Sun StorEdge™ 3310 SCSI CLI Guide

Version 1.0

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Chapter

Preface

The *Sun StorEdge 3310 SCSI CLI Guide* contains the syntax and commands for monitoring and configuring the Sun StorEdge™ array from an operating environment command line interface.

This manual is written for experienced system administrators who are already familiar with Sun's hardware and software products.

How This Book Is Organized

This book contains the following topics:

Chapter 1 provides instructions on installing and accessing the CLI and describes the supported command modes.

Chapter 2 explains the device name, lists the options, and provides the available subcommands along with sample code.

Appendix A contains a list of CLI error messages.

Using UNIX Commands

This document might not contain information on basic UNIX® commands and procedures such as shutting down the system, booting the system, and configuring devices.

See one or more of the following for this information:

- *Solaris Handbook for Sun Peripherals*
- AnswerBook2™ online documentation for the Solaris™ operating system
- Other software documentation that you received with your system

Typographic Conventions

TABLE P-1

Typeface*	Meaning	Examples
`AaBbCc123`	The names of commands, files, and directories; on-screen computer output	Edit your `.login` file. Use `ls -a` to list all files. `% You have mail.`
`AaBbCc123`	What you type, when contrasted with on-screen computer output	`% su` `Password:`
AaBbCc123	Book titles, new words or terms, words to be emphasized	Read Chapter 6 in the *User's Guide*. These are called *class* options. You *must* be superuser to do this.

* The settings on your browser might differ from these settings.

Related Documentation

Application	Title	Part Number
Late-breaking news	*Sun StorEdge 3310 SCSI Array Release Notes*	816-7292
Installation and service	*Sun StorEdge 3310 SCSI Array Installation, Operation, and Service Manual*	816-7290
Best practices	*Sun StorEdge 3310 SCSI Array Best Practices Manual*	816-7293
Safety and compliance	*Sun StorEdge 3310 SCSI Array Safety, Regulatory, and Compliance Manual*	816-7291
Firmware	*Sun StorEdge 3310 SCSI RAID Firmware Guide*	816-7296
Monitoring and configuration software	*Sun StorEdge 3310 SCSI Configuration Service User Guide*	816-7298
Reporting software	*Sun StorEdge 3310 SCSI Diagnostic Reporter User Guide*	816-7722

Technical Support

For late-breaking news and troubleshooting tips, review the *Sun StorEdge 3310 SCSI Array Release Notes* located at:

`www.sun.com/products-n-solutions/hardware/docs/Network_Storage_Solutions/Workgroup/3310`

For 24-hour access to web-based support solutions, visit the Online Support Center at:

`www.sun.com/service/online`

To initiate or check on a USA-only service request, contact Sun support at:

1-800-USA4SUN

To obtain international technical support, contact the sales office of a specific country at:

`www.sun.com/service/contacting/sales.html`

Accessing Sun Documentation Online

All Sun StorEdge 3310 SCSI Array online documentation is located at:

`http://www.sun.com/products-n-solutions/hardware/docs/Network_Storage_Solutions/Workgroup/3310`

You can order printed copies of the Sun StorEdge 3310 SCSI array manuals at:

`http://corppub.iuniverse.com/marketplace/sun`

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CHAPTER 1

Overview

The Storage Management Command Line Interface provides the capability to download firmware, reset the controller, and display specific information for the Sun StorEdge 3310 SCSI array from an operating environment command line interface. The CLI utility communicates with the storage subsystem by using in-band communication with the RAID controller over connections.

This chapter introduces the CLI and includes the following topics:

Supported Platforms

- Solaris 8 and Solaris 9 operating environments
- Microsoft® Windows NT® and Windows® 2000

Installing and Accessing the CLI

Before You Begin

Before you install the CLI utility, make sure that a logical drive is mapped to the primary controller.

▼ To Install the CLI on Systems Using the Solaris Operating Environment

The CLI installation package, `SUNWsccli`, can be obtained from the Sun StorEdge 3310 SCSI Professional Storage Manager CD. It must be installed on a server that is attached to the Sun StorEdge array.

1. **Insert the Sun StorEdge 3310 SCSI Professional Storage Manager CD and type**

```
# pkgadd -d/cdrom/cdrom0/product/solaris SUNWsccli
```

2. **To access the CLI, log in as `root` on the server that you installed the CLI and that is attached to the Sun StorEdge array, and type**

```
# sccli (with options and subcommands as described in this guide)
```

Note – If you do not have `/usr/sbin` in your PATH environment variable, you can invoke the CLI as `/usr/sbin/sccli`.

▼ To Access the Man Page

Without specifying environment variables, type

```
# man -M /opt/SUNWsscs/man sccli
```

Note – If you do not want to specify the man page directory each time, add the directory `/opt/SUNWsscs/man` to the colon-separated list of directories in the `$MANPATH` environment variable.

▼ To Install the CLI on Microsoft Windows NT/2000 Operating Systems

The CLI installation package, `SUNWsccli.exe`, can be obtained from the Sun StorEdge 3310 SCSI Professional Storage Manager CD. It must be installed on a server that is attached to the Sun StorEdge array.

1. **Insert the Sun StorEdge Professional Storage Manager CD and go to the `\product\windows` directory.**
2. **Either double-click or copy `SUNWsccli.exe` to a local drive, and proceed through the series of windows and prompts to complete the installation.**

   The default installation directory is `C:\Program Files\Sun\sccli`.
3. **To access the CLI, go to Start → Programs → Sun StorEdge 3000 Family → Command Line Interface.**

▼ To Access Help

Go to Start → Programs → Sun StorEdge 3000 Family → Command Line Help**.**

Supported Command Modes

The CLI utility supports single command mode and prompting mode as shown in the following examples.

You can type the entire command on the command line:

```
# sccli /dev/rdsk/c1t0d0s2 show events
```

Or you can specify the device on the command line:

```
# sccli /dev/rdsk/c1t0d0s2
sccli> show events
       :
sccli> quit
```

Or you can specify nothing on the command line:

```
# sccli
Available devices:
       1.  /dev/rdsk/c1t0d0s2 [SUN StorEdge 3310 00028E]
       2.  /dev/rdsk/c1t1d0s2 [SUN StorEdge 3310 00028F]
Enter selection: 1
sccli> show events
       :
sccli> quit
```

CHAPTER 2

Options and Subcommands

This chapter explains the device name, lists the options, and provides the available CLI subcommands along with sample code. Topics covered in this chapter include:

Note – To prevent unauthorized access, the CLI utility requires superuser or administrator privileges.

Specifying the Device Name

Except for the `help`, `about`, and `version` subcommands, all CLI subcommands require the specification of a device filename.

For systems using the Solaris operating environment, the device name is typically specified as:

```
/dev/rdsk/cXtYdZs2
```

where:

X = controller number

Y = scsi target number

Z = logical unit number

`s2` = slice 2 of the (logical) disk. Usually, slice 2 is specified when identifying a disk for administrative purposes, but any slice number between 0 and 7 (if the slice exists) work.

For Microsoft Windows NT/2000 operating systems, the device name is specified using the Window's internal device name for the physical device.

```
PhysicalDriveN
```

where *N* corresponds to the disk number displayed in the Disk Administrator, for example:

```
PhysicalDrive2
```

Note – If no device is specified on the command line, and more than one Sun StorEdge array is connected to the host, a menu of devices is presented with one device filename for each array. If there is only one StorEdge array device connected to the host, that device is selected automatically.

Note – The sample code shown throughout this code is based on systems using the Solaris operating environment.

Options

```
-y, --yes
```

Assume a `yes` response to any `yes`/`no` prompts. This is used to allow dangerous commands to be run from a script without prompting the user.

```
-n, --no
```

Assume a `no` response to any `yes`/`no` prompts.

```
-v, --version
```

Displays the version number of the CLI utility and exits without processing any subcommnads.

```
-h, --help, --usage
```

Displays a usage message.

Options Usage

```
# sccli option device subcommand
```

Subcommands

Note – If no subcommand is entered on the command line, the CLI enters an interactive mode, prompting you to enter subcommands until the `quit` command is entered. All subcommands operate on the currently-selected device.

Note – The secondary controller in dual-controller configurations does not support any administrative functions. In *active/active* configurations where LUNs are assigned to both the primary and secondary controllers, the CLI command can be used only with those LUNs assigned to the primary controller.

about

Displays version and copyright information.

```
# sccli about
```

```
# sccli about
sccli version 1.0.2
Sun StorEdge 3000 Family CLI
Copyright 2002 Dot Hill Systems Corporation
All rights reserved. Use is subject to license terms.
```

clear events

Clears the array's internal event log.

```
# sccli device clear events
```

```
# sccli /dev/rdsk/c0t5d0s2 clear events
```

download

Caution – All `download` commands are potentially dangerous. Use only as instructed.

Caution – All `download` commands cause the array to stop responding to I/O requests from the host for a period of time. This might result in data loss unless all I/O activity is suspended by halting all applications that are accessing the array, and unmounting any file systems that are mounted from the array. In redundant-controller configurations, these commands affect all LUNs on both controllers. After running a download command, you need to run the `select` command to reselect the device.

Caution – Stop the Configuration Service Agent if it is running.

Note – Although redundant controller configurations support live firmware upgrades using its failover capability, the failover operation itself might cause warning messages to be displayed on the console or system log. These messages can be ignored.

Note – If the download firmware files are not under the same directory as the CLI, you need to specify the full path.

download controller-firmware

Downloads firmware into the controller. In a dual-controller configuration, the failover capability of the redundant controller pair is used to activate the new firmware without requiring the array to be shut down in what is known as a live upgrade or hot firmware download operation. In a single controller configuration, the new firmware is activated by resetting the controller.

If the `-r` or `--reset` option is specified, the controllers are always reset instead of performing a live upgrade. This option is faster and is recommended when a live upgrade is not required.

If `boot-record` is specified, it names an additional file that is downloaded at the same time.

```
# sccli device download controller-firmware [-r | --reset] filename
[boot-record]
```

```
# sccli /dev/rdsk/c0t5d0s2 download controller-firmware c:\SUN 325k-
3310.bin c:\ b32a131e
WARNING: This is a potentially dangerous operation. The controller
will go offline for several minutes. Data loss may occur if the
controller is currently in use.
Are you sure? y
sccli: Downloading boot record...done
sccli: Downloading controller firmware...programming flash
memory...done
sccli: Engaging controller...done
sccli: /dev/rdsk/c0t5d0s2: device reset
sccli: /dev/rdsk/c0t5d0s2: waiting for device to be ready
sccli: /dev/rdsk/c0t5d0s2: device is ready
```

download disk-firmware

Downloads disk driver firmware into disk drives connected to the Sun StorEdge array. If a disk-model string is specified, it is matched against SCSI INQUIRY data to determine which drives to program.

Note – To download firmware to expansion unit disk drives, the drives must be attached to the Sun StorEdge array. That is, the CLI utility does not download firmware to JBODs directly.

When using this command:

- All daemons that access the RAID controller must be stopped.
- I/O is interrupted.
- The controller is reset after disks are flashed.

```
# sccli device download disk-firmware filename disk-model
```

```
# sccli /dev/rdsk/c0t5d0s2 download disk-firmware c:\ST3366051.0538.fw
"ST336605LSUNS6G"
WARNING: This is a potentially dangerous operation. The controller
will go offline for several minutes. Data loss may occur if the
controller is currently in use.
Are you sure? y
sccli: controller is shut down and ready for disk firmware download
sccli: Sending disk firmware data...
sccli: flashing firmware data, please wait...
sccli: Disk firmware download done
Download Status Report
-------------------------------------------------------------
Disk Firmware download completed (CH 0 ID 0)
Disk Firmware download completed (CH 0 ID 1)
Disk Firmware download completed (CH 0 ID 2)
Disk Firmware download completed (CH 0 ID 3)
Disk Firmware download completed (CH 0 ID 4)
Disk Firmware download completed (CH 0 ID 5)
Disk Firmware download completed (CH 0 ID 8)
Disk Firmware download completed (CH 0 ID 9)
Disk Firmware download completed (CH 0 ID 10)
Disk Firmware download completed (CH 0 ID 11)
Disk Firmware download completed (CH 0 ID 12)
Disk Firmware download completed (CH 0 ID 13)
-------------------------------------------------------------
sccli: Resetting controller...Done
sccli: /dev/rdsk/c0t5d0s2: waiting for device to be ready
sccli: /dev/rdsk/c0t5d0s2: device reset
sccli: /dev/rdsk/c0t5d0s2: device is ready
```

download safte-firmware

Downloads firmware into the SAF-TE microprocessor in a Sun StorEdge array enclosure controller.

When using this command:

- All daemons that access the RAID controller must be stopped.
- I/O is interrupted.
- The controller is reset after disks are flashed.

```
# sccli device download safte-firmware filename
```

```
# sccli /dev/rdsk/c0t5d0s2 download safte-firmware saftefw.bin
WARNING: This is a potentially dangerous operation.
Are you sure? y
sccli: controller is shut down and ready for SAFTE firmware
download
sccli: Downloading SAFTE firmware package to SAFTE targets

sccli: downloading SAFTE module: EMU ENVIRONMENTALS.............
.............
          CH 0 ID 14 succeeded

sccli: downloading SAFTE module: EMU ISEMS.....................
          CH 0 ID 14 succeeded

sccli: downloading SAFTE module: EMU LED CONTROLLER.............
          CH 0 ID 14 succeeded

sccli: downloading SAFTE module: POWER SUPPLY CTRL..............
.............
          CH 0 ID 14 succeeded

sccli: downloading SAFTE module: SAFTE HC11.....................
.............................................................
.............................................................
.............................................................
.............................................................
.............
          CH 0 ID 14 succeeded
sccli: SAFTE firmware package download succeeded (rev A000 CH 0 ID
14)
Download Status Report
-------------------------------------------------------------
SAF-TE Firmware download completed (CH 0 ID 14)
-------------------------------------------------------------
sccli: Resetting controller...Done
sccli: /dev/rdsk/c0t5d0s2: waiting for device to be ready
sccli: /dev/rdsk/c0t5d0s2: device reset
sccli: /dev/rdsk/c0t5d0s2: device is ready
```

download ses-firmware (reserved for future use)

Downloads firmware into the SES microprocessor in a Fibre Channel array enclosure.

```
# sccli device download ses-firmware filename
```

help

Displays a short synopsis of available commands.

```
# sccli help
```

inquiry

Displays SCSI INQUIRY data returned by the array controller. (Shortcut for `show inquiry-data`).

```
# sccli device inquiry
```

```
# sccli /dev/rdsk/c0t5d0s2 inquiry
Vendor: SUN
Product: StorEdge 3310
Revision: 0325
Vendor-specific S/N: 5E034B32-00
Peripheral Device Type: 0
Removable Media: no
Page 80 Serial Number: 00028E5E034B3200
Page 83 Logical Unit Device ID: 600C0FF00000000000028E5E034B3200
```

reset

Caution – All reset commands are potentially dangerous. Use only as instructed.

Caution – All reset commands cause the array to stop responding to I/O requests from the host for a period of time. This might result in data loss unless all I/O activity is suspended by halting all applications that are accessing the array, and unmounting any file systems that are mounted from the array. In redundant-controller configurations, these commands affect all LUNs on both controllers. After running a reset command, to stay in prompt mode, run the `select` command to reselect the device.

reset controller

Resets the controller. This temporarily causes the array to go offline, which might affect applications running on any hosts connected to the array. Also see `shutdown controller`.

```
# sccli device reset controller
```

```
# sccli /dev/rdsk/c0t5d0s2 reset controller
WARNING: This is a potentially dangerous operation. The controller
will go offline for several minutes. Data loss may occur if the
controller is currently in use.
Are you sure? y
sccli: resetting controller...
sccli: controller has been reset
sccli: /dev/rdsk/c0t5d0s2: waiting for device to be ready
sccli: /dev/rdsk/c0t5d0s2: device reset
sccli: /dev/rdsk/c0t5d0s2: device is ready
```

reset nvram

Clears the NVRAM configuration memory and restores factory defaults. After issuing this command, reset the controller and reconfigure the controller to restore any non-default configuration options.

Caution – Logical devices are not deleted, but it is possible for them to become inaccessible after this command is run. This might result in data loss.

```
# sccli device reset nvram
```

```
# sccli /dev/rdsk/c0t5d0s2 reset nvram
WARNING: The configuration of the RAID controller will be erased.
Factory default parameters will take effect at next controller
reset. Logical devices may not be accessible until mappings are
reconfigured.
Are you sure? y
sccli>
```

select

Select a new device to which subsequent commands are issued. If no device is specified, and more than one choice exists, a menu of choices is displayed.

```
sccli> select device
```

```
sccli> select /dev/rdsk/c0t5d0s2
sccli: selecting /dev/rdsk/c0t5d0s2 [SUN StorEdge 3310 00028E]
```

show events

Displays the contents of the array's event log.

```
# sccli device show events
```

```
# sccli /dev/rdsk/c0t5d0s2 show events
Tue Jul 30 16:04:45 2002
[0181] #1: StorEdge Array SN#600001 Controller NOTICE: controller
initialization completed

Tue Jul 30 16:04:24 2002
[0181] #2: StorEdge Array SN#600001 Controller NOTICE: controller
initialization completed
```

show inquiry-data

Displays the SCSI INQUIRY data returned by the array controller.

```
# sccli device show inquiry-data
```

```
# sccli /dev/rdsk/c0t5d0s2 show inquiry-data
Vendor: SUN
Product: StorEdge 3310
Revision: 0325
Vendor-specific S/N: 5E034B32-00
Peripheral Device Type: 0
Removable Media: no
Page 80 Serial Number: 00028E5E034B3200
Page 83 Logical Unit Device ID: 600C0FF00000000000028E5E034B3200
```

show ip-address

Displays the IP address of the array controller.

Note – Before running this command, make sure the network parameters on the controller are set.

```
# sccli device show ip-address
```

```
# sccli device show ip-address
206.6.182.71
```

shutdown controller

Shuts down the RAID controller and stops I/O processing. This temporarily causes the array to go offline, which might affect applications running on any hosts connected to the array. Data in the controller cache is flashed to logical drives. After issuing this command, issue the `reset controller` command.

Caution – The shutdown command causes the array to stop responding to I/O requests from the host for a period of time. This might result in data loss unless all I/O activity is suspended by halting all applications that are accessing the array, and unmounting any file systems that are mounted from the array. In redundant-controller configurations, these commands affect all LUNs on both controllers.

```
# sccli device shutdown controller
```

```
# sccli /dev/rdsk/c0t5d0s2 shutdown controller
WARNING: This is a potentially dangerous operation. The controller
will go offline for several minutes. Data loss may occur if the
controller is currently in use.
Are you sure? y
sccli: shutting down controller...
sccli: controller is shut down
```

quit

Exits the interactive mode.

```
sccli> quit
```

version

Displays the version number of the CLI.

```
# sccli version
```

```
# sccli version
version 1.0.23
```

APPENDIX **A**

Error and Status Messages

This appendix contains a list of CLI error messages.

TABLE A-1 Error and Status Messages

Error and Status Messages
a firmware filename is required
a primary controller device must be selected
aborted command
AC line failure condition ended
AC line failure detected
add scsi drive operation failed
adding SCSI drive completed
adding SCSI drive operation paused
ALERT
assume a “no”response to any prompts
assume a “yes”response to any prompts
At least one SAFTE module is missing; package revision will not be updated
bad block encountered
bad SAFTE package firmware found, download aborted
battery failure condition ended
battery failure detected
block reassignment failed
block successfully reassigned
cannot open device

TABLE A-1 Error and Status Messages *(Continued)*

Error and Status Messages
cannot retrieve events from secondary controller
clear the event log
clone failed
clone operation completed
command returned bad value
condition no longer critical
continue adding SCSI drive operation
controller firmware download failed
controller firmware downloaded OK, but reset failed
controller firmware downloaded successfully, but reset failed
controller initialization completed
controller is shut down and ready for disk firmware download
controller is shut down and ready for SAFTE firmware download
controller is shut down and ready for SES firmware download
controller reset
controller reset failed
cooling fan Failure Detected
cooling fan high speed threshold detected
cooling fan high threshold detected
cooling fan is no longer in critical state
cooling fan is now operational
cooling fan is OK
cooling fan low speed threshold detected
cooling fan low speed threshold exceeded
cooling fan not installed
cooling fan not installed or failure detected
cooling fan not present or failure detected
cooling fan now above low speed threshold
cooling fan now below high speed threshold
cooling fan state changed to critical

TABLE A-1 Error and Status Messages *(Continued)*

Error and Status Messages
cooling fan state no longer critical
CRITICAL
current sensor failure detected
current sensor is OK
current sensor low threshold critical ended
current sensor low threshold detected
current sensor low threshold exceeded
current sensor no longer critical
current sensor not present or failure detected
current sensor state changed to critical
current sensor state is no longer critical
Data loss may occur if the controller is currently in use
data overrun / underrun detected
DC line failure condition ended
DC line failure detected
device reset
disk drive product id string required
Disk firmware download done
Disk firmware download failed
disk firmware download failed on logical drive channel
disk firmware download OK on logical drive channel
Display info for array disks.
Display SCSI INQUIRY data for selected device
Displays the controller event log.
Displays the controller's IP network address
Door is now locked
Door is unlocked
door state change notification
door state changed to critical
download completed

TABLE A-1 Error and Status Messages *(Continued)*

Error and Status Messages
download disk drive firmware to internal drives
download enclosure SES firmware
download failed
download RAID controller firmware (optionally w/ hard reset)
Download Status Report
download: one ore more modules failed
Downloading boot record
Downloading controller firmware
downloading SAFTE firmware package failed
Downloading SAFTE firmware package to SAFTE targets
downloading SAFTE module
DRAM parity error detected
drive hardware error
elevated temperature alert
elevated temperature now back to normal level
EMU ENVIRONMENTALS
EMU LED CONTROLLER
engaging controller firmware failed
Engaging firmware
expansion failed
expansion of logical drive completed
Factory default parameters will take effect at next controller reset
failed on posting data to controller
failed on sending data to controller
failed to download Safte HC11 firmware
failed to free controller resource
failed to free resource on controller
failed to get configuration
failed to get network parameters
failed to get response

TABLE A-1 Error and Status Messages *(Continued)*

Error and Status Messages
failed to issue command
failed to issue write buffer command
failed to post data to controller
failed to send data to controller
FAILURE
failure detected
fan failure detected
fan not present
fan now online
fan sensor
fibre channel loop connection failure detected
fibre channel loop connection restored
file name too long; max length is:
firmware filename required
Flashing firmware data, please wait
general failure condition ended
general failure detected
gross error on scsi bus detected
high speed
high speed condition no longer critical
high speed threshold exceeded
high temperature threshold exceeded
high voltage
illegal option
initialization failed
initialization of logical drive completed
invalid debug option
invalid event number range
invalid input: please enter a number between 1 and
invalid or ambiguous command

TABLE A-1 Error and Status Messages *(Continued)*

Error and Status Messages
invalid or ambiguous subcommand
invalid status/sense data received
invalid subcommand
Logical devices may not be accessible until mappings are reconfigured
low speed
low speed condition is no longer critical
low speed threshold exceeded
low temperature threshold exceeded
low voltage
memory is not sufficient to fully support current configuration
memory is now sufficient to fully support current configuration
missing argument
negotiation error detected
no disk found to match disk model specified
no event found
no manageable devices found
no matching commands found
no module firmware found in SAFTE package, download aborted
no SAFTE device found
no SES device found
no valid device selected
not present or failure detected
Not Valid
NOTICE
now back to non-critical level
NVRAM factory defaults restored
option doesn't take an argument
option requires an argument
Page 80 Serial Number
Page 83 Logical Unit Device ID

TABLE A-1 Error and Status Messages *(Continued)*

Error and Status Messages
Page 83 Target Device ID
parity error detected
parity regeneration failed
parity regeneration of logical drive completed
Peripheral Device Type
Please enter "yes" or "no"
Please manually reset controller
please reset controller manually!
power supply AC failure detected
power supply AC is OK
POWER SUPPLY CTRL
power supply DC failure condition ended
power supply DC failure detected
power supply DC is OK
power supply failure detected
power supply high voltage condition is no longer critical
power supply high voltage threshold exceeded
Power Supply is AC OK
power supply is no longer critical
power supply is OK
power supply low voltage threshold exceeded
power supply no longer critical
power supply state changed to critical
power supply state is no longer critical
power supply unstable
power supply voltage is OK
power supply voltage now within acceptable limits
predictable failure detected
product id string too long
Programming flash memory

TABLE A-1 Error and Status Messages *(Continued)*

Error and Status Messages
rebuild failed
rebuild of logical drive completed
redundant controller failover detected
Redundant controllers will fail over instead of going offline
redundant loop connection error detected
redundant loop failure detected
redundant path expected but not found
redundant path failure detected
redundant path restored
re-select timeout
Reset failed--Please manually reset controller!
reset nvram failed
reset the array controller
reset the event log
Resetting controller
restore nvram to factory defaults
SAFTE Firmware downloaded successfully!
SAFTE firmware package download failed
SAF-TE firmware package download succeeded
SAFTE HC11 module firmware download OK on logical drive channel
SAFTE package revision on target is not valid
scan SCSI drive successful
SCSI bus device reset
SCSI bus reset issued
SCSI channel failure
scsi command failed
SCSI drive failure
SCSI parity/CRC error detected
Sending disk firmware data
SES firmware download OK!

TABLE A-1 Error and Status Messages *(Continued)*

Error and Status Messages
SES firmware download succeeded!
shutting down controller...
some operations on SAFTE firmware download failed
Some operations on SES Firmware download failed
specified device not found or not valid
specify a filename for the device to be managed
starting add SCSI drive operation
starting clone operation
starting logical drive expansion
starting logical drive rebuild
starting parity regeneration
starting to send disk firmware data
starting to send SES firmware data
state change to critical
superuser privileges required
syntax error
temperature no longer below low threshold
temperature sensor failure detected
temperature sensor high temperature threshold exceeded
temperature sensor is no longer critical
temperature sensor is OK
temperature sensor low temperature threshold exceeded
temperature sensor low threshold detected
temperature sensor low threshold no longer critical
temperature sensor no longer critical
temperature sensor not installed or failure detected
temperature sensor now below high threshold
temperature sensor now online
temperature sensor state changed is no longer critical
temperature sensor state changed to critical

TABLE A-1 Error and Status Messages *(Continued)*

Error and Status Messages
The controller will go offline for several minutes
this command requires a subcommand
this command requires an additional keyword
threshold exceeded
threshold status back to normal
threshold status critical
timeout waiting for io to complete
Type "%s help" for valid commands.
unexpected disconnection encountered
unexpected drive not ready
unexpected select timeout
unexpected sense received
unit attention received
updating SAFTE firmware package rev for target denied
voltage now within acceptable limits
Voltage Sensor %d low threshold Critical Ended
Voltage Sensor %d low threshold Detected
voltage sensor failure detected
voltage sensor high voltage threshold exceeded
voltage sensor high voltage threshold no longer critical
voltage sensor is OK
voltage sensor low voltage threshold detected
voltage sensor low voltage threshold exceeded
voltage sensor no longer critical
voltage sensor not present or failure detected
voltage sensor now within acceptable limits
voltage sensor state changed to critical
voltage sensor state no longer critical

TABLE A-1 Error and Status Messages *(Continued)*

Error and Status Messages
WARNING
WARNING: The configuration of the RAID controller will be erased
WARNING: This is a potentially dangerous operation