Description

Modifies the host name. You can have up to 256 hosts per array on the 6130/6140 arrays and up to 512 on the 6540 array.

## Options

**-a**,**--array** <*array-name*>

Specifies the array associated with this host. For cross-platform compatibility, you can substitute -X,--storage-device in place of the -a,--array option.

**-N**,**--new-name** <*host-name*>

Specifies the new name for the host.

**-g**,**--hostgroup** <*host-group-name*>

Specifies the host group into which to include this host.

**host** <*host-name*>

Specifies the current host name.

## Examples

**sscs modify -a** array00 **-N** host02 **host** host01

# modify hostgroup

Modifies the host group name.

## Synopsis

**modify -a** <*array-name*> **-N** <*host-group-name*> **hostgroup** <*host-group-name*>

## Description

Modifies the host group name. You can have up to 256 hosts per array on the 6130/6140 arrays and up to 512 on the 6540 array.

## Options

**-a**,**--array** <*array-name*>

Specifies the array associated with this host group.

**-N**,**--new-name** <*host-group-name*>

Specifies the new name for the host group.

**hostgroup** <*host-group-name*>

Specifies the current name of the host group that you want to rename.

## Examples

```
sscs modify -a array00 -N hg02 hostgroup hg01
```

# modify initiator

Modifies an initiator.

## Synopsis

**modify -a** <*array-name*> [ **-h** <*host-name*>] [ **-N** <*initiator-name*> ] [ **-T** *wwn* | *initiator_name* ] [ **-o solaris_dmp | solaris** | **sun_storedge** | **sun_storedge_nas_gateway** | **aix** | **hpux** | **linux** | **lnxavt** | **irix** | **ptx** | **netware_failover** | **netware_non_failover** | **win2k_clustered** |

**win2k_non_clustered** | **winnt** | **winnt_non_clustered** | **win2k_non_clustered_dmp** | **win2k_clustered_dmp** | **dsp** | **aixavt** | **winnt_clustered** ]**initiator** *<initiator-ID>*

## Description

Modifies the initiator.

## Options

**-a**,**--array-name** *<array-name>*

Specifies the array for which you want to modify the initiator. For cross-platform compatibility, you can substitute `-X,--storage-device` in place of the `-a,--array` option.

**-h**,**--hostname** *<host-name>*

Specifies the new host to be associated with this initiator.

**-N**,**--new-name** *<initiator-name>*

Specifies the new initiator name.

**-T**,**--name-type** `wwn | initiator_name`

Specifies the World Wide Name or the initiator name. If *name-type* is not specified, the *initiator-ID* is assumed to be an initiator name. You can modify the WWN if the initiator is offline only.

**-o**,**--os-type** *<OS-type-name>*

Specifies the operating system type. Use the command **sscs list -a** *array-name* **os-type** to view all of the operating systems that are supported by the array.

**initiator** *<initiator-ID>*

Specifies the initiator identifier.

## Examples

**sscs modify -a** array00 **-N** Lexington_01 **initiator** myInitiator_01

# modify iperformance

Modifies the settings for iSCSI performance data.

## Synopsis

**modify -a** *<array-name>* [**-S** <**on**|**off**>] [**-p** <**1**|**5**|**15**>] [**-r** <**forever**|**1HR**|**2HR**|**4HR**|**1DAY**>] [**-b** <**true** | **false**>] **iperformance**

## Description

Modifies the settings for iSCSI performance data.

## Options

**-a**,**--array** *<array-name>*

Specifies the name of the array for which you want to modify.

**-S**,**--status** <**on**|**off**>

Enables or disables iSCSI performance monitoring.

**-p**,**--poll** <**1**|**5**|**15**>

Specifies the poll interval frequency as 1, 5, or 15 minutes.

**-r,--retention** <**forever**|**1HR**|**2HR**|**4HR**|**1DAY**>

Specifies the period of time you want to retain the performance data in cache.

**-b**,**--baseline** <**true** | **false**>

Sets the baseline time for the iSCSI array. If true, the current array time is used as the baseline time.

## Examples

```
sscs modify -a iSCSILCA_2 -S on -p 5 iperformance
```

# modify iscsi-port

Modifies an iSCSI port.

## Synopsis

**modify -a** *<array-name>* [**-c** <**A**|**B**>] [**-p** <**3260**|**49152..65535**>] [**-m** *<1500..9000>*] [**-P** <**enable**|**disable**>] [**-d** <**on**|**off**>] [**-i** *<ip-address>*] [**-g** *<ip-address>*] [**-n** *<netMask>*] [**-v** <**enable**|**disable**>] [**-V** *<0..4096>*] [**-e** <**enable**|**disable**>] [**-E** *<0..7>*] **iscsi-port** *<iscsi-port-id>*

## Description

Modifies an iSCSI port configured for a specified array.

## Options

**a**, **--array** <*array-name*>

Specifies the array for which you want to modify the iSCSI port.

**-c,--controller** <**A | B**>

Specifies the controller.

**-d,--dhcp** <**on | off**>

Turns DHCP on or off.

**-E,--ethernet-priority-value** <*0..7*>

Specifies the ethernet priority value.

**-e,--ethernet-priority** <**enable | disable**>

Enables or disables the ethernet priority.

**-g,--gateway** <*ip-address*>

Specifies the IP address gateway.

**-i,--ipaddress** <*ip-address*>

Specifies the IP address.

**-m,--max-trans-unit** <*1500..9000*>

Specifies the max-trans-unit.

**-n|,-netmask** <*netMask*>

Specifies the netMask.

**-P,--icmp-ping** <**enable | disable**>

Enables or disables the ICMP ping feature.

**-p,--port** <**3260 | 49152..65535**>

Specifies the default port number, 3260, or a port number from 49152 to 65535.

**-v,--VLAN** <**enable|disable**>

Enables or disables the VLAN feature.

**-V,--VLAN-id** <*0..4096*>

Specifies the VLAN ID.

**iscsi-port** *<iscsi-port-id>*

Specifies the iSCSI port ID.

# modify iscsi-target

Modifies an iSCSI target.

## Synopsis

**modify -a** *<array-name>* [**-A** *<alias-name>*] **iscsi-target** *<target-name>*

**modify -a** *<array-name>* **-p** <**3205**|**49152...65535**> **iscsi-target** *<target-name>*

**modify -a** *<array-name>* **-u** <**none**|**CHAP**|**BOTH**> **iscsi-target** *<target-name>*

**modify -a** *<array-name>* **-n** <**enable**|**disable**> **iscsi-target** *<target-name>*

**modify -a** *<array-name>* **-p** <**3205**|**49152...65535**> **-i** <**enable**|**disable**> **-d** <**on**|**off**> **-q** *<string>* **iscsi-target** *<target-name>*

**modify -a** <array-name> **-i** <**enable**|**disable**> **-s** <**enable**|**disable**> [**-h** *<string>*] [**-p** <**3205**|**49152..65535**>] **iscsi-target** *<target-name>*

**modify -a** *<array-name>* **-i** <**enable**|**disable**> **-d** <**on**|**off**> [**-q** *<string>*] [**-p** <**3205**|**49152..65535**>] **iscsi-target** *<target-name>*

## Description

Modifies an iSCSI target configured for a specified array.

## Options

**-a**,**--array** *<array-name>*

Specifies the array for which you want to modify the iSCSI target.

**-A**,**--alias** *<alias-name>*

An alias defined for the array.

**-p**,**--port** <**3205**|**49152..65535**>

Specifies the default port number, 3205, or a port number from 49152 to 65535.

**-u**,**--authentication** <**none**|**CHAP**|**BOTH**>

Specifies authentication as none, CHAP, or both.

**-n**,**--unnamed-discovery** <**enable**|**disable**>

Specifies to enable or disable unnamed discovery.

**-s,--stateless** <**enable|disable**>

Specifies to enable or disable stateless.

**-h,--ip-v6-address** *<string>*

Specifies the IPv6 address.

**-i**,**--isns** <**enable**|**disable**>

Specifies to enable or disable iSNS.

-**d**,**--dhcp** <**on**|**off**>

Specifies to set DHCP to on or off.

**-q**,**--ip-address** *<string>*

Specifies to set the IP address to IPv4.

**iscsi-target** *<target-name>*

Specifies the iSCSI qualified target name. For example: iqn.1992-01.com.sun:1535.600a0b80002f9da000000000461255f9

## Examples

```
sscs modify --alias fred iscsi-target
iqn.199201.com.sun:1535.600a0b80002f9da000000000461255f9
```

# modify jobs

Cancels or prioritizes a running or outstanding job.

## Synopsis

**modify -a** *<array-name>* [ **-k** ] [ **-p lowest** | **low** | **medium** | **high** | **highest** ] **jobs** [ *<job-ID>* ]

## Description

Cancels or prioritizes a running or outstanding job using the job identification number.

## Options

**-a**,**--array** <*array-name*>

Specifies the array for which you want to modify the job or jobs.

**-k**,--**kill**

Cancels a running or outstanding job or jobs.

**-p**,**--priority** lowest | low | medium | high | highest]

Specifies an order of priority from which to determine the action of the modification.

**jobs** <*job-id*>

Specifies the job to be cancelled or prioritized.

## Examples

**sscs modify -p** low **jobs** VOL:00C1408F84C2

# modify license

Activates replication set licenses (applicable to 2500 Series only when running firmware version 07.35.*nn.nn* or higher).

## Synopsis

**modify -a** <*array-name*> **-A** [ **-v** <*virtual-disk-name*> ] **license ReplicationSet**

Activates replication set licenses on the specified array using the designated virtual disk for replication set repository volumes. If the virtual disk is omitted, the manager chooses an appropriate virtual disk to create the repository volumes.

**modify -a** <*array-name*> **-A -r 1 -n** <*1..224*> [ **-k ANY** | **FC** | **SAS** | **SATA** | **SSD** ] **license ReplicationSet**

Activates replication set licenses on the specified array, creating a new virtual disk with the designated RAID level and disk type for the replication set repository volumes. RAID level 1 is used in combination with number-of-disks 1 to 224.

**modify -a** *<array-name>* **-A -r 3 | 5 | 6 | -n** *<1..30>* [ **-k ANY** | **FC** | **SAS** | **SATA** | **SSD** ] **license ReplicationSet**

Activates replication set licenses on the specified array, creating a new virtual disk with the designated RAID level and disk type for the replication set repository volumes. RAID levels 3, 5, or 6 are used in combination with number-of-disks 1 to 30.

**modify -a** *<array-name>* **-A -r 1** | **3** | **5 | 6 -d** *<disk-name,...>* **license ReplicationSet**

Activates replication set licenses on the specified array, creating a new virtual disk with the designated RAID level and names of disks to be used for the replication set repository volumes.

**modify -a** *<array-name>* **-I license ReplicationSet**

Deactivates replication set licenses on the specified array and deletes the replication set repository volumes.

## Options

**-a**, **--array** *<array-name>*

Specifies the array for which you want to activate or deactivate a replication set license. For cross-platform compatibility, you can substitute `-X, --storage-device` in place of the `-a, --array` option.

**-A**, **--activate**

Activates a replication set license.

**-I** (that is, uppercase letter "i"), **--deactivate**

Deactivates a replication set license.

**-v**, **--virtual-disk** *<virtual-disk-name>*

Specifies the virtual disk that you want to select.

**-r**, **--raid-level 1**

Specifies the RAID level 1, in combination with number-of-disks 1 to 224.

**-r**, **--raid-level 3 | 5 | 6**

Specifies RAID level 3, 5, or 6, in combination with number-of-disks 1 to 30.

**-n**, **--number-of-disks** *<1..224>*

Specifies the number of disks, 1 to 224, in combination with RAID level 1.

**-n**, **--number-of-disks** *<1..30>*

Specifies the number of disks, 1 to 30, in combination with RAID levels 3, 5, or 6.

**-k,--disk-type ANY** | **FC** | **SATA** | **SAS** | **SSD**

Specifies the disk type:

ANY - Any type of disk

FC - Fibre Channel

SATA - Serial Advanced Technology Attachment

SAS - Serial Attached SCSI

SSD - Solid State Device

**-d**,**--disk** <*disk-name*>

Specifies the named disk.

**license**

Specifies that you want to modify a license.

**ReplicationSet**

Specifies the license that you want to modify.

## Examples

**sscs modify -a** europe **-A -v** 3 **license ReplicationSet**

Activates replication set licenses on the array named europe using existing virtual disk 3 for the replication set repository volumes.

**sscs modify -a** corporate **-A -r** 3 **-n** 3 **-D** *FC* **license ReplicationSet**

Activates replication set licenses on the array named corporate, creating a new virtual disk of RAID level 3 with 3 Fibre Channel disks for the replication set repository volumes.

**sscs modify -a** corporate **-A -r** 1 **-d** t1d01,t2d02 **license ReplicationSet**

Activates replication set licenses on the corporate array, creating a new virtual disk of RAID level 1 with 2 specific disks for the replication set repository volumes.

**sscs modify -a** europe **-I license ReplicationSet**

Deactivates replication set licenses on the europe array. The replication set repository volumes will be deleted.

# modify notification

Modifies notification options.

## Synopsis

**modify -d notification** <**local_email|trap**>

**modify -e notification** <**local_email|trap**>

**modify -p** <*string*>] [**-i** <*string*>] [**-k** <**true|false**>] [**-f** <*string*>] [**-f** <*string*>] [**-u** <*string*>] [**-q**] [**-z** <**2|4|6|8|10|15|20|30|40|50**>] [**-o** <*integer*>] **notification** <**local_email|trap**>

**modify -m** <*string*> **-r** <*string*> **notification** <**local_email|trap**>

## Description

Modifies notification options.

## Options

**-d,--disable**

Disables notification.

**-e,--enable**

Enables notification.

**-f,--from** <*string*>

Specifies the origin of the notification message.

**-i,--ip** <*string*>

Specifies the IP address of the device.

**-k,--secure** <true | false>

Specifies whether security is used.

**-m,--test-message** <*string*>

Specifies to send test message.

**-o,--port** <*integer*>

Specifies the port.

**-p,--path <***string***>**

Specifies the path.

**-q,--query-for-password**

Queries for the current password for the registered array.

**-r,--test-address** *<string>*

Specifies address where test message will be sent.

**-u,--user** *<string>*

Specifies the user for which notification will be modified.

**-z,--max-size** <2 | 4 | 6 | 8 | 10 | 15 | 20 | 30 | 40 | 50>

Specifies the maximum size of the notification message.

**notification** <local_email | trap>

*local-email*

Specifies your local email address at which you want to modify the notification.

*trap*

Specifies the SNMP trap notification method to use to receive the notification.

# modify performance

Modifies settings for performance monitoring.

## Synopsis

**modify -a** *<array-name>* **[ -S on | off ] [ -p 1 | 5 | 15 ] [ -r forever | 1HR | 2HR | 4HR | 1DAY ] performance**

## Description

Modifies settings for performance monitoring. To reset performance settings, toggle the status to off and back on again.

## Options

**-a,--array** *<array-name>*

Specifies the array for which you want to modify the performance.

**-S,--status** on | off

Enables or disables performance monitoring.

**-p,--poll** 1 | 5 | 15

Specifies the poll interval frequency in minutes. The default is 15.

**-r,--retention** forever | 1HR | 2HR | 4HR | 1DAY

Specifies the amount of time to retain data in cache. The default data retention period is 1 hour.

### Examples

**sscs modify –a** array00 **-S on -p 5 performance**

# modify pool

Modifies the name or description of the storage pool or the profile with which this pool is associated.

### Synopsis

**`modify -a`** <*array-name*> [ **`-N`** <*new-pool-name*> ] [ **`-d`** <*description*> ] [ **`-p`** <*new-profile-name*> ] **`pool`** <*pool-name*>

### Description

Modifies the name or description of the storage pool or the profile with which this pool is associated.

You can change the segment size of a volume by a factor of 2 only. For example, a volume with segment size of 32K can only be changed to a segment size of 64K or 16K. To change the segment size to 256K, the volume would first need to be changed to 64K, then 128K, then 256K. Any changes made to the profile of a pool must maintain this segment size restriction for all affected volumes.

### Options

**`-a`**, **`--array`** <*array-name*>

Specifies the name of the array to associate with this pool. For cross-platform compatibility, you can substitute `-X,--storage-device` in place of the `-a,--array` option.

**`-N`**,**`--new-name`** <*new-pool-name*>

Specifies a new name for this pool.

**`-d`**,**`--description`** <*description*>

Specifies a description of the pool. The description can be up to 256 alphanumeric characters, which can include underscores, dashes, colons, commas, parentheses, curly brackets, square brackets, ticks, tildes, bars, periods, or spaces.

**`-p`**,**`--profile`** <*profile-name*>

Specifies the name of the profile to associate with this pool.

**`pool`** <*pool-name*>

Specifies the pool that you want to modify.

## Examples

**`sscs modify -a`** array00 **`-d`** Lexington_01 **`pool`** SP048763

# modify profile

Modifies a storage profile on the array.

## Synopsis

**`modify -a`** <*array-name*> [ **`-r 0 | 1`** ] [ **`-s 8K | 16K | 32K | 64K | 128K | 256K | 512K`** ] [ **`-N`** <*new-profile-name*> ] [ **`-d`** <*profile-description*> ] [ **`-h on | off`** ] [ **`-n variable`** | <*1..224*> ] [ **`-H`** <*hot-spare*> **`yes | no`** ] [ **`-k ANY | FC | SAS | SATA | SSD`** ] **`profile`** <*profile-name*>

**`modify -a`** <*array-name*> [ **`-r 3 | 5 | 6`**] [ **`-s 8K | 16K | 32K | 64K | 128K | 256K | 512K`** ] [ **`-N`** <*new-profile-name*> ] [ **`-d`** <*profile-description*> ] [ **`-h on | off`** ] [ **`-n variable`** | <*1..30*> ] [ **`-H`** <*hot-spare*> **`yes | no`** ] [ **`-k ANY | FC | SAS | SATA | SSD`** ] **`profile`** <*profile-name*>

## Description

Modifies a storage profile on the array. You cannot modify a profile that is in use and is associated with a storage pool.

## Options

**-a**,**--array** *<array-name>*

Specifies the name of the array to associate with this profile.

**-r**,**--raid-level** `0 | 1`

Specifies the RAID level: 0 or 1, in combination with number-of-disks 1 to 224.

**-r**,**--raid-level** `3 | 5 | 6`

Specifies the RAID level: 3, 5, or 6, in combination with number-of-disks 1 to 30.

**-s**,**--segsize** `8K | 16K | 32K | 64K | 128K | 256K | 512K`

Specifies the segment size.

**-N**,**--new-name** *<new-profile-name>*

Specifies a new name for the profile.

**-d**,**--description** *<profile-description>*

Specifies a profile description. The description can be up to 256 alphanumeric characters, which can include underscores, dashes, colons, commas, parentheses, curly brackets, square brackets, ticks, tildes, bars, periods, or spaces. Enclosing the description in quotation marks retains it exactly as you want it.

**-h**,**--readahead** `on | off`

Specifies if the readahead setting is on or off.

**-n**,**--number-of-disks** `variable | <1..30>`

Specifies the number of disks, 1 to 30, in combination with RAID level 3, 5, or 6.

**-n**,**--number-of-disks** `variable | <1..224>`

Specifies the number of disks, 1 to 224, in combination with RAID levels 0 or 1.

**-H**,**--hot-spare** `yes | no`

Specifies whether you want this disk to be a designated hot-spare.

**-k,--disk-type** `ANY | FC | SATA | SAS | SSD`

Specifies the disk type:

ANY - Any type of disk

FC - Fibre Channel

SATA - Serial Advanced Technology Attachment

SAS - Serial Attached SCSI

SSD - Solid State Device

**profile** <*profile-name*>

Specifies the name of the profile to be modified. The profile-name can be up to 12 alphanumeric characters.

### Examples

**sscs modify -d** "my profile description" **profile** random_5

# modify registeredarray

Change the locally stored password for a registered array.

### Synopsis

**modify -a** <*array-name*> **-q registeredarray**

### Description

Modifies the locally stored password for a registered array or queries for the current password.

### Options

**-a**,**--array** <*array-name*>

Specifies the name of the array to be modified.

**-q**,**--query-for-password**

Queries for the current password for the registered array.

### Examples

**sscs modify -a** *array00* **-q registeredarray**

`New Password:` *myregisteredarray*

`Re-enter New Password:` *myregisteredarray*

# modify repset

Modifies the mode, consistency group, or replication priority of the specified replication set (not applicable to 2500 Series).

## Synopsis

**modify -a** *<array-name>* [ **-m sync** | **async** ] [ **-G yes** | **no** ] [ **-R lowest** | **low** | **medium** | **high** | **highest** ] [ **-s enable** | **disable** ] **repset** *<repset-name>*

Modifies the role, mode, consistency group, or replication priority of the specified replication set.

**modify -a** *<array-name>* [ **-r primary** | **secondary** ] [ **-f** ] **repset** *<repset-name>*

Changes the role of the local volume on the specified array.

**modify -a** *<array-name>* **-c repset** *<repset-name>*

Suspends replication on the specified array.

**modify -a** *<array-name>* **-z repset** *<repset-name>*

Resumes replication on the specified array.

**modify -a** *<array-name>* **-E repset** *<repset-name>*

Tests to determine if the primary volume on the specified array is communicating correctly with its replica (primary or secondary).

## Options

**-a**,**--array** *<array-name>*

Specifies the array for which you want to activate or deactivate a replication set license. For cross-platform compatibility, you can substitute `-X,--storage-device` in place of the `-a,--array` option.

-**m**,**--mode** `sync | async`

Specifies whether the mode is synchronous or asynchronous.

**-G**,**--consistency-group** `yes | no`

Specifies whether or not the replication set is part of a consistency group.

**-R**,**--replication-priority** `lowest | low | medium | high | highest`

Specifies the priority level for this replication set.

**-s**,**--auto-sync** enable | disable

Specifies whether or not the auto synchronization policy is enabled. If it is not specified, the default is disable.

**-r**,**--role** primary | secondary

Specifies whether the role is primary or secondary.

**-f**,**--force**

If specified, it works with the -r option to reverse roles. If communication with the replication peer is not functioning, the role change is still forced on the local volume.

**-c**,**--suspend**

Suspends temporarily the replication activity. If the replication set is part of a replication consistency group, then all of the replication sets in that group are suspended.

**-z**,**--resume**

Resumes replicating a replication set that has been suspended, or starts replicating a replication set. If the replication set is part of a replication consistency group, then it sets all of the replication sets in that group to synchronize.

**-E**,**--test-communication**

Tests communications to a replication set.

## Examples

**sscs modify -a** corporate **-r** secondary **repset** oracle/1

Changes the role of the local volume on the oracle/1 repset to secondary on the array named corporate.

**sscs modify -a** corp_west **-r** primary **-f repset** mail/1

Forces the role of the local volume on the mail/1 repset to primary on the sample corp_west array, even if communications cannot be established with the current primary.

**sscs modify -a** corporate **-c repset** sap_central/1

Suspends replication on the sap_central/1 repset on the corporate array.

**sscs modify -a** corporate **-z repset** sap_central/1

Resumes replication on the sap_central/1 repset on the corporate array.

**sscs modify -a** corporate **-E repset** finance/1

Tests to determine if the primary volume finance on the corporate array is communicating correctly with its replica (primary or secondary).

# modify snapshot

Modifies the specified snapshot.

## Synopsis

**modify -a** <*array-name*> [**-N** <*snapshot-name*>] [**-f** <**failbasewrite**|**failsnapshot**>] [**-w** <*0..100*>] [ **-D** <*profile-description*> ] **snapshot** <*snapshot-name*>

Modifies properties of the snapshot.

**modify -a** <*array-name*> **-e** <*extend-size*> **snapshot** <*snapshot-name*>

Extends the snapshot reserve volume size by a specified amount. This option is mutually exclusive and cannot be used with any other option.

**modify -a** <*array-name*> **-S snapshot** <*snapshot-name*>

Disables the snapshot. This option is mutually exclusive and cannot be used with any other option.

**modify -a** <*array-name*> **-R snapshot** <*snapshot-name*>

Resnaps the snapshot. This option is mutually exclusive and cannot be used with any other option.

**modify -a** <*array-name*> [**-m** <*volume-name*>] [**-c A** | **B**] [**-W enable** | **disable**] [**-M enable** | **disable**] [**-b enable** | **disable**] [**-k enable** | **disable**] [**-r enable** | **disable**] **snapshot** <*snapshot-name*>

Modifies the volume properties of the snapshot reserve volume.

**modify -a** <*array-name*> [**-m** <*volume-name*>] [**-c** <**A**|**B**>] [**-W** <**enable**|**disable**>] [**-M** <**enable**|**disable**>] [**-b** <**enable**|**disable**>] [**-k** <**enable**|**disable**>] [**-r** <**enable**|**disable**>] [**-d** <*description-text*>] **snapshot** <*snapshot-name*>

Modifies the volume properties of the snapshot reserve volume, with snapshot description.

## Description

Modifies the specified snapshot. The arguments resnap and extend are mutually exclusive.

## Options

**-a**,**--array** <*array-name*>

Specifies the array associated with this snapshot. For cross-platform compatibility, you can substitute `-X,--storage-device` in place of the `-a,--array` option.

**-b**,**--write-cache-without-batteries** `enable | disable`

Specifies whether write-cache-without-batteries is enabled.

**-c**,**--controller A** | **B**

Specifies the controller.

**-D**,**--description** <*snapshot-description*>

Specifies a snapshot description. The description can be up to 256 alphanumeric characters, which can include underscores, dashes, colons, commas, parentheses, curly brackets, square brackets, ticks, tildes, bars, periods, or spaces. Enclosing the description in quotation marks retains it exactly as you want it.

**-d,--description** <*description-text*>

Specifies snapshot description.

**-e**,**--extend** <*extend-size*>

Extends the snapshot reserve volume size by a specified amount.

**-f**,**--full-policy** `failbasewrite | failsnapshot`

The full-policy specifies what to do if and when the snapshot fills up:

*Failbasewrite* - Stop allowing writes to the base volume.

*Failsnapshot* - Stop allowing writes to the snapshot. This is the default.

**-k**,**--disk-scrubbing** `enable | disable`

Specifies whether disk scrubbing is enabled.

**-m**,**--reserve-name** <*reserve-volume-name*>

Specifies the name of the reserve volume.

**-M**,**--write-cache-with-mirroring** `enable | disable`

Specifies whether write-cache-with-mirroring is enabled.

**-N**,**--new-name** <*new-snapshot-name*>

Specifies a new name for the snapshot.

**-r**,**--disk-scrubbing-with-redundancy** `enable | disable`

Specifies whether disk scrubbing-with-redundancy is enabled.

**-R**,**--resnap**

Resnaps the snapshot.

**-S**,**--disable**

Disables the snapshot.

**-w**,**--warning-threshold** *<0..100>*

Specifies when to inform you that the snapshot reserve volume is near capacity. If a warning-threshold is not specified, 50% is the default.

**-W**,**--write-cache** `enable | disable`

Specifies whether the write cache is enabled.

**snapshot** *snapshot-name*

Specifies the name of the snapshot to modify.

## Examples

**sscs modify -a** array00 **-V** vol0 **snapshot** vol01_snap

# modify tray

Modifies information about one or more storage trays in the array.

## Synopsis

**modify -a** *<array-name>* `[` **-N** *<0..99>* `]` **tray** `[` *<tray-name>* `]`

## Description

Modifies information about one or more storage trays in the array.

## Options

**-a**,**--array** *<array-name>*

Specifies the array associated with this tray.

**-N,--new-name** *<0..99>*

Specifies the new tray name.

**tray** *<tray-name>*

Specifies the tray ID or tray IDs you want to modify. If no tray ID is specified, then the names of all the trays in the array are listed.

### Examples

```
sscs modify -a array00 -n 99 tray 0
```

# modify vdisk

Specifies modifications to a virtual disk.

### Synopsis

**modify -a** *<array-name>* [**-N** *<virtual-disk-name>*] [**-d** *<disk-name*[*,diskname...*]*>*] [**-f**] [**-S**] **vdisk** *<virtual-disk-name>*

### Description

Specifies modifications to a virtual disk.

### Options

**a,--array** *<array-name>*

Specifies the array that is associated with the virtual disk changes.

**-d,--disk** *<disk-name,...>*

Specifies particular disks to be added to the virtual disk.

**-f,--defragment**

Specifies whether to defragment the virtual disk or virtual disks.

**-N,--new-name** *<virtual-disk-name>*

Specifies new virtual disk name.

**-S,--secure**

Specifies to make the virtual disk secure.

**vdisk** *<virtual-disk-name>*

Specifies the virtual disk that you want to modify.

## Examples

```
sscs modify -a array00 -d t0d01,t0d02 vdisk vdisk01
```

# modify volume

Modifies any of a volume's attributes.

## Synopsis

**modify -a** *<array-name>* [**-p** *<pool-name>*] [**-e** *<extend-size>*] [**-N** *<new-volume-name>*] [**-c** <**A**|**B**>] [**-m** <**lowest**|**low**|**medium**|**high**|**highest**>] [**-W** <**enable**|**disable**>] [**-M** <**enable**|**disable**>] [**-b** <**enable**|**disable**>] [**-F** <**immediate**|**250ms**|**500ms**|**750ms**|**1s**|**1500ms**|**2s**|**5s**|**10s**|**20s**|**60s**|**120s**|**300s**|**1200s**|**3600s**|**infinite**>] [**-k** <**enable**|**disable**>] [**-r** <**enable**|**disable**>] [**-Z** *<number*<**TB**|**GB**|**MB**|**KB**|**Bytes**|**BLK**>>] [**-C** *<integer>*] [**-L** <**low**|**verylittle**|**little**|**average**|**high**|**full**>] [**-l** *<0..100>*] [**-f** <**volume**|**snapshot**>] [**-w** *<0..100>*] [**-P** *<pool-name>*] [**-V** *<virtual-disk-name>*] [**-D** *<description-text>*] **volume** *<volume-name>*

## Description

Modifies a volume's attributes with one or more of the following arguments.

You can change the segment size of a volume by a factor of two only. For example, a volume with segment size of 32K can only be changed to a segment size of 64K or 16K. To change the segment size to 256K, the volume would first need to be changed to 64K, then 128K, then 256K. Any changes made to the profile of a pool must maintain this segment size restriction for all affected volumes.

## Options

**a**,**--array** *<array-name>*

Specifies the array whose volume you want to modify. For cross-platform compatibility, you can substitute **-X,--storage-device** in place of the **-a,--array** option.

**-b**,**--write-cache-without-batteries** <**enable**|**disable**>

Specifies whether write-cache-without-batteries is enabled.

**-C,--snapshot-count** *<integer>*

Specifies the number of intended snapshots for the volume.

**-c**,**--controller** <**A**|**B**>

Changes a volume's preferred and current controller.

**-D,--description** *<description-text>*

Specifies a description of the snapshot.

**-e**,**--extend** *<extend-size>*

Extends the volume size by a specified amount.

**-F,--flush-write-cache-after**
<**immediate**|**250ms**|**500ms**|**750ms**|**1s**|**1500ms**|**2s**|**5s**|**10s**|**20s**|**60s**|**120s**|**300s**|**1200s**|**3600s**|**infinite**>

Specifies the period of time after which to flush the write cache.

**-f**,**--favor** <**volume**|**snapshot**>

Favors the volume or snapshot.

**-k**,**--disk-scrubbing** <**enable**|**disable**>

Specifies whether disk scrubbing is enabled.

**-L,--snapshot-level** <**low**|**verylittle**|**little**|**average**|**high**|**full**>

Specifies the level of snapshot activity as either low, verylittle, little, average, high, or full. The snapshot levels equate to the following percentages:

low - 10%

verylittle - 25%

little - 40%

average - 50%

high - 75%

full - 100%

**-l,--snapshot-percentage** *<0..100>*

Specifies what percentage of the volume is to be used for snapshot creation.

**-m,--modification-priority** <**lowest**|**low**|**medium**|**high**|**highest**>

Specifies the priority of this modification.

**-M,--write-cache-with-replication** <**enable**|**disable**>

Specifies whether write-cache-with-replication is enabled.

**-N**, **--new-name** *<new-volume-name>*

Specifies a new name for the volume that is being modified.

**-P,--snapshot-pool** *<pool-name>*

Specifies the name of the snapshot.

**-p**, **--pool** *<pool-name>*

Specifies the pool in which the volume resides.

**-r**, **--disk-scrubbing-with-redundancy** <**enable**|**disable**>

Specifies whether disk scrubbing-with-redundancy is enabled.

**-V,--reserve-vdisk** *<virtual-disk-name>*

Specifies a reserve virtual disk.

**volume** *<volume-name>*

Specifies the volume name.

**-w,--warning-threshold** *<0..100>*

Specifies when to inform you that the snapshot reserve volume is near capacity. If a warning-threshold is not specified, 50% is the default.

**-W**, **--write-cache** <**enable**|**disable**>

Specifies whether the write cache is enabled.

**-Z,--snapshot-reserve-size** *<number*<**TB**|**GB**|**MB**|**KB**|**Bytes**|**BLK**>>

Specifies the amount of space you want to reserve for capacity of the snapshot reserve volume.

## Examples

**sscs modify -a** array01 **-p** pool1 **-e 10GB volume** V1

# modify volume-copy

Modifies a volume copy (not applicable to 2500 Series).

## Synopsis

**modify -a** *<array-name>* **-s** [ *<source-volume-name>* ] **-t** [ *<target-volume-name>* ] [ **-p lowest**|**low**|**medium**|**high**|**highest** ] [ **-r enable** | **disable** ] [ **-R** ] [ **-S** ] **volume-copy**

**modify -a** *<array-name>* **-s** *<volume-name>* **-t** *<volume-name>* [**-p** <**lowest**|**low**|**medium**|**high**|**highest**>] [**-r** <**enable**|**disable**>] **volume-copy**

**modify -a** *<array-name>* **-s** *<volume-name>* **-t** *<volume-name>* **-R volume-copy**

**modify -a** *<array-name>* **-s** *<volume-name>* **-t** *<volume-name>* **-S volume-copy**

## Description

Modifies a volume copy.

## Options

**-a**,**--array** *<array-name>*

Specifies the array associated with this volume copy.

**-s**,**--source-volume** *<source-volume-name>*

Specifies the source volume name associated with this volume copy.

**-t**,**--target-volume** *<target-volume-name>*

Specifies the target volume name associated with this volume copy.

**-p**,**--priority** lowest | low | medium | high | highest

Specifies the priority level for this volume copy.

**-r**,**--readonly** enable | disable

Specifies whether this volume copy is read only or modifiable.

**-R**,**--recopy**

Specifies that you want to recopy this volume copy.

**-S**,**--stop**

Specifies that you want to stop this volume copy while in progress.

**volume-copy** *<volume-copy-name>*

Specifies the name of the volume copy that you want to modify.

### Examples

```
sscs modify -a array00 -s vol1 -t vol2 -S volume-copy
```

## offline vdisk

Sets a virtual disk offline.

### Synopsis

```
offline -a <array-name> vdisk [ <virtual-disk-name> ]
```

### Description

Sets a virtual disk offline. This can create complications. Do not initiate this command without first consulting Sun Customer Service personnel.

---

**Note –** This command does not apply to all arrays or firmware versions. Use the **--help** command to check proper syntax for your array. For further information on how to use the **--help** command, see "Getting Help with Commands and Their Syntax" on page 4.

---

### Options

**-a**, **--array** *<array-name>*

Specifies the array on which you want to set the virtual disk offline.

**vdisk**

Specifies the name of the virtual disk.

### Examples

```
sscs offline -a Array01 vdisk VirtualDisk33
```

# online vdisk

Sets a virtual disk online.

## Synopsis

**online -a** *<array-name>* **vdisk** [ *<virtual-disk-name>* ]

## Description

Sets a virtual disk online. This can create complications. Do not initiate this command without first consulting Sun Customer Service personnel.

## Options

**-a**,**--array** *<array-name>*

Specifies the array on which you want to set the vdisk online.

**vdisk**

Specifies the name of the virtual disk.

## Examples

```
sscs online -a Array01 vdisk
```

# reconstruct disk

Initiates a disk reconstruction.

## Synopsis

**reconstruct -a** *<array-name>* [ **-t** *<tray-name>*] **disk** [ *<disk-name>* ]

## Description

Reconstructs a disk. This can create complications. Do not initiate this command without first consulting Sun Customer Service personnel.

## Options

**-a**,**--array** *<array-name>*

Specifies the array on which you want to reconstruct the disk.

**-t**,**--tray** *<tray-name>*

Identifies the tray where the physical disk resides.

**disk**

Specifies the name of the disk.

## Examples

```
sscs reconstruct -a Array01 -t Tray2
```

# remove hostgroup

Removes one or more hosts from a host group.

## Synopsis

**remove -a** *<array-name>* **-h** *<host-name,...>* **hostgroup** *<host-group-name>*

## Description

Removes one or more hosts from a host group.

## Options

**-a**,**--array** *<array-name>*

Specifies the array associated with this host group.

**-h**,**--host** *<host-name,...>*

Specifies the host or hosts that you want to remove from this host group.

**hostgroup** *<host-group-name>*

Specifies the host group from which you want to remove hosts.

### Examples

**sscs remove -a** array00 **-h** host01,host02 **hostgroup** hg01

## remove license

Removes the replication set feature license from the specified array (not applicable to 2500 Series).

### Synopsis

**remove -a** *<array-name>* **license** *<license-name>*

### Description

Removes the specified feature license from the array.

### Options

**-a**, **--array** *<array-name>*

Specifies the array associated with this license.

**license** *<license-name>*

Specifies the license that you want to remove from the array. The license name is one of the well-known license names. Use the command sscs list license to see these names.

### Examples

**sscs remove -a** corp_west **license** ReplicationSet

Removes a replication set feature license from the array named corp_west.

## remove notification

Removes a local or remote notification provider.

### Synopsis

**remove** [**-e** <*string[,string...]*>] **notification** <**local_email|email-filter|trap**>

**remove** [**-i** <*string*>] [**-o** <*string*>] [**-t** <*string[,string...]*>] **notification** <**local_email|email-filter|trap**>

**remove -d** <*string[,string...]*> **notification** <**local_email|email-filter|trap**>

## Description

Removes a local or remote notification provider.

## Options

**-d,--id** <*string[,string...]*>

Specifies the notification ID being removed.

**-e**,**--email** <*string[,string...]*>

Specifies the email address for notification removal.

**-i**,**--ip** <*string*>

Specifies the IP address for notification removal.

**-o,--port** <*string*>

Specifies the port for notification removal.

**-t**,**--trapnumber** <*string[,string...]*>

Specifies the trap number associated with notification removal.

**notification local_email** | **email-filter** | **tra**p

Specifies that all notifications of the specified type are removed from the given addresses.

**local-email**

Specifies your local email address at which you want to remove the notification.

**email-filter**

Specifies that you want the email filter used.

**trap**

Specifies the SNMP trap notification method to use to remove the notification.

## Examples

**sscs remove -e** john.doe@address.com **notification local_email**

**sscs remove -t 2 notification trap**

# reset array

Resets the specified array.

## Synopsis

**reset -a** <*array-name*> **-l** <**array**|**volume**> **array**

## Description

Resets the specified array.

---

**Caution –** Resetting the array destroys all user data, including volumes, hosts, initiators, and so forth.

---

## Options

**-a**, **--array** <*array-name*>

Specifies the array you want to reset.

**-l,--level** <**array | volume**>

Specifies either array or volume to reset. If **volume** option is used, only volume information is erased, while array configuration is retained.

# reset controller

Resets the specified controller.

## Synopsis

**reset -a** <*array-name*> **controller A**| **B**

**reset -a** <*array-name*> **controller** <*controller-name*>

## Description

Resets the specified controller.

## Options

**-a**, **--array** *<array-name>*

Specifies the array whose controller you want to reset.

**controller A** | **B**

Specifies the name of the controller to reset, A or B.

**controller**

Specifies the name of the controller to reset.

## Examples

**sscs reset -a** array00 **controller** A

# resnap snapshot

Resnaps one or more existing snapshots.

## Synopsis

**resnap -a** *<array-name>* **snapshot** *<snapshot-name[,snapshot-name...]>*

## Description

Resnaps one or more existing snapshots. When you resnap a group of snapshots, an array job is created.

When resnapping a group of snapshots, if the resnap operation fails for one snapshot, then the entire resnap operation is cancelled.

## Options

**-a**, **--array** *<array-name>*

Specifies the array associated with this snapshot.

**snapshot** *<snapshot-name,...>*

Specifies the names of the snapshots that you want to resnap.

### Examples

**sscs resnap -a** array00 **snapshot** snapshot1, snapshot2

Resnaps snapshot1 and snapshot2 on array00.

## revive disk

Attempts to bring a disk to the optimal state.

### Synopsis

**revive -a** *<array-name>* [ **-t** *<tray-id>* ] **disk** [ *<disk-name>* ]

### Description

Attempts to bring a disk to the optimal state. This can create complications. Do not initiate this command without first consulting Sun Customer Service personnel.

### Options

**-a**, **--array** *<array-name>*

Specifies the array on which you want to revive the disk.

**-t**, **--tray** *<tray-ID>*

Identifies the tray where the disk resides.

**disk**

Specifies the name of the disk.

### Examples

**sscs revive -a** Array01 **-t** Tray1 **disk** Disk7

# revive vdisk

Revives a virtual disk.

## Synopsis

```
revive -a <array-name> vdisk [ <virtual-disk-name> ]
```

## Description

Revives a virtual disk. This can create complications. Do not initiate this command without first consulting Sun Customer Service personnel. A virtual disk must be put offline before attempting revival.

---

**Note –** This command does not apply to all arrays or firmware versions. Use the **--help** command to check proper syntax for your array. For further information on how to use the **--help** command, see "Getting Help with Commands and Their Syntax" on page 4.

---

## Options

**-a**, **--array** *<array-name>*

Specifies the array on which you want to revive the virtual disk.

**vdisk**

Specifies the name of the virtual disk.

## Examples

```
sscs revive -a Array01 vdisk VirtualDisk33
```

# service fail

Places a field-replaceable unit of an array into a failed state.

## Synopsis

**service -a** <*array-name*> **-t** <*target-fru-name*> **fail**

## Description

Places the specified field-replaceable unit of the array into a failed state.

---

**Caution –** Do not initiate this command without first consulting Sun Customer Service personnel.

---

## Options

**-a**,**--array** <*array-name*>

Specifies the array to be placed into a failed state.

**-t**,**--target** <*target-fru-name*>

Specifies the name of the field-replaceable unit to be placed into a failed state. This parameter needs to be set to either the FRU name or the FRU ID, both of which can be obtained using variations of the `list fru` command. See "list fru" on page 46 for further details.

## Examples

```
service -a myarray -t t0drive12 fail
```

# service redistribute

Redistributes volumes back to their preferred owners.

## Synopsis

**service -a** <*array-name*> **redistribute**

## Description

Redistributes volumes back to their preferred owners.

## Options

**-a**,**--array** *<array-name>*

Specifies the array on which volumes will be redistributed.

## Examples

```
service -a Myarray redistribute
```

# service revive

Attempts to place the array controller or disk drive into the optimal state. This can create complications. Do not initiate this command without first consulting Sun Customer Service personnel.

## Synopsis

**service -a** *<array-name>* **-t** *<target-fru-name>* [ **-w** ] **revive**

## Description

Attempts to place the controller or disk drive of the specified array into the optimal state.

## Options

**-a**,**--array** *<array-name>*

Specifies the array to be placed into the optimal state.

**-t**,**--target** *<target-fru-name>*

Specifies the name of the field-replaceable unit to be placed into the optimal state. This parameter needs to be set to either the FRU name or the FRU ID, both of which can be obtained using variations of the `list fru` command. See "list fru" on page 46 for further details.

**-w,--no warn**

Skips the warning prompt.

## Examples

```
sscs service -a myarray -t t0drive12 -w revive
```

# snapshoot volume

Creates and manages snapshots. This command provides cross-compatibility with scripts that are written for the Sun StorageTek 6920 System. The preferred snapshot commands are Create Snapshot and Modify Snapshot.

## Synopsis

**snapshoot -a** *<array-name>* **-v** *<source-volume-name>* [**-C** *<integer>*] [**-L** <**low**|**verylittle**|**little**|**average**|**high**|**full**>] [**-l** *<0..100>*] [**-Z** *<number*<**TB**|**GB**|**MB**|**KB**|**Bytes**|**BLK**>>] [**-f** <**volume**|**snapshot**>] [**-w** *<0..100>*] [**-P** *<reserve-volume-name>*] [**-V** *<virtual-disk-name>*] **volume** *<string>*

**snapshoot -a** *<array-name>* **-R volume** *<string>*

**snapshoot -a** *<array-name>* **-r volume** *<string>*

## Description

Creates and manages snapshots. This command provides cross-compatibility with scripts that are written for the Sun StorageTek 6920 System. The preferred snapshot commands are Create Snapshot and Modify Snapshot.

## Options

**-a**,**--array** *<array-name>*

Specifies the array.

**-v,--volume** *<source-volume-name>*

Specifies the volume for which to take a snapshot.

**-C,--snapshot-count** *<integer>*

Specifies the number of intended snapshots for the volume.

**-l,--snapshot-percentage** *<0..100>*

Specifies what percentage of the volume is to be used for snapshot creation.

**-L**,**--snapshot-level** <**low**|**verylittle**|**little**|**average**|**high**|**full**>

Specifies the level of snapshot activity as either low, verylittle, little, average, high, or full. The snapshot levels equate to the following percentages:

low - 10%

verylittle - 25%

little - 40%

average - 50%

high - 75%

full - 100%

**-Z,--snapshot-reserve-size** <*number*<**TB**|**GB**|**MB**|**KB**|**Bytes**|**BLK**>>

Specifies the amount of space you want to reserve for capacity of the snapshot reserve volume.

**-f,--favor** <**volume**|**snapshot**>

Favors the volume or snapshot.

**-w,--warning-threshold** <*0..100*>

Specifies the threshold, as a percentage, at which the management software will generate messages to indicate the level of space left in the reserve volume. By default, the software generates a warning notification when data in the reserve volume reaches 50 percent of the available capacity. Possible values for the warning threshold are 1 to 100 percent.

**-P**, **--snapshot-pool** <*reserve-volume-name*>

Specifies the name to give to the reserve volume.

**-V,--reserve-vdisk** <*virtual-disk-name*>

Specifies the name to give to the reserve virtual disk.

**-R**, **--resnap**

Resnaps a volume.

**-r,--remove-pool**

Removes a snapshot from a storage pool.

**volume** <<*snapshot-volume-name*>|<*new-snapshot-name*>>

Specifies the volume or volumes for the snapshot argument. Once the snapshot volume is created, you can treat it the same as any other volume, except that it cannot be used to create another snapshot.

## Examples

To create a snapshot named vol01 from the source volume vol0, type:

```
sscs snapshoot -a array01 -v vol0 volume vol01
```

# unmap host

Unmaps one or more snapshots or volumes from a host.

## Synopsis

**unmap -a** <*array-name*> [**-s** <*snapshot-name,...*> ] [ **-v** <*volume-name,...*>] **host** <*host-name*>

## Description

Unmaps one or more snapshots or volumes from a host.

## Options

**-a**,**--array** <*array-name*>

Specifies the array on which this volume resides. For cross-platform compatibility, you can substitute `-X,--storage-device` in place of the `-a,--array` option.

**-s**,**--snapshot** <*snapshot-name,...*>

Specifies the snapshot or snapshots to unmap from the host.

**-v**,**--volume** <*volume-name,...*>

Specifies the volume or volumes to unmap from the host.

**host** <*host-name*>

Specifies the host that you want to unmap from the snapshot or volume.

## Examples

**sscs unmap -a** array00 **-v** vol01,vol02 **host** host01

# unmap hostgroup

Unmaps one or more snapshots or volumes from a host group.

## Synopsis

**unmap -a** <*array-name*> [ **-s** <*snapshot-name,...*> ] **-v** <*volume-name,...*> **hostgroup** <*host-group-name*>

## Description

Unmaps one or more snapshots or volumes from a host group.

## Options

**-a**, **--array** <*array-name*>

Specifies the array containing the volume that you want to unmap from the host group.

**-s**, **--snapshot** <*snapshot-name,...*>

Specifies the snapshot or snapshots to unmap from the host group.

**-v**, **--volume** <*volume-name,...*>

Specifies the volume or volumes that you want to unmap from the host group.

**hostgroup** <*host-group-name*>

Specifies the host group that you want to unmap from the snapshot or volume.

## Examples

```
sscs unmap -a array00 -v vol01,vol02 hostgroup hg01
```

# unmap initiator

Removes the mapping from one or more initiators to a volume or snapshot.

## Synopsis

**unmap -a** <*array-name*> [ **-s** <*snapshot-volume-name,...*> ] [ **-v** <*volume-name,...*> ] **initiator** <*initiator-name,...*>

## Description

Removes the mapping from an initiator to a snapshot or volume.

## Options

**-a**,**--array** *<array-name>*

Specifies the array associated with the volume or snapshot to be unmapped. For cross-platform compatibility, you can substitute `-X,--storage-device` in place of the `-a,--array` option.

**-s**,**--snapshot** *<snapshot-volume-name,...>*

Specifies the snapshot volumes to be unmapped from this initiator.

**-v**,**--volume** *<volume-name,...>*

Specifies the volumes to be unmapped from this initiator.

**initiator** *<initiator-name,...>*

Specifies the initiator name to be unmapped.

## Examples

**sscs unmap -a** array00 **-v** vol01 **initiator** init1

# unmap snapshot

Removes the mapping from one or more snapshots to a host or hostgroup.

## Synopsis

**unmap -a** *<array-name>* [**-i** *<initiator-name>*] [**-h** *<host-name>*] [**-g** *<hostgroup-name>*] **snapshot** *<snapshot-name[,snapshot-name...]>*

## Description

Removes the mapping from one or more snapshots to a host or hostgroup.

## Options

**-a,--array** *<array-name>*

Specifies the array.

**-i,--initiator** *<initiator-name>*

Specifies the initiator that you want to unmap from the snapshot.

**-h,--host** *<host-name>*

Specifies the host that you want to unmap from the snapshot.

**-g,--hostgroup** *<hostgroup-name>*

Specifies the hostgroup that you want to unmap from the snapshot.

**snapshot** *<snapshot-name[,snapshot-name...]>*

Specifies the snapshot or snapshots to be unmapped.

# unmap volume

Unmaps one or more volumes from a host or host group.

## Synopsis

**unmap -a** *<array-name>* [ **-h** *<host-name>* | **-g** *<host-group-name>* ] **volume** *<volume-name,...>*

**unmap -a** *<array-name>* [**-i** *<initiator-name>*] [**-h** *<host-name>*] [**-g** *<hostgroup-name>*] **volume** *<volume-name[,volume-name...]>*

## Description

Unmaps one or more volumes from a host or host group.

## Options

**-a**, **--array** *<array-name>*

Specifies the array containing the volume that you want to unmap from the host or host group. For cross-platform compatibility, you can substitute `-X,--storage-device` in place of the `-a,--array` option.

**-i,--initiator** *<initiator-name>*

Specifies the initiator that you want to unmap from the volume.

**-h,--host** *<host-name>*

Specifies the host that you want to unmap from the volume.

**-g,--hostgroup** *<host-group-name>*

Specifies the host group that you want to unmap from the volume.

**volume** <*volume-name,...*>

Specifies the volume or volumes to unmap from the host.

## Examples

**sscs unmap -a** array00 **-g** hg01 **volume** vol01,vol02

CHAPTER 5

# SAS Domain Access Configuration Commands for JBOD Arrays

This chapter describes the `sscs` commands and their options for SAS domain access configuration on Sun JBOD arrays, including Sun Storage J4200, J4400, and J4500 arrays, Sun Storage F5100 Flash Array, and the Sun Blade 6000 disk module.

For monitoring and administration commands for all Sun arrays, see Chapter 3. For configuration and other commands that apply only to arrays with RAID controllers, see Chapter 4.

This chapter begins with an overview of using the CLI to perform access configuration tasks, followed by the individual commands and their details:

# Overview of Access Configuration with the CLI

This section provides a brief overview of using the CLI to perform SAS domain access configuration tasks. For detailed information concerning access configuration, see the *Sun StorageTek Common Array Manager User Guide for Open Systems*.

The following topics are discussed:

# Viewing Discovered SAS Domains

To view a list of SAS domains, issue the following command:

**sscs list sas-domain**

This will provide a brief summary of all SAS domains known to the management station. To obtain detailed information for a specific SAS domain or multiple domains, issue the following command:

**sscs list sas-domain** [*sas-domain-name* [ , *sas-domain-name...* ] ]

To obtain detailed SAS domain information with SAS port-centric output, issue the following command:

**sscs list** [**-p** [*sas-port-name* , [*sas-port-name,...*] ] ] **sas-domain** [*sas-domain-name* [ , *sas-domain-name...* ] ]

For detailed information on these commands, including examples, see "list sas-domain" on page 217.

# Changing the Domain Name

When a SAS domain has been discovered by the management station, its name defaults to the domain's SAS ID. After viewing the list of discovered SAS domains, if you would like to rename a domain to something more identifiable or meaningful, issue the following command:

**sscs modify -n** <*sas-domain-name*> **sas-domain** <*sas-domain-name*>

Note that the first instance of *sas-domain-name* is the new name you choose for the domain, while the second instance is the current domain name.

For detailed information on this command, including alternate variations which change other SAS domain properties, see "modify sas-domain" on page 226.

# Configuring Access

Access between initiators and disks within a SAS domain can be configured manually, with a factory pre-configured template, or with a user-configured template. These options are descibed below.

# Manual Configuration

Access configurations can be created manually with one of two variants:

- Between initiators and disks
- Between SAS ports and disks.

Note that each variant must be exectuted separately (i.e. it is not possible to create an access configuration between initiators, SAS ports, and disks within the same command). The two variants are described below.

## *Manual Configuration: Initiators to Disks*

To configure initiator to disk access manually, stop all I/O operations to any disks within the specified SAS domain, then issue the following command:

**modify -A -i** <*initiator-address*[ , *initiator-address...*]> **-d** <*disk-name*[ , *disk-name...*]> **sas-domain** <*sas-domain-name*>

This will associate specified initiators with specified disks to create an access configuration. You can associate one or multiple initiators with one or multiple disks. Note that disk SAS addresses are also acceptable for the **-d** option.

For detailed information on this command, including alternate variations which change other SAS domain properties, see "modify sas-domain" on page 226.

## *Manual Configuration: SAS Ports to Disks*

To configure SAS port to disk access manually, stop all I/O operations to any disks within the specified SAS domain, then issue the following command:

**modify -A -p** <*sas-port-name*[ , *sas-port-name...*]> **-d** <*disk-name*[ , *disk-name...*]> **sas-domain** <*sas-domain-name*>

This will associate specified SAS ports with specified disks to create an access configuration. You can associate one or multiple SAS ports with one or multiple disks. Note that disk SAS addresses are also acceptable for the **-d** option.

For detailed information on this command, including alternate variations which change other SAS domain properties, see "modify sas-domain" on page 226.

## Factory Template Configuration

The Common Array Manager software includes factory default templates which represent common SAS domain access configuration options. TABLE 5-1 lists the available factory templates.

**TABLE 5-1** List of Factory Default Templates

| Template Name | Description |
|---|---|
| F5100-dual-host | Allocate equal numbers of disks to each of two hosts. For use with a single enclosure. |
| F5100-quad-host | Allocate equal numbers of disks to each of four hosts. For use with a single enclosure. |
| J4200-dual-host | Allocate equal numbers of disks to each of two hosts. Supports cascade depth of four devices. |
| J4400-dual-host | Allocate equal numbers of disks to each of two hosts. Supports cascade depth of four devices. |
| J4500-dual-host | Allocate equal numbers of disks to each of two hosts. Supports cascade depth of three devices. |
| J4500-quad-host | Allocate equal numbers of disks to each of four hosts. Does not support cascading. |
| Simple-zone-split | Split all current disks evenly across all current initiators. |
| Unassigned-zone-split | Split all unassigned disks evenly across all current initiators. |

Once you have chosen the best template for your configuration, use the list template command to obtain valid anchor point and candidate values for that template. Then, stop all I/O operations to any disks within the specified SAS domain and issue the following command:

**import -t** <*template-name*> **-A** <*anchorPoint-name*[,*anchorPoint-name*...]> **-c** <*candidate-name*[,*candidate-name*...]> **sas-domain** <*sas-domain-name*>

The factory template configuration will then be applied to the specified SAS domain. For detailed information on this command, including examples, see "import sas-domain" on page 215.

## User Template Configuration

In addition to the factory default templates, you can create your own templates to save access configurations for future use.

### *Saving a User Configuration*

To save a configuration, issue the following command:

**export -t** <*filename*> [ **-D** <*template-description*> ] **sas-domain** <*sas-domain-name* [ , *sas-domain-name* . . . ] >

Replace <*filename*> with a template name of your choice. If desired, replace <*template-description*> with a description of your choice. Replace <*sas-domain-name*> with the name of the SAS domain whose configuration you want to save. The new template will then be included in the list of available templates. For detailed information on this command, including examples, see "export sas-domain" on page 214.

---

**Note –** For backup purposes, templates should be exported periodically in case of hardware failure. Current SAS domain access configuration data is auto-saved, however, when any access configuration change has been made by the user. This auto-save data is stored in a template file and can be used to recover a previous configuration. By default, a maximum of two auto-save template files are stored. When a new auto-save file is created for a SAS domain, it replaces the oldest file stored for that SAS domain.

---

### *Restoring a User Configuration*

To restore a user template access configuration, use the list template command to obtain valid anchor point and candidate values for that template. Then, stop all I/O operations to any disks within the specified SAS domain and issue the following command:

**import -t** <*template-name*> **-A** <*anchorPoint-name* [ , *anchorPoint-name* . . . ] > **-c** <*candidate-name* [ , *candidate-name* . . . ] > **sas-domain** <*sas-domain-name*>

The user template configuration will then be applied to the specified SAS domain. For detailed information on this command, including examples, see "import sas-domain" on page 215.

## Administering Access Configuration Passwords

Access configuration passwords are stored in both the CAM Array Registration Database and JBOD Array SAS Expander, and must match in order to allow modification operations on a SAS domain. Passwords can be administered in three ways, each using a variation of the **modify sas-domain** command. See "modify sas-domain" on page 226 for complete details.

## Clearing the Password

To clear the access configuration password in the Array Registration Database, issue the following command:

**modify -c sas-domain** *<sas-domain-name>*

This will erase the password on the specified SAS domain and reset it to the factory default of no password.

## Changing the Password

To change (or set) the access configuration password in both the Array Registration Database and Array SAS Expander, issue the following command:

**modify -C -P** *<old-password>* **-N** *<new-password>* **sas-domain** *<sas-domain-name>*

Use this command to update the password in the Array Registration Database and Array SAS Expander at the same time. If setting a new password after it has been previously cleared, substitute `""` for *<old-password>*, making sure to escape each quote mark (`\"\"`).

## Synchronizing the Password

To change the access configuration password in the Array Registration Database only, issue the following command:

**modify -s -N** *<new-password>* **sas-domain** *<sas-domain-name>*

Use this command to synchronize the Array Registration Database password with the Array SAS Expander password.

# Configuring Storage Cascading

The CLI can be used to perform two functions in the overall storage cascading process:

- Prepare for storage cascading.
- Synchronize cascaded array access configurations.

For full details concerning these functions and storage cascade configuration in general, see the *Sun StorageTek Common Array Manager User Guide for Open Systems*.

## Prepare for Storage Cascading

To prepare a storage system (i.e. JBOD) for cascading, issue the following command:

**modify -p sas-domain** *<sas-domain-name>*

This will clear any previous access configurations on the specified SAS domain.

## Synchronize Cascaded Array Access Configurations

To synchronize the access configurations of cascaded arrays, issue the following command:

**modify -y sas-domain** *<sas-domain-name>*

This will synchronize the merged SAS domain in the cascaded storage (synchronizes access configurations and initializes the connections between arrays).

# disable sas-domain

Disables SAS zoning for a specified SAS domain.

## Synopsis

**disable sas-domain** <*sas-domain-name*>

## Description

Disables SAS zoning for a specified SAS domain.

## Options

**disable sas-domain** <*sas-domain-name*>

Disables the specified SAS domain.

## Examples

```
disable sas-domain HowiesPlace
```

# enable sas-domain

Enables SAS zoning for a specified SAS domain.

## Synopsis

**enable sas-domain** <*sas-domain-name*>

## Description

Enables SAS zoning for a specified SAS domain.

## Options

**enable sas-domain** <*sas-domain-name*>

Enables the specified SAS domain.

## Examples

```
enable sas-domain HowiesPlace
```

# export sas-domain

Copies the configuration of a specified SAS domain to a specified template file.

## Synopsis

**export -t** <*filename*> [ **-D** <*template-description*> ] **sas-domain** <*sas-domain-name*[ , *sas-domain-name...*]>

## Description

Copies the configuration of a specified SAS domain to a specified template file.

---

**Note –** For backup purposes, templates should be exported periodically in case of hardware failure. Current SAS domain access configuration data is auto-saved, however, when any access configuration change has been made by the user. This auto-save data is stored in a template file and can be used to recover a previous configuration. By default, a maximum of two auto-save template files are stored. When a new auto-save file is created for a SAS domain, it replaces the oldest file stored for that SAS domain.

---

## Options

**-D,--template-description** <*template-description*>

Specifies an optional template description.

**-t,--template** <*filename*>

Specifies the name of the XML file to which the SAS domain configuration information is saved.

**sas-domain** <*sas-domain-name*[ , *sas-domain-name...*]>

Specifies the SAS domain from which configuration information is exported.

## Examples

Export current configuration for SAS domain `PikesPlace` to a new template file named `test_template`:

**`export -t`** `test_template` **`sas-domain`** `PikesPlace`

# import sas-domain

Restores specified SAS domain configuration information from a specified template.

## Synopsis

**`import -t`** <*template-name*> **`-A`** <*anchorPoint-name*[,*anchorPoint-name...*]> **`-c`** <*candidate-name*[,*candidate-name...*]> **`sas-domain`** <*sas-domain-name*>

## Description

Restores specified SAS domain configuration from a specified template file.

---

**Caution –** Before executing this command, stop all I/O operations to any disk within the specified SAS domain.

---

## Options

**`-A,--anchor-point`** <*anchorPoint-name*[,*anchorPoint-name*...]>

Specifies the name of a sample JBOD configuration found within the specified template. This sample configuration is then applied to an actual JBOD in your live configuration. Anchor points and candidates must be specified when performing a template import, and those specified must agree with the output provided from the list template command.

**`-c,--candidates`** <*candidate-name*[,*candidate-name*...]>

Specifies the name of an actual JBOD in your live configuration to be configured using values specified by the specified anchor point. Anchor points and candidates must be specified when performing a template import, and those specified must agree with the output provided from the list template command.

**`-t,--template`** <*template-name*>

Specifies the name of the template file from which SAS domain configuration information is imported.

**`sas-domain`** <*sas-domain-name*>

Specifies the SAS domain to which imported configuration information is copied.

### Examples

Import template `Simple-zone-split` to SAS domain `PikesPlace` using anchor point `Array1` and candidate storage system `CAM_Demo_Rocky1`:

```
import -t Simple-zone-split -A Array1 -c CAM_Demo_Rocky1 sas-domain
PikesPlace
```

## list host-agent

List host-agents in a specified SAS domain or the details for specified host-agents in a specified SAS domain.

### Synopsis

**list** [ **-d** <*sas-domain*> ] **host-agent** [<*host-agent-name*[ , *host-agent-name...*]>]

### Description

Lists the host-agents in a specified SAS domain or the details for specified host-agents in a specified SAS domain.

### Options

**-d,--sas-domain** <*sas-domain*>

Specifies the SAS domain for which host-agents will be listed.

**host-agent** [<*host-agent-name*[ , *host-agent-name...*]>]

If no host agent names are provided, lists host-agents in a specified SAS domain. If host agent names are provided, lists details for specified host-agents in a specified SAS domain.

### Examples

List host-agents in a specified SAS domain:

```
list host-agent
```

```
Name: cam-buffalo
Name: rocky
```

List details for specified host-agents in a specified SAS domain:

```
list host-agent cam-buffalo

Name:                              cam-buffalo

  Host IP:                         10.30.12.118
  Host ID:                         0bba236c
  OS Type:                         SunOS x86
  OS Version:                      5.10
  CAM Version:                     6.3.0.6

Registered Arrays

  Name:                            5080020000592B80
  Health:                          Degraded
  Type:                            F5100
  Total Capacity:                  68.663 GB
  Available Capacity:0.000 MB
  Firmware Version:                5.3.62.0

SAS Domains

  Name:                            508002000046743f.508002000046747f
  Entry SAS Address:               508002000046743f.508002000046747f
  No. of Expanders:                2
  No. of End Devices:              7

  Name:                            5080020000592bbf
  Entry SAS Address:               5080020000592bbf
  No. of Expanders:                1
  No. of End Devices:              5

HBAs

  SAS Address:                     500605b000809e40
  SAS Address:                     500605b000809e44
```

# list sas-domain

Lists SAS domains or the details of specified SAS domains.

## Synopsis

**list** [**-p** [*sas-port-name*, [*sas-port-name,...*]]] **sas-domain** [*sas-domain-name*[, *sas-domain-name...*]]

## Description

Lists SAS domains or the details of specified SAS domains.

## Options

**-p,--port** [*sas-port-name*,[*sas-port-name,...*]]

Specifies to list SAS domains with SAS port-centric output. This option has the following variants:

- Specifying **-p** with no specified ports yields output showing all disks seen by all ports.
- Specifying **-p** with a single specified port yields output showing all disks seen only by the specified port.
- Specifying **-p** with multiple specified ports yields output showing all disks seen only by the specified ports, with output grouped by ports.

**sas-domain** [<*sas-domain-name*[,*sas-domain-name...*]>]

If no SAS domain names are provided, lists all SAS domains. If SAS domain names are provided, lists the details of the specified SAS domains. If multiple SAS domains are specified, the output is grouped by SAS domain.

## Examples

**EXAMPLE 1**: List SAS domains:

```
list sas-domain

Name: 508002000046743f
Name: 5080020000592bbf
```

**EXAMPLE 2**: List details of a specified SAS domain:

---

**Note –** For reference, in the following output, "Group" is the current zone group, while "Groups" lists the other zone groups that have permission to view the current group.

---

```
list sas-domain 50016360000514ff

Name : 50016360000514ff
Id : 50016360000514ff
Array Name(s) : CAM_Demo_Rocky
Zoning state : Enabled
End Device Count : 9
Expander Count : 1
```

```
Expanders : 50016360000514ff
Endpoint Count : 45
Initiator Count : 1
Initiator : 500605b000809694:4,5,6,7 cam-
beast.East.Sun.COM:hba:cambeast.
East.Sun.COM:mpt:2:4,5,6,7
ZPSDS : 50016360000514ff
Connectors :
Connector : CAM_Demo_Rocky.SIM.00.Host_Or_SIM_Link_In
Group : 50016360000514ff.0x8
Connector : CAM_Demo_Rocky.SIM.00.Host_Out
Group : 50016360000514ff.0x1
Group : 50016360000514ff.0x1
Group : 50016360000514ff.0x1
Group : 50016360000514ff.0x1
Connector : CAM_Demo_Rocky.SIM.00.SIM_Link_Out
Group : 50016360000514ff.0x1
Group : 50016360000514ff.0x1
Group : 50016360000514ff.0x1
Group : 50016360000514ff.0x1
Group : 1
Groups : 1, 8, 10, 127
Member : Expander 50016360000514ff:8
CAM_Demo_Rocky:port:SIM.00.Disk Slot 8
Member : Expander 50016360000514ff:9
CAM_Demo_Rocky:port:SIM.00.Disk Slot 9
Member : Expander 50016360000514ff:10
CAM_Demo_Rocky:port:SIM.00.Disk Slot 10
Member : Expander 50016360000514ff:11
CAM_Demo_Rocky:port:SIM.00.Disk Slot 11
Member : Expander 50016360000514ff:12
CAM_Demo_Rocky:port:SIM.00.Disk Slot 12
Member : Expander 50016360000514ff:13
CAM_Demo_Rocky:port:SIM.00.Disk Slot 13
Member : Expander 50016360000514ff:14
CAM_Demo_Rocky:port:SIM.00.Disk Slot 14
Member : Expander 50016360000514ff:15
CAM_Demo_Rocky:port:SIM.00.Disk Slot 15
Member : Expander 50016360000514ff:16
CAM_Demo_Rocky:port:SIM.00.Disk Slot 16
Member : Expander 50016360000514ff:17
CAM_Demo_Rocky:port:SIM.00.Disk Slot 17
Member : Expander 50016360000514ff:18
CAM_Demo_Rocky:port:SIM.00.Disk Slot 18
Member : Expander 50016360000514ff:19
```

```
CAM_Demo_Rocky:port:SIM.00.Disk Slot 19
Member : Expander 50016360000514ff:20
CAM_Demo_Rocky:port:SIM.00.Disk Slot 20
Member : Expander 50016360000514ff:21
CAM_Demo_Rocky:port:SIM.00.Disk Slot 21
Member : Expander 50016360000514ff:22
CAM_Demo_Rocky:port:SIM.00.Disk Slot 22
Member : Expander 50016360000514ff:23
CAM_Demo_Rocky:port:SIM.00.Disk Slot 23
Member : Expander 50016360000514ff:24
CAM_Demo_Rocky:port:SIM.00.SIM Link Out
Member : Expander 50016360000514ff:25
CAM_Demo_Rocky:port:SIM.00.SIM Link Out
Member : Expander 50016360000514ff:26
CAM_Demo_Rocky:port:SIM.00.SIM Link Out
Member : Expander 50016360000514ff:27
CAM_Demo_Rocky:port:SIM.00.SIM Link Out
Member : Expander 50016360000514ff:28
CAM_Demo_Rocky:port:SIM.00.Host Out
Member : Expander 50016360000514ff:29
CAM_Demo_Rocky:port:SIM.00.Host Out
Member : Expander 50016360000514ff:30
CAM_Demo_Rocky:port:SIM.00.Host Out
Member : Expander 50016360000514ff:31
CAM_Demo_Rocky:port:SIM.00.Host Out
Member : Expander 50016360000514ff:36
CAM_Demo_Rocky:port:SIM.00.Virtual SSP (SES) Target ->
sas.endpoint.type.VIRTUAL 50016360000507fd:0
Member : Expander 50016360000514ff:37
CAM_Demo_Rocky:port:SIM.00.Virtual STP Target
Group : 8
Groups : 1, 8
Member : Expander 50016360000514ff:32,33,34,35
CAM_Demo_Rocky:port:SIM.00.Host Or SIM Link In -> Initiator
500605b000809694:4,5,6,7 cam-beast.East.Sun.COM:hba:cambeast.
East.Sun.COM:mpt:2:4,5,6,7
Group : 10
Groups : 1, 10
Member : Expander 50016360000514ff:7
CAM_Demo_Rocky:port:SIM.00.Disk Slot 7 -> Target 5000c50007bb233e:1
CAM_Demo_Rocky:disk:Disk.07
Group : 127
Groups : 1
Member : Expander 50016360000514ff:0
CAM_Demo_Rocky:port:SIM.00.Disk Slot 0 -> Target 5000c50007bb58a6:1
```

```
CAM_Demo_Rocky:disk:Disk.00
Member : Expander 50016360000514ff:1
CAM_Demo_Rocky:port:SIM.00.Disk Slot 1 -> Target 5000c50007bb245e:1
CAM_Demo_Rocky:disk:Disk.01
Member : Expander 50016360000514ff:2
CAM_Demo_Rocky:port:SIM.00.Disk Slot 2 -> Target 5000c50007bb5902:1
CAM_Demo_Rocky:disk:Disk.02
Member : Expander 50016360000514ff:3
CAM_Demo_Rocky:port:SIM.00.Disk Slot 3 -> Target 5000c50007bb4cda:1
CAM_Demo_Rocky:disk:Disk.03
Member : Expander 50016360000514ff:4
CAM_Demo_Rocky:port:SIM.00.Disk Slot 4 -> Target 5000c50007bb65ee:1
CAM_Demo_Rocky:disk:Disk.04
Member : Expander 50016360000514ff:5
CAM_Demo_Rocky:port:SIM.00.Disk Slot 5 -> Target 5000c50007bb6482:1
CAM_Demo_Rocky:disk:Disk.05
Member : Expander 50016360000514ff:6
CAM_Demo_Rocky:port:SIM.00.Disk Slot 6 -> Target 5000c50007bb66ba:1
CAM_Demo_Rocky:disk:Disk.06
/opt/se6x20/cli/bin/sscs list sas-domain 50016360000514ff, 0
```

**EXAMPLE 3**: List all ports of the specified SAS domain(s) with disks visible through them:

```
list -p sas-domain 50016360000514ff

Connectors :
Connector : CAM_Demo_Rocky.SIM.00.Host_Or_SIM_Link_In
Group : 50016360000514ff.0x8
Connector : CAM_Demo_Rocky.SIM.00.Host_Out
Group : 50016360000514ff.0x1
Group : 50016360000514ff.0x1
Group : 50016360000514ff.0x1
Group : 50016360000514ff.0x1
Connector : CAM_Demo_Rocky.SIM.00.SIM_Link_Out
Group : 50016360000514ff.0x1
Group : 50016360000514ff.0x1
Group : 50016360000514ff.0x1
Group : 50016360000514ff.0x1
Group : 10
Groups : 1, 10
Member : Expander 50016360000514ff:31
CAM_Demo_Rocky:port:SIM.00.Host Out
Member : Expander 50016360000514ff:7
```

```
CAM_Demo_Rocky:port:SIM.00.Disk Slot 7 -> Target 5000c50007bb233e:1
CAM_Demo_Rocky:disk:Disk.07
```

**EXAMPLE 4**: List a single specified port of the specified SAS domain(s) with disks visible through it:

```
list -p CAM_Demo_Rocky:port:SIM.00.Host_Out sas-domain
50016360000514ff
```

```
Connectors :
Group : 10
Groups : 1, 10
Member : Expander 50016360000514ff:31
CAM_Demo_Rocky:port:SIM.00.Host Out
Member : Expander 50016360000514ff:7
CAM_Demo_Rocky:port:SIM.00.Disk Slot 7 -> Target 5000c50007bb233e:1
CAM_Demo_Rocky:disk:Disk.07
```

**EXAMPLE 5**: List multiple specified ports of the specified SAS domain(s) with disks visible through them:

```
list -p CAM_Demo_Rocky:port:SIM.00.Host_Out,
CAM_Demo_Rocky:port:SIM.00.Host_In sas-domain 50016360000514ff
```

```
Connectors :
Group : 10
Groups : 1, 10
Member : Expander 50016360000514ff:31
CAM_Demo_Rocky:port:SIM.00.Host Out
Member : Expander 50016360000514ff:7
CAM_Demo_Rocky:port:SIM.00.Disk Slot 7 -> Target 5000c50007bb233e:1
CAM_Demo_Rocky:disk:Disk.07
Group : 11
Groups : 1, 11
Member : Expander 50016360000514ff:31
CAM_Demo_Rocky:port:SIM.00.Host IN
Member : Expander 50016360000514ff:7
CAM_Demo_Rocky:port:SIM.00.Disk Slot 7 -> Target 5000c50007bb233e:1
CAM_Demo_Rocky:disk:Disk.08
```

# list sas-zone

Provides a list of all SAS access configuration (zone) groups and details of those groups.

## Synopsis

```
list sas-zone
```

## Description

Provides a list of all SAS access configuration (zone) groups and their details.

## Examples

**Note –** The following example output is truncated. Actual output is often much longer than what is represented here.

```
list sas-zone

SAS Zone Groups:
Group:  1
 Group With Permission To Id:  1
 Key:       50800200004696bf.50800200004696ff.0x1
 ZpsdsKey:  50800200004696bf.50800200004696ff
Members:
SAS Address:     50800200004696ff
 Type:           EXPANDER
 Key:            50800200004696ff:28,29,30,31,32,33,34,35
 SES Reference:  j4500:J4500-2-bottom-test2:sasexpander
 Attach Point:   50800200004696bf:28,29,30,31,32,33,34,35
 Capacity:       null
 Model:          j4500
 Device Name:    J4500-2-bottom-test2
 Component Name:
 Class:          sasexpander
SAS Address:     50800200004696bf
 Type:           EXPANDER
 Key:            50800200004696bf:28,29,30,31,32,33,34,35
 SES Reference:  j4500:J4500-2-bottom-test2:sasexpander
 Attach Point:   50800200004696ff:28,29,30,31,32,33,34,35
 Capacity:       null
```

```
 Model:          j4500
 Device Name:    J4500-2-bottom-test2
 Component Name:
 Class:          sasexpander
SAS Address:     50800200004696bf
 Type:           EXPANDER
 Key:            50800200004696bf:36
 SES Reference:  j4500:J4500-2-bottom-test2:sasexpander
 Attach Point:   50800200004696bd:0
 Capacity:       null
 Model:          j4500
 Device Name:    J4500-2-bottom-test2
 Component Name:
 Class:          sasexpander
```

# list template

Lists a summary of SAS domain templates or details of specified templates.

## Synopsis

**list** [**-d** <*sas-domain-name*>] **template** [<*template-name*[ , *template-name...*]>]

## Description

Lists a summary of all SAS domain templates known by the current management station, a summary of templates in a specified SAS domain, or details of specified templates. Use this command to obtain valid anchor point and candidate values for a specified template when executing the import sas-domain command.

## Options

**-d,--sas-domain** <*sas-domain-name*>

Specifies the SAS domain for which a template summary is requested.

**template** [<*template-name*[ , *template-name...*]>]

If no specific template names are specified, a summary of templates will be listed. If specific template names are specified, details for those templates will be listed.

## Examples

List all templates:

```
sscs list template

Name: F5100-dual-host
Name: F5100-quad-host
Name: J4200-dual-host
Name: J4400-dual-host
Name: J4500-dual-host
Name: J4500-quad-host
Name: Simple-zone-split
Name: Unassigned-zone-split
```

List templates within a specified SAS domain:

```
sscs list -d SAS_Breckenridge template

Name: F5100-dual-host
Name: F5100-quad-host
Name: J4200-dual-host
Name: J4400-dual-host
Name: J4500-dual-host
Name: J4500-quad-host
Name: Simple-zone-split
Name: Unassigned-zone-split
```

List details of a specified template:

```
sscs list template "Simple-zone-split"
Name: Simple-zone-split
 Description: A template that splits all current disks evenly across
all current initiators.
 Anchor Points
  Name:JBOD
   Description:SAS JBOD Array
   Candidates:J4500-2-bottom-test2,J4500-2-bottom-test2
```

# modify sas-domain

Modifies specified properties of a SAS domain. There are ten variations of this command:

- Rename specified SAS domain
- Clear access configuration password in Array Registration Database
- Modify the access configuration password stored in the Array Registration Database and the Array SAS Expander
- Modify the access configuration password stored in the Array Registration Database only (to synchronize with the Array SAS Expander password)
- Associate specified initiators and disks in a SAS domain
- Dissociate specified initiators and disks in a SAS domain.
- Prepare storage for cascading.
- Synchronize cascaded storage access configurations.
- Associate specified SAS ports and disks in a SAS domain.
- Dissociate specified SAS ports and disks in a SAS domain.

## Synopsis

**modify -n** <*new-sas-domain-name*> **sas-domain** <*sas-domain-name*>

**modify -c sas-domain** <*sas-domain-name*>

**modify -C -P** <*old-password*> **-N** <*new-password*> **sas-domain** <*sas-domain-name*>

**modify -s -N** <*new-password*> **sas-domain** <*sas-domain-name*>

**modify -A -i** <*initiator-address*[ , *initiator-address...*]> **-d** <*disk-name*[ , *disk-name...*]> **sas-domain** <*sas-domain-name*>

**modify -D -i** <*initiator-address*[ , *initiator-address...*]> **-d** <*disk-name*[ , *disk-name...*]> **sas-domain** <*sas-domain-name*>

**modify -p sas-domain** <*sas-domain-name*>

**modify -y sas-domain** <*sas-domain-name*>

**modify -A -p** <*sas-port-name*[ , *sas-port-name...*]> **-d** <*disk-name*[ , *disk-name...*]> **sas-domain** <*sas-domain-name*>

**modify -D -p** <*sas-port-name*[ , *sas-port-name...*]> **-d** <*disk-name*[ , *disk-name...*]> **sas-domain** <sas-domain-name>

## Description

This command modifies the specified properties of a SAS domain.

## Options

**-A,--associate** (in conjunction with **-i,--initiator** and **-d,--disk**)

Associates specified initiators and disks in a SAS domain (i.e. defines an access configuration). Disk common names (e.g., CAM_Demo_Rocky:disk:Disk.01) and SAS addresses (e.g., 5000c50001b9c83d) are used in place of <*disk-name*>. Initiator SAS addresses are used in place of <*initiator-address*>. Association of initiators and disks in combination with ports and disks is not possible within a single command. Both variants of **-A** must be executed separately. When creating a new initiator-disk association (i.e. access configuration), note the following two conditions:

- If an access configuration already exists for the specified initiators, any disks not specified in the current command will retain their previous associations. If a previous disk association is intended for removal, the **-D,--dissociate** option must be used in a separate command instance.
- If you are creating a new access configuration immediately following execution of the reset sas-domain command, or if this is the first access configuration being created on a default-configured JBOD array from the factory, note that all ports and initiators are associated with all disks by default. Therefore, creating a new association will implicitly dissociate all disks from all ports and initiators before applying the associations you specify.

---

**Caution –** Before executing the above command, stop all I/O operations to any disks within the specified SAS domain.

---

**-A,--associate** (in conjunction with **-p,--port** and **-d,--disk**)

Associates specified ports and disks in a SAS domain (i.e. defines an access configuration). Disk common names (e.g., CAM_Demo_Rocky:disk:Disk.01) and SAS addresses (e.g., 5000c50001b9c83d) are used in place of <*disk-name*>. Association of ports and disks in combination with initiators and disks is not possible within a single command. Both variants of **-A** must be executed separately. When creating a new port-disk association (i.e. access configuration), note the following two conditions:

- If an access configuration already exists for the specified ports, any disks not specified in the current command will retain their previous associations. If a previous disk association is intended for removal, the **-D,--dissociate** option must be used in a separate command instance.
- If you are creating a new access configuration immediately following execution of the reset sas-domain command, or if this is the first access configuration being created on a default-configured JBOD array from the factory, note that all ports

and initiators are associated with all disks by default. Therefore, creating a new association will implicitly dissociate all disks from all ports and initiators before applying the associations you specify.

---

**Caution –** Before executing the above command, stop all I/O operations to any disks within the specified SAS domain.

---

**-C,--change-password**

Modifies the access configuration password in the Array Registration Database and the Array SAS Expander so both passwords match. The password can be a maximum of 32 alphanumeric characters. If setting a new password after it has been previously cleared, substitute "" for <*old-password*>, making sure to escape each quote mark (\"\").

**-c,--clear-password**

Clears the access configuration password in the Array Registration Database and resets it to the factory default of no password.

---

**Note –** If the password in the Array SAS Expander is also not set to the default, modification operations on the SAS domain will be prevented.

---

**-D,--dissociate** (in conjunction with **-i,--initiator** and **-d,--disk**)

Dissociates specified initiators and disks in a SAS domain (i.e. defines an access configuration). Disk common names (e.g., CAM_Demo_Rocky:disk:Disk.01) and SAS addresses (e.g., 5000c50001b9c83d) are used in place of <*disk-name*>. Initiator SAS addresses are used in place of <*initiator-address*>. Dissociation of initiators and disks in combination with ports and disks is not possible within a single command. Both variants of **-D** must be executed separately.

---

**Caution –** Before executing the above command, stop all I/O operations to any disks within the specified SAS domain.

---

**-D,--dissociate** (in conjunction with **-p,--port** and **-d,--disk**)

Dissociates specified ports and disks in a SAS domain. Disk common names (e.g., CAM_Demo_Rocky:disk:Disk.01) and SAS addresses (e.g., 5000c50001b9c83d) are used in place of <*disk-name*>. Dissociation of ports and disks in combination with initiators and disks is not possible within a single command. Both variants of **-D** must be executed separately.

**Caution –** Before executing the above command, stop all I/O operations to any disks within the specified SAS domain.

**-d,--disk** *<disk-name [ , disk-name... ] >*

Specifies the common names of the disks. Disk SAS addresses can also be used. If using this option, a value must be supplied or else an error message will be returned.

**-i,--initiator** *<initiator-address [ , initiator-address... ] >*

Specifies the SAS addresses of the initiators. Initiator common names cannot be used. If using this option, a value must be supplied or else an error message will be returned.

**-N,--new-password** *<new-password>*

Specifies a new access configuration password.

**-n,--new-name** *<new-sas-domain-name>*

Specifies a new name for the specified SAS domain.

**-P,--old-password** *<old-password>*

Specifies the existing access configuration password in the Array Registration Database. If setting a new password after it has been previously cleared, substitute "" for *<old-password>*, making sure to escape each quote mark (\"\").

**-p,--prepare-cascade**

Clears any previous access configurations on the specified SAS domain in preparation for storage cascading. Refer to the procedures in the *Sun StorageTek Common Array Manager User Guide for Open Systems* for information about configuring cascaded arrays.

**-p,--port** *<sas-port-name [ , sas-port-name... ] >*

Specifies the SAS port names to be used when associating or dissociating ports and disks.

**-s,--synch-password**

Modifies the access configuration password stored in the Array Registration Database only. The password can be a maximum of 32 alphanumeric characters.

**Note –** If the password in the Array SAS Expander does not match, modification operations on the SAS domain will be prevented.

**-y,--synch-cascade**

Synchronizes the merged SAS domain in cascaded storage. This action synchronizes the zoning permissions and initializes the connections between arrays. Refer to the procedures in the *Sun StorageTek Common Array Manager User Guide for Open Systems* for information about configuring cascaded arrays.

## Examples

These examples use the following sample data:

| | |
|---|---|
| **Current SAS domain name (SAS Address):** | **50016360000514ff** |
| **New SAS domain name:** | **SAS_Breckenridge** |
| **Current access configuration password:** | **key!stone** |
| **New access configuration password:** | **colo!rado** |
| **Initiator-1 SAS address:** | **500605b0008085d4** |
| **Initiator-2 SAS address:** | **500605b0008088d3** |
| **Disk-1 common name:** | **CAM_Demo_Rocky:disk:Disk.01** |
| **Disk-2 common name:** | **CAM_Demo_Rocky:disk:Disk.02** |
| **Disk-3 common name:** | **CAM_Demo_Rocky:disk:Disk.03** |
| **Disk-3 SAS address:** | **5000c50001b9c83d** |
| **Port-1 name:** | **CAM_Demo_Rocky:port:SIM.00.Host_In** |
| **Port-2 name:** | **CAM_Demo_Rocky:port:SIM.00.Host_Out** |
| **Port-3 name:** | **CAM_Demo_Rocky:port:SIM.00.SIMLink_Out** |

**Note –** When using special characters, such as "!" used in these example passwords, you must escape them or else the shell will misinterpret the command. The password `key!stone` would thus be entered `key\!stone`.

### Example 1: Rename a SAS Domain

```
modify -n SAS_Breckenridge sas-domain 50016360000514ff
```

### Example 2: Clear Password

```
modify -c sas-domain SAS_Breckenridge
```

### Example 3: Change Password

```
modify -C -P key!stone -N colo!rado sas-domain SAS_Breckenridge
```

### Example 4: Synchronize Passwords

```
modify -s -N colo!rado sas-domain SAS_Breckenridge
```

### Example 5: Associate Initiators and Disks

Single initiator to multiple disks:

```
modify -A -i 500605b0008085d4 -d
CAM_Demo_Rocky:disk:Disk.01,CAM_Demo_Rocky:disk:Disk.02,5000c50
001b9c83d sas-domain SAS_Breckenridge
```

Multiple initiators to a single disk:

```
modify -A -i 500605b0008085d4,500605b0008088d3 -d
CAM_Demo_Rocky:disk:Disk.01 sas-domain SAS_Breckenridge
```

Multiple initiators to multiple disks:

```
modify -A -i 500605b0008085d4,500605b0008088d3 -d
CAM_Demo_Rocky:disk:Disk.02,5000c50001b9c83d sas-domain
SAS_Breckenridge
```

### Example 6: Dissociate Initiators and Disks

Multiple initiators from a single disk:

```
modify -D -i 500605b0008085d4,500605b0008088d3 -d
CAM_Demo_Rocky:disk:Disk.02 sas-domain SAS_Breckenridge
```

Dissociate multiple initiators from multiple disks:

```
modify -D -i 500605b0008085d4,500605b0008088d3 -d
CAM_Demo_Rocky:disk:Disk.01,CAM_Demo_Rocky:disk:Disk.02,5000c50
001b9c83d sas-domain SAS_Breckenridge
```

### Example 7: Prepare for Storage Cascading

```
modify -p sas-domain SAS_Breckenridge
```

### Example 8: Synchronize Cascade

```
modify -y sas-domain SAS_Breckenridge
```

### Example 9: Associate Ports and Disks

Multiple disks to a single port:

```
modify -A -p CAM_Demo_Rocky:port:SIM.00.Host_In -d
CAM_Demo_Rocky:disk:Disk.01,CAM_Demo_Rocky:disk:Disk.02,CAM_Dem
o_Rocky:disk:Disk.03 sas-domain 50016360000514ff
```

Multiple ports to a single disk:

```
modify -A -p
CAM_Demo_Rocky:port:SIM.00.Host_In,CAM_Demo_Rocky:port:SIM.00.H
ost_Out -d CAM_Demo_Rocky:disk:Disk.02 sas-domain
50016360000514ff
```

Multiple ports to multiple disks:

```
modify -A -p
CAM_Demo_Rocky:port:SIM.00.Host_In,CAM_Demo_Rocky:port:SIM.00.H
ost_Out -d
CAM_Demo_Rocky:disk:Disk.01,CAM_Demo_Rocky:disk:Disk.02,CAM_Dem
o_Rocky:disk:Disk.03 sas-domain 50016360000514ff
```

### Example 10: Dissociate Ports

Multiple ports from a single disk:

```
modify -D -p
CAM_Demo_Rocky:port:SIM.00.Host_In,CAM_Demo_Rocky:port:SIM.00.H
ost_Out,CAM_Demo_Rocky:port:SIM.00.SIMLink_Out -d
CAM_Demo_Rocky:disk:Disk.01 sas-domain 50016360000514ff
```

Multiple disks from multiple ports:

```
modify -D -p
CAM_Demo_Rocky:port:SIM.00.Host_In,CAM_Demo_Rocky:port:SIM.00.H
ost_Out,CAM_Demo_Rocky:port:SIM.00.SIMLink_Out -d
CAM_Demo_Rocky:disk:Disk.01,CAM_Demo_Rocky:disk:Disk.02,CAM_Dem
o_Rocky:disk:Disk.03 sas-domain 50016360000514ff
```

# reset sas-domain

Returns the specified SAS domains to their default settings.

**Caution –** Carefully review the below command description before executing this command.

## Synopsis

**reset sas-domain** <*sas-domain-name*>

## Description

Upon execution, this command performs the following:

- Returns the specified SAS domain to the default settings.
- Changes the zoning state to Disabled.
- Clears the existing access configuration.
- Resets the SAS domain to the default access configuration. The default access configuration is such that there is open access between all initiators, ports, and disks within the SAS domain.

## Options

**sas-domain** <*sas-domain-name*>

Specifies the SAS domain to reset to default settings.

## Examples

```
reset sas-domain SAS_Breckenridge
```

# Index